



**ANAIS DO II CONGRESSO INTERNACIONAL EM CIÊNCIAS DA
SAÚDE**

**I CONGRESSO INTERNACIONAL EM BIOTECNOLOGIA
I CONGRESSO INTERNACIONAL EM CUIDADO PRIMÁRIO À
SAÚDE**

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O II Congresso Internacional em Ciências da Saúde, I Congresso Internacional em Biotecnologia e I Congresso Internacional em Cuidado Primário é uma iniciativa do Programa de Pós-Graduação em Ciências da Saúde (PPGCS) da Universidade Estadual de Montes Claros (Unimontes) juntamente com outros programas parceiros, a saber, o Programa de Pós-Graduação em Biotecnologia – Unimontes (PPGB) e o Programa de Pós-Graduação em Cuidado Primário à Saúde – Unimontes (PPGCPS). O evento teve como objetivo divulgar a pesquisa/conhecimento científico por meio de palestras, mesas-redondas e minicursos consonantes às linhas de pesquisa desenvolvidas pelo PPGCS, PPGB e PPGCPS, para estudantes de graduação e pós-graduação, profissionais de saúde e pesquisadores.

O evento contou com a participação de mais 300 pessoas, entre participantes, palestrantes (de instituições nacionais e internacionais) e comissão organizadora. Em sua segunda edição, os resultados obtidos evidenciaram o significativo potencial apresentado pelo evento.

Este documento compila os resumos científicos apresentados durante o evento, mostrando uma grande diversidade de temáticas. Trabalhos de qualidade metodológica indiscutível, muito deles produtos de iniciação científica, dissertações e teses desenvolvidas por alunos e professores dos programas parceiros.

A Comissão Organizadora do II Congresso Internacional em Ciências da Saúde, I Congresso Internacional em Biotecnologia e I Congresso Internacional em Cuidado Primário agradece a todos que contribuíram para a construção deste documento.

João Marcus Oliveira Andrade
Presidente da Comissão Organizadora do Evento

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**OBESITY IN CHILDHOOD AND ADOLESCENCE: A SYSTEMATIC REVIEW
AND META-ANALYSIS OF PREVALENCES IN BRAZIL**

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Introduction: The childhood obesity has grown exponentially in most of the world, including Brazil, in general, the prevalence of obesity in Brazil increased by an average of 53% from the 1970s to the late 1990s and, in some Brazilian capitals, the proportion of overweight people increased from 42.7% to 46.6% from 2006 to 2009. In addition to the increased risk of developing chronic diseases associated to overweight, such as high blood pressure, type 2 diabetes, orthopedic problems and certain types of cancers, overweight children are likely to become obese adults and at greater risk for developing comorbidities. **Objective:** The objective of the study that was to analyze the prevalence of overweight and childhood obesity in Brazil. **Methods:** Articles were retrieved from National Library of Medicine (Pubmed), Scientific Electronic Library Online (SciELO), Web of Science, Scopus and Latindex databases and also in the reference lists of other original reviews and studies by the month of May 2018. Articles were selected from the reading of the titles, abstracts and full texts. Duplicates were excluded, and assessed risk of bias in accordance with the accuracy of statistical analyzes employed observing the design of each study and adapting descriptive and inferential analysis used. **Results:** The heterogeneity of studies was 99,18% ($p < 0,01$) and, therefore, a random effect model was applied in the meta-analysis. The overall prevalence of overweight in childhood and adolescence was 23% (18-25%, $p < 0,01$). **Conclusion:** It is concluded that more than 1/5 of Brazilian children and adolescents have overweight, that may be addressed as health public problem.

Keywords: Childhood Obesity; Adolescent Obesity, Overweight; BMI

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INTERNET ADDICTION TEST REPRODUCTIVITY IN BRAZILIAN
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Introduction: The presence of the Internet and its maladaptive use, such as Internet Addiction, is a current and emerging reality. Given the increased prevalence of this disorder, the analysis of the internal consistency and reproducibility of a screening instrument is necessary. The Internet Addiction Test stands out among the other instruments because it has already been validated in several countries. In Brazil it has been translated, has undergone analysis of semantic equivalence and internal consistency, but its reproducibility has not yet been verified. **Objectives:** In this context, the aim of the present study was to evaluate the reproducibility of the Portuguese version of the Internet Addiction Test in a sample of Brazilian students. **Materials and Method:** The population consisted of high school and college students regularly enrolled in institutions in the urban area of Montes Claros, Minas Gerais, Brazil. A simple random sample was selected from two institutions, one from high school and one from higher education. Next, four classes were drawn in high school and five in higher education. All students from these classes were invited to participate in the survey. The sample consisted of 320 students, 157 from high school and 163 from higher education. The questionnaire was applied and reapplied at an interval of two weeks. For the reproducibility analysis, the total score was calculated, which was later categorized as median user (20 to 39 points), problematic user (40 to 69 points) and addicted user (70 to 100 points), at both application moments. To estimate the agreement between the answers, the weighted Kappa coefficient and the Intraclass Correlation Coefficient were used. This study was conducted according to the standards of Resolution No. 466 of December 12, 2012 and was approved by the Research Ethics Committee under protocol No. 1.520.173 / 2016. **Results:** The Intraclass Correlation Coefficient was 0.90 for the general score and the Kappa coefficient was 0.73 ($p < 0.001$) for the estimation of agreement of the categorization of the scores (median, problematic or addicted). **Conclusions:** These findings assume that the answers given at different times to the instrument are reliable, which indicated stability of the Internet Addiction Test over the studied period. Therefore, the Portuguese version translated and adapted from this study can be considered reliable to evaluate Internet Addiction in epidemiological research among Brazilian high school and university students.

Keywords: Validation Studies; Addiction; Internet; Students.

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**KETOGENIC DIET AND AUTISTIC SPECTRUM DISORDER:
INTEGRATIVE LITERATURE REVIEW**

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Introduction: Autistic disorder is a complex neurodevelopmental disorder with multifactorial etiology, characterized by restricted / stereotyped behaviors and modifications in social interaction and communication, that are associated with neurobiological abnormalities that produce changes in the synaptic connections of individuals who have this disorder or Epilepsy. Considering that its prevalence has increased significantly in the last decade, it is necessary to develop new therapies, among them, the Ketogenic Diet, which has a high lipid content and a carbohydrate restriction, that is already recognized as a complementary intervention in the neurological disorders, like epilepsy in children. **Objectives:** the purpose of this paper is to analyze the effectiveness of the Ketogenic Diet as an alternative therapeutic to the clinical manifestations of Autism Spectrum Disorder. **Materials and methods:** a descriptive research of the systematic review type was performed. The selection of articles in the Lilacs, Medline and Pubmed databases followed the process: The descriptors "Autistic disorder", "Ketogenic diet" and Therapeutic diet " were used; April 2004 to August 2019 was the accepted period; the languages english, portuguese and spanish were selected and the articles were filtered as to the full and free text. Of the 132 results, nine were adequate for the purpose of this study. **Results:** Five to forty percent of children with Autistic Disorder develop Epilepsy, which allows the identification of an autistic-epileptic group that can be benefit from the Ketogenic Diet. The mechanisms of action are diverse, highlighting the anti-inflammatory, antiepileptic and neuroprotective effects of ketone bodies, since the stabilization of the cell membrane of neurons, through the modification of their receptors and ion channels. Moreover, the alteration of the oxidative profile in children with Autistic Disorder, caused by this diet and the production of detoxifying agentes favor the maintenance of low concentrations of free radicals, which are harmful to proper synaptic connections. Therefore, a significant improvement in cognition and sociability was observed, improving behavioral abnormalities, increase in sociability and decrease in repetitive behavior itself, and normalization of ataxia. **Conclusions:** the use of restrictive dietary patterns is a complementary therapy to improve the prognosis of people with Autistic Disorder. Thus, the Ketogenic Diet is studied and used as a way to control the symptoms of this condition.

Keywords: Autistic disorder; Ketogenic diet; Therapeutic diet.

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**THE RELATION BETWEEN AGE AND OVERWEIGHT AMONG PREGNANT
WOMEN IN MONTES CLAROS, BRAZIL**

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Introduction: Overweight and maternal obesity contribute to bad fetal-maternal outcomes during birth and postpartum, as well as during the development of the newborn, so it is important to know the anthropometric data related to these conditions and its prevalence. Possible complications include, to the expectant, increase in the predisposition to develop diabetes, systemic arterial hypertension and also the need to a cesarean section; furthermore, to the child, maternal overweight can increase the risk of fetal macrosomia, malformation and heightened perinatal mortality. **Objective:** Considering these possible damages to the mother-child binomial, the present study aims to compare the gestational body-mass index with the age of women in prenatal care in the Estratégia de Saúde da Família of Montes Claros, Brazil. **Materials and Methods:** A cross-section study carried out from partial data of “Estudo ALGE”. Data were collected in person, starting in October 2018 and continuing in the current days. All statistical analyses were performed with SPSS version 22. The chi-square test was used to analyze the association between the data. The present study was approved by the Ethics and Research Committee of the State University of Montes Claros, nº 1.073.200. **Results:** 804 pregnant women participated in the study. It was observed that the percentage of overweight (25,9%) and obesity (11,6%) among the expectant, even together, don't surpass the percentage of eutrophic (41,3%). Also, it was possible to relate age to overweight (p -value $< 0,001$), as the pregnant with overweight were in majority (62,4%), over 31 years of age, whilst the group aged 23 or younger corresponded to a smaller percentage (30,1%). **Conclusion:** It is concluded that amongst pregnant women there was a significant percentage of overweight and obesity, being associated with age, women older than 31 years old represented higher prevalence of overweight, whilst the ones aged 23 or younger weighted more appropriately.

Key Words: Pregnancy; Body Mass Index; Overweight.

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II CONGRESSO INTERNACIONAL EM CIÊNCIAS DA SAÚDE I CONGRESSO INTERNACIONAL EM BIOTECNOLOGIA I CONGRESSO INTERNACIONAL EM CUIDADO PRIMÁRIO À SAÚDE

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PROFILE FOR BRAZILIAN STUDENTS 'INTERNET USE

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Introduction: The use of the internet has provided several benefits for everyday life, including being currently an important resource for student learning. We must consider the influence of the advent of smartphones, which contributed to facilitate access to the Internet, at high speed and in various environments at any time of the day, especially in relation to social networks. But its use has aroused interest in the time spent on online activities and the user's goals when logged in. **Objectives:** In this context, the objective of the present study was to characterize the behavior of a sample of Brazilian students regarding the use of the internet. **Materials and Method:** The population consisted of high school and college students regularly enrolled in institutions in the urban area of Montes Claros, Minas Gerais, Brazil. Were selected by probability proportional to size nine institutions, five from high school and four from higher education. Then the groups were drawn. At both levels all students in the selected classes were invited to participate in the study. The sample consisted of 2519 students, 29.6% from high school and 70.4% from higher education. To verify the internet usage profile, we considered the self-report about the nightly habit of internet use (no and yes), the frequency of use of social networks, e-mail and the internet to perform school activities, to see / hear movies, music and videos and to play online, categorized into eventually (never / rarely / occasionally) and often (often / almost always / always). It was also evaluated the average daily internet connection time, in hours. This study was conducted according to the standards of Resolution No. 466 of December 12, 2012 and was approved by the Research Ethics Committee under protocol No. 1.520.173 / 2016. **Results:** The students had nightly habits of internet use (85.7%) with frequent use to access email (64.6%), watching movies, music and videos (73.1%), performing school activities (77.0 %) and, most notably, to access social networks (91.9%). Only 17.5% reported playing online frequently. On weekdays they use it for 8.7 hours daily (SD = 5.8) and on weekends for 10.0 hours daily (SD = 6.5). **Conclusions:** The daily time spent by students on the Internet was considerable, both on weekdays and on weekends. It is also emphasized the informal objective of this use, especially for the access of social networks.

Keywords: Internet; Students; Social network.

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**RESVERATROL NEGATIVELY MODULATES PRO-ADIPOGENIC GENE
EXPRESSION IN VISCERAL WHITE ADIPOSE TISSUE OF C57BL/6 MICE
BEARING SYNGENEIC CUTANEOUS MELANOMA**

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Background: During tumor progression, might occur cancer-related cachexia (CRC), a paraneoplastic syndrome characterized as progressive, systemic physical consumption of individual with cancer, which modulates inflammatory responses that are usually found in a number of low-grade, systemic chronic inflammatory diseases. **Aim:** We investigated the effects of Resveratrol administration on inflammatory plasma biomarkers, anthropometrical parameters, white adipose tissue (WAT), and survival of C57BL/6 mice bearing a syngeneic cutaneous-melanoma model (SCMM). **Material and Methods:** Murine B16F10 cells were injected into flank of the fifty-eight female C57BL/6 mice in order to establish a SCMM. CRC diagnosis was individually established for each animal using as parameter weight loss $\geq 5\%$. Resv was administered in concentrations of 200 and 400mg/Kg body weight using oral gavage in both control and experimental mice. Measurements of water and food consumption, body weight, and tumor size were daily performed. High-sensitive C-reactive protein (CRP) plasma level was measured by an enzyme immunoassay. SM strength, volume, and mass were assessed using a grip strength meter, a high-frequency ultrasound, and an analytical balance, respectively. Visceral WAT samples were collected and submitted to morphometric and pro-adipogenic gene expression (PPAR-gamma and SREBF1) analysis. Control and experimental mice were submitted to cancer-related survival (CRS) analysis. This study was approved by an ethics committee in animal well-being and experimentation (CEEBEA/Unimontes N^o: 131/2017). **Results:** Mice treated with Resv significantly reduced plasma concentration of CRP; exhibited a delayed in CRC occurrence, showed gain of body weight; and improved CRS rate. Resv administration reduced WAT relative weight, adipocyte area and number, and PPAR-gamma and SRE expression in WAT. The most of these effects promoted by Resv were dose-dependent. **Conclusions:** Although Resv administration negatively modulated WAT in C57BL/6 mice bearing SCMM, positive effects of Resv on CRC and CRS seem to be caused by its systemic antiinflammatory effects.

Keywords: Cancer-related Cachexia; C57BL/6 Mice; B16F10 Mouse Melanoma Cell; Adipokines; Inflammation; Cancer-related Survival.

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CAFETERIA DIET FROM LACTATION TO ADULTHOOD ALTERS THE SENSITIVITY OF WISTAR RATS TO THE EFFECTS OF RISPERIDONE ON ANXIETY AND LOCOMOTION

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Introduction: Several studies have already demonstrated changes in anxiety and locomotion, in the offspring of rodents, exposed to obesogenic diets during gestation, lactation, and/or post-lactation periods. One of the mechanisms possibly involved in certain behavioral changes is related to the impairment of neurotransmitter circuits in the brain. However, studies that demonstrate the effect of drugs in animals on an aggressive diet from the beginning of life until adulthood are lacking. **Purpose:** This study aimed to evaluate the effect of a serotonergic drug (risperidone) on the behavior of rats treated from lactation to adulthood with an obesogenic diet (cafeteria diet). **Materials and methods:** During the lactation period, 14 litters of Wistar rats (a dam + 8 pups) were fed one of two diets: control (CTRL, n=7) and cafeteria (CAF, n=7). After weaning, the males were placed in individual cages, receiving the same diet, and offered to their respective dams. In adulthood, they were assigned (n = 21) to receive treatment with saline (CTRL-S, CAF-S) or risperidone (CTRL-R and CAF-R) and underwent behavioral testing including: elevated plus maze and open field tests. Prefrontal cortex and hippocampus were weighed and homogenized in a phosphate-buffered saline solution, and after we detected serotonin in the samples using the Differential Pulse Voltammetry technique. ANOVA was used followed by Newman Keuls when necessary (p<0,05). **Results:** Risperidone had different effects on the animals' anxiety in the two groups: those that received a cafeteria diet and those on a standard diet. In the EPM test, the time spent by the CAF-R in the open arms did not change whereas that spent by the CTRL-R increased (anxiolytic effect). In the OF test, the number of entries and time spent in the center was lower in the CAF-R group than in the CAF-S group; however, the number of entries and time spent did not differ between the CTRL-R and CTRL-S groups. CAF-R group had a 10-fold reduction in locomotion compared with that of the CAF-S, whereas in the CTRL-R group, the reduction was only 2,5-fold compared with that in the CTRL-S. The analysis of samples of the brain of male offspring by DPV showed that there was no difference in the serotonin levels in the prefrontal cortex and the hippocampus. **Conclusions:** Risperidone administered to animals on a cafeteria diet led to a greater reduction in locomotion, and had an anxiogenic effect, effects different from those found in control diet animals.

Keywords: Cafeteria diet; Anxiety; Locomotion; Risperidone; Serotonin.

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**EVALUATION OF DENTAL ANOMALIES IN PATIENTS WITH
CONGENITAL MICROCEPHALIA CAUSED BY ZIKA VIRUS INFECTION**

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Introduction: Zika virus (ZIKV) is an arbovirus belonging to the family Flaviviridae and genus Flavivirus, transmitted by the gnat *Aedes aegypti*. The most common symptoms presented by individuals with ZIKV infection are fever, polyarthralgia, maculopathy, conjunctivitis, muscle pain, vomiting and neurological impairment. However, 80% of individuals are asymptomatic. From November 2015 to April 2016, the Brazilian Ministry of Health declared the implication of ZIKV in the microcephaly outbreak as a Public Health Emergency of National Importance. Orofacial development begins in the 4th week of intrauterine life, undergoing complex modifications until reaching morphofunctional maturity. Few studies have evaluated the presence of ZIKV infection in oral development. **Objective:** To identify and describe dental anomalies in patients diagnosed with congenital microcephaly caused by congenital Zika Virus infection. **Material and Methods:** Longitudinal, descriptive study, according to data collected through interviews with parents and clinical and radiographic findings, observed in patients belonging to the “*Association Mothers of Microcephaly*” in the region of Montes Claros, Minas Gerais, Brazil and diagnosed in the period between 2014 to 2017. **Results:** Nine children were included in the study. Of these, 5 had agenesis in deciduous dentition. 3 cases of Microdontia and 1 of twinning. Eight have delayed chronology and bruxism and 7 short lingual frenulum. **Conclusion:** Dental alterations present in the evaluated patients include: opacity and hypoplasia, bruxism, changes in the timing and sequence of primary teeth eruption, dental anomalies, enamel defects, agenesis. The late dental eruption being the most prevalent oral characteristic in the studied population. There are few published studies in the field of dentistry, so one should consider more about such an important change, aiming at a better knowledge of the clinical characteristics presented by this disorder, in order to collaborate with new diagnoses and multidisciplinary treatment. It is important to emphasize that this was the first study in the literature to report cases of dental agenesis in association with Zika virus.

Keywords: zika vírus, microcephaly, agenesis.

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**MENTAL DISORDERS AMONG FARMERS EXPOSED TO PESTICIDES OR
ENROLLED IN AGROECOLOGICAL PRACTICES**

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Introduction: Pesticide poisoning has been associated with symptoms of psychological distress and neuropsychiatric disorders, including suicidal ideation. Proximity to agricultural fields treated with pesticides is a proxy for environmental exposure in rural residences. Agroecology is the science of natural resource management that involves a sustainable agriculture practice without using pesticides. **Objective:** To examine whether the frequency of common mental disorders, including suicidal ideation, differs between a rural population under cumulative pesticide exposure and a reference rural population enrolled in agroecological practices, both populations from the semiarid region of Minas Gerais, Brazil. **Methods:** The population comprised 597 men and women, above 18 years, interviewed in January 2017. There were 311 individuals living in pesticide-exposed areas, while 236 individuals were living in areas of agroecological practices. Those living inside the Irrigated Agriculture Perimeter in the valley of Gorutuba River were considered pesticide exposed. This territory was precision delimited and had been covered by banana's crops over twenty years. Pesticides were spreading over the fields by airplanes, reaching workers, residences and superficial waters, used by the ten communities located inside that perimeter. The selection of exposed participants was performed according to nonrandom sampling in clusters. The agroecological group was invited to participate in the study after public audiences in the rural communities. Certificated families, recognized for sustainable agriculture practices, were selected. In order to assess common mental disorders and suicidal ideation, Self-Reporting Questionnaire was performed, setting a cutoff point of 7 for both sexes, according to World Health Organization. A single question about previous pesticide poisoning episodes was included in the questionnaire. Logistic regression analysis were conducted for Odds Ratio (OR) and 95% Confidence Interval (CI) were estimated. **Results:** Common mental disorders were more strongly associated with people living under cumulative pesticide exposure than people enrolled in agroecological practices (crude OR = 1.60; 95% CI: 1.07 - 2.41). Suicidal ideation was also more strongly associated with exposed group (crude OR = 2.59; 95% CI: 1.35 - 4.96). After adjusting for previous pesticide poisoning episodes, both associations remained statistically significant for common mental disorders (OR = 1.58; 95 CI: 1.04 - 2.40) and for suicidal ideation (OR = 2.25; 95% CI: 1.11 - 4.38). **Conclusion:** This cross-sectional study brought evidence that people living under cumulative pesticide exposure in rural areas have greater odds of having common mental disorders and suicidal ideation than people enrolled in agroecological practices, regardless previous pesticide poisoning episodes. **Keywords:** pesticide poisoning; agroecology; rural population; suicidal ideation; exposure; environment

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**CAFETERIA DIET ADMINISTERED FROM LACTATION TO ADULTHOOD
PROMOTES HIPPOCAMPAL OXIDATIVE STRESS AND GREATER
MEMORY IMPAIRMENT AFTER APPLICATION OF RISPERIDONE IN
WISTAR RATS**

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Amanda Escobar Teixeira 3
Arthur Rocha Gomes Alexandre Alves da Silva 4
Tania Regina Riul 5
Sergio Ricardo Stuckert-Seixas 6

Introduction: Classified as epidemic around the world, obesity have been linked to the development of disease, and important morphological, and behavioral changes, in particular cognitive and memory disorders. These changes in behavior become even more serious when malnutrition begins, even in the early stages of life, including lactation and post-weaning. An obesogenic diet can promote the increase in reactive oxygen species (ROS) that may compromise the development and function of the neurotransmitter circuits, responsible for the behavior and emotions, such as the serotonergic system.

Purpose: This study aimed to evaluate the effect of a serotonergic drug (risperidone) on the behavior of rats treated from lactation to adulthood with an obesogenic diet (cafeteria diet). **Materials and methods:** During the lactation period, 14 litters of Wistar rats (a dam + 8 pups) were fed one of two diets: control (CTRL, n=7) and cafeteria (CAF, n=7). After weaning, the males were placed in individual cages, receiving the same diet, and offered to their respective dams. In adulthood, they were assigned (n = 21) to receive treatment with saline (CTRL-S, CAF-S) or risperidone (CTRL-R and CAF-R) and underwent the recognition object test. Prefrontal cortex and hippocampus were weighed and oxidative stress markers were evaluated in these tissues (malondialdehyde, carbonylated protein, superoxide dismutase and glutathione S-transferase). ANOVA was used followed by Newman Keuls when necessary (p<0,05). **Results:** CAF-S also demonstrated memory impairments. However, CAF-R was a decrease in the interaction with the two objects in the object recognition test, demonstrating an even greater deficit than CAF-S animals. Cafeteria diet animals exhibited oxidative stress characteristics in the hippocampus, which might compromise the function of this structure and promote the observed behavioral changes. **Conclusions:** Risperidone administered to animals on a cafeteria diet led to a greater deficit in memory, effect different from those found in control diet animals. The behavioral alterations are related to oxidative stress in the hippocampus and may also have affected the encephalic serotonergic system.

Keywords: Cafeteria diet; Memory; Object recognition; Risperidone; Redox state.

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VULNERABILITIES AND SEROPREVALENCE OF SEXUALLY TRANSMITTED INFECTIONS AND THE PERSPECTIVE OF PRE-EXPOSURE PROPHYLAXY USE IN DEPRIVED OF LIBERTY

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Cristina Andrade Sampaio 3

Introduction: People involved with crime and imprisonment are significantly more prone to the human immunodeficiency virus than general population. In the current scenario of the epidemic in Brazil, the route of transmission of the virus is heterosexual and there is a concentration of cases among men who have sex with other men. Therefore, combined prevention, considered as the possibility of managing biomedical, behavioral and structural strategies, pre-exposure prophylaxis to the human immunodeficiency virus can be translated into a fundamental strategy for vulnerable groups such as the population deprived of liberty. **Objectives:** To estimate the seroprevalence of the human immunodeficiency virus, syphilis and viral hepatitis in people deprived of their liberty in prisons in the northern region of Minas Gerais, to evaluate access to health services in the area of prevention and treatment of sexually transmitted infections and to correlate the markers to factors of vulnerability to infections and to evaluate possibilities for the implementation of pre-exposure prophylaxis for human immunodeficiency virus. **Materials and Method:** Epidemiological, longitudinal, descriptive, documentary, exploratory research, with quantitative and qualitative approach, by simple random probability sampling, approved by the Ethics Committee of Universidade Federal de Minas Gerais according act number 3338.613, which is being performed. in 15 Prisons in the Macronorte Health Region of Minas Gerais, through rapid testing for sexually transmitted infections, socioeconomic questionnaire / sexual behavior, and interviewing patients with chronic sexually transmitted infections via case census. **Results:** There are several factors of individual and collective vulnerability to infections, especially risk behaviors and lack of knowledge about the mechanisms of transmission of infections, lack of condom use during sexual practices and lack of educational, care and support actions shared with their pairs, from the perspective of expanded care transcending the dimension of clinical management, in addition to the important and excessive programmatic vulnerability of prison health services in the northern region of Minas Gerais, although the participants previously listed in the study expressed a desire to be inserted in pre-prophylaxis therapy for sexual exposure to the human immunodeficiency virus. **Conclusions:** It is necessary to implement educational actions, health care and expanded care transcending the clinical dimension of the management of these infections, a care process based on the logic of social reintegration of the arrested people and the effective provision of health services. prison health modeled by the combined prevention model to reduce the transmission of these infections in this specific audience.

Keywords: HIV; Prisons; Sexually Transmitted Diseases; Vulnerability Analysis.

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II CONGRESSO INTERNACIONAL EM CIÊNCIAS DA SAÚDE I CONGRESSO INTERNACIONAL EM BIOTECNOLOGIA I CONGRESSO INTERNACIONAL EM CUIDADO PRIMÁRIO À SAÚDE

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FECAL INCONTINENCE AND INTESTINAL HABIT IN STUDENTS

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Introduction: Fecal incontinence (FI) is characterized by voluntary and / or involuntary loss of feces in underwear, being common among children, with major impact on lifestyle activities, social and emotional behavior. **Objective:** To analyze the prevalence of FI and aspects of intestinal habit associated among children and adolescents enrolled in public schools in Montes Claros (MG). **Materials and Method:** Cross-sectional and analytical study, conducted in 2017, with a representative sample of students from public schools in the county. Sample selection occurred in two stages. Initially, 12 schools were selected. Subsequently, the classes in each school were selected at random and proportional to the number of students enrolled in each school. In the selected classes, all students were eligible for study. Data collection was performed by specially trained and calibrated staff. Validated instruments were used for data collection, including the Rome III questionnaire for the evaluation of FI and intestinal habit. To analyze the associations between the dependent variable (fecal incontinence) and the independent variables (intestinal constipation, defecation frequency per week, hard stools, painful defecation, history of toilet-clogging stools, excessive stool retention, straining to evacuate, feeling of incomplete defecation), a bivariate analysis was performed using the chi-square test, following multiple binary logistic regression analysis, adopting a significance level of 5% ($p \leq 0.05$). **Results:** 1471 students between the 6th and 9th grade participated. The average age was 13 years old ($SD \pm 1.22$), ranging from 11 to 18 years old, with 50.1% being female. The prevalence of FI in the study group was 4.1%, and it was statistically associated with intestinal constipation ($p = 0.001$ OR=3.41; CI95%=1.62-7.19), and excessive stool retention ($p = 0.002$; OR=2.75; CI95%=1.47-5.18). **Conclusion:** The prevalence of FI found is considered high and is closely associated to inadequate behavior and defecation disorders.

Keywords: Fecal incontinence; Intestinal habit; Students.

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EPIDEMIOLOGICAL AND CLINICAL-LABORATORY PROFILE OF PATIENTS WITH ASSOCIATION VISCERAL LEISHMANIASIS/ HEMOPHAGOCYtic LYMPHOHISTIOCYTOSIS IN ENDEMIC AREA REFERENCE HOSPITAL IN NORTH OF MINAS GERAIS

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Introduction: Visceral leishmaniasis (VL) is a growing public health problem in developing countries. The annual global incidence is estimated at 200,000 to 400,000 new cases with a lethality rate of up to 10%. It is part of the group of major neglected tropical diseases in the world, affecting the most marginalized populations and helping to perpetuate cycles of poverty and social exclusion. Hemophagocytic lymphohistiocytosis (HLH) or hemophagocytic syndrome presents a major diagnostic and therapeutic challenge, comprising two different forms, sometimes difficult to distinguish. **Objective:** This study intention to identify the frequency and describe the epidemiological, clinical-laboratory and therapeutic profile of patients with the association visceral leishmaniasis / hemophagocytic lymphohistiocytosis admitted to a reference hospital in an endemic area in the north region of Minas Gerais. **Material and Methods:** This is a retrospective case series study of patients with association between visceral leishmaniasis and hemophagocytic lymphohistiocytosis. The study was conducted at the Clemente de Faria University Hospital (HUCF) at Montes Claros State University. The data source was the medical records of children from zero to 12 years old, admitted to the HUCF from January 2012 to June 2017, diagnosed with visceral leishmaniasis at any time during hospitalization. The study protocol was approved by the Ethics Committee of the Montes Claros State University, Process No. 2050 and the institution's authorization for data collection. **Results:** We studied 39 (15.1%) cases of a retrospective cohort of 258 hospitalized children between January 2012 and June 2017. From urban areas 31/39 (79.5%). Mean age 2.86 ± 2.08 years, 21/39 (53%) male. Main signs and symptoms, fever (100%), hepatosplenomegaly (100%), cutaneous-mucous pallor (82.5%), edema (38.5%), bleeding (25%) and jaundice (7.5%). Transfusions performed on 19/39 (48.71%) patients. Hemophagocytosis identified in 16/37 (43.24%) patients. **Conclusion:** HLH associated with VL in childhood in endemic areas is not uncommon and should always be remembered, considering it is a potentially fatal condition. This data draws attention to the need to think about HLH triggered by VL, especially in patients with unsatisfactory evolution during the specific treatment.

Keywords: Visceral leishmaniasis. Haemophagocytic lymphohistiocytosis. Children. Liposomal amphotericin B. Brazil.

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EFFECT OF SECONDARY METABOLITES FROM *Lactococcus lactis* IN GROWTH, *in vitro*, OF RESIDENT PROCARIOTS IN GASTROINTESTINAL TRACTS

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Introduction: studies have shown the influence of *Lactococcus lactis* on the abundance and diversity of the intestinal tract microbial population of mice treated with alcohol acting as a probiotic. However, the effect of secondary metabolites from *Lactococcus lactis* over this microbial population is not known. It is important to know alternative intestinal microbiota modulation strategies capable of attenuating or reverting the effects generated by dysbiosis, because they can cause clinical implications. **Objective:** evaluate the effect of *Lactococcus lactis*' extracellular secondary metabolites on its *in vitro* growth of bacteria residing in the gastrointestinal tract. **Materials and Method:** Species *Lactococcus lactis* NCDO 2118 was utilized and the extracellular secondary metabolites were obtained through a 22 hour culture. To evaluate these metabolites' action, the microdilution sensitivity test was performed utilizing a suspension composed of *Escherichia coli* ATCC 8739, *Enterococcus faecalis* ATCC 4083, *Lactococcus lactis* NCDO 2118, *Enterococcus sakazakii* ATCC 29544, *Klebsiella oxytoca*, *Salmonella enteritidis*, *Lactobacillus rhamnosus*, *E. coli* from intestinal cleansing of an alcohol-treated animal and another strain of *E. coli* from intestinal cleansing of an alcohol-treated animal alongside with the *Lactococcus lactis*', in accordance to The Clinical and Laboratory Standards Institute. After the incubation, the colony counting plating was performed and the results were expressed in percentage form with the mean \pm standard error of the mean. **Results:** The extracellular metabolites have shown various intensities of inhibitory action over the investigated microorganisms. The microorganisms have shown the following intensities of inhibition: *Salmonella enteritidis* (54,4%), *Lactobacillus rhamnosus* (51,9%), *Enterococcus sakazakii* ATCC 29544 (47,9%), *Escherichia coli* from the intestinal cleansing of an alcohol-treated animal and *Lactococcus lactis* (46,7%), *Escherichia coli* ATCC 8739 (42,4%), *Escherichia coli* from the intestinal cleansing of an alcohol-treated animal (41,6%), *Klebsiella oxytoca* (31,1%), *Lactococcus lactis* NCDO 2118 (24,1%) and *Enterococcus faecalis* ATCC 4083 (19,6%). **Conclusion:** The *L. lactis* extracellular metabolites inhibited the growth of bacteria from the Enterobacteriaceae family and from those who produce lactic acid, with acknowledged probiotic activity. It is suggested that these metabolites can be effective on the biological control of these microorganisms, thus modulating the intestinal microbiota. **Keywords:** *Lactococcus lactis*; Extracellular secondary metabolites; Enterobacteriaceae; Lactic acid bacteria.

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**SELF-PERCEPTION OF PREGNANT WOMEN FEEDING OF PRIMARY
HEALTH CARE**

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Introduction: The nutritional monitoring during prenatal is crucial for nutritional status assessment. During this period, is important weight control, know food preferences and aversions, as well as demystify myths. Self-perception of feeding may influence eating behavior. **Objective:** analyze the self-perception of pregnant women feeding of primary health in the municipality of Montes Claros-MG. **Methodology:** It is a clipping of the “Study ALGE - Avaliação das Condições de Saúde das Gestantes de Montes Claros - MG: estudo longitudinal”, epidemiological inquiry, population-based, with longitudinal study, that is being conducted in the municipality of Montes Claros - MG. The present study was carried out from partial data from the first step (baseline) of the study. The sample was calculated in 863 pregnant women, registered in all the poles of the Estratégia de Saúde da Família (ESF) from the urban area of the municipality. To collect the data was used a single questionnaire, composed of various instruments, including feeding and nutrition. **Results:** 804 pregnant women participated in the study, being that 9,5% rated their feeding as very good, 56,3% good, 27,5% neither good / nor bad, 4,2% bad and 2,4% very bad. Among pregnant women, there is a proportion of 34,2% who have negative self-perception of eating. Regarding follow up with nutritionist in prenatal, 94,3% answered not perform. Asked about dieting during pregnancy 10,3% performed. Regarding healthy eating orientation in prenatal, 72,1% answered yes and 27,5% answered no. **Conclusion:** In this study one third of pregnant women reported negative self-perception of eating, although most report feeding guidance in prenatal. There was low adherence to nutritional monitoring in prenatal, worrying aspect, because pregnant women are more susceptible to nutritional inadequacy due to increased energy during this period. Proper nutrition during the gestational period plays a determining role in the outcome related to the fetus, as well as the evolution of pregnancy. In this context, investigate eating habits and the perceptions of these pregnant women allows to identify dietary errors that may harm the health of mother and fetus.

Keywords: Eating behavior; Feeding; Gestation; Prenatal;

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**THERMAL SENSITIVITY OF PROBIOTIC BACTERIA *Lactococcus lactis*
subsp. *lactis* E *Lactobacillus acidophilus***

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Introduction: Lactic acid producing bacteria (BALs) arouse special therapeutic and biotechnological interests. Here we highlight *Lactococcus lactis* (LL), and *Lactobacillus acidophilus* (LA), known to be Generally Recognized As Safe (GRAS) species. These probiotics microorganisms support therapeutic applications, associated with dysfunctions caused by alcoholism and gastrointestinal tract disorders, respectively. However questions regarding the mechanisms of action of these bacteria still remain. **Objectives:** The present study aimed to measure the thermal resistance levels by *Lactococcus lactis* (LL) and *Lactobacillus acidophilus* (LA) when submitted to different heating times. **Material and Methods:** Cultures of *Lactococcus lactis* subsp *lactis* NCDO 2118 and *Lactobacillus acidophilus* ATCC 43121 obtained on M17 and MRS (pH 5.7) medium, respectively at 37°C for 24 hours, were interrupted in Log growth phase and distributed. in fractionated tubes, each containing 10^6 bacterias.ml⁻¹ on Standard (LL) and MRS (LA) broth. Five treatments (0, 5, 10, 15 and 20 minutes) of exposure at 100°C were established. After heating, 10µL aliquots were superficially distributed on Standard Methods Agar (LL) and MRS medium (LA) plates. Survivor cells were measured in triplicate by direct counting after 24 hours of incubation at 37°C. The Viable Bacterial Density (DBV) records were transformed into Log 10, from which descriptive statistics and regression calculations for quantitative effects analysis were generated. **Results:** *L. lactis* resisted heating until 15 minutes of exposure, and after 20 minutes of heating all the cells were killed. *L. acidophilus* resisted just for 05 minutes of heating. **Conclusions:** *Lactococcus lactis* subsp *lactis* NCDO 2118 was significantly more heat resistant when compared to *Lactobacillus acidophilus* ATCC 43121, which are able to survive at 100°C until 15 and 05 minutes, respectively. Despite the distinct levels of thermotolerance, these results reinforce the adaptability of these bacteria to extreme environments such as the mammalian gastrointestinal tract. Additionally we can make inferences about the advantages and disadvantages of these results in biotechnological and industrial processes.

Keywords: Probiotics; *Lactococcus lactis*; *Lactobacillus acidophilus*; Thermotolerance.

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PREVALENCE OF OVARIAN CYST AND ASSOCIATED FACTORS IN
CLIMACTERIC WOMEN

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Introduction: The presence of ovarian cysts may be a risk factor for the development of ovarian cancer, which is the seventh most incident cancer in women worldwide. Brazil recorded an incidence of 5.6 new cases/100,000 women and 2.7 deaths/100,000 women. The increase in incidence was associated with changes in age structure of the population, their reproductive behavior, habits and lifestyle. **Objective:** To investigate the prevalence of ovarian cyst and associated factors in climacteric women treated in Primary Health Care (PHC). **Methods:** An analytical study, conducted in 2014 and 2015, with a population of 30,018 women registered in 73 Family Health Strategies of Montes Claros, Minas Gerais, Brazil. The selection of the sample occurred in two stages. Initially, the PHC were selected by urban and rural conglomerates, making a total of 20 units. After that, a proportional number of women in PHC was selected randomly, obeying the stratification criterion, according to the climacteric period. Data were collected through validated questionnaires, containing social variables, life habits, gynecological, clinical, anthropometric assessment, waist circumference. The dependent variable was evaluated by the question: Have you ever had a cyst in the ovary? The response was dichotomized in the presence/absence of ovarian cyst. The association between the variables was performed by the chi-square test and the associated variables up to the level of 20% were analyzed together by means of Poisson regression, being assumed in the final model only the associated variables up to the level of 5%. **Results:** The sample consisted of 867 women between the ages of 40 and 65. The prevalence of ovarian cyst was reported by 16.8% of the women interviewed. In the bivariate analysis, the variables of having partner ($p = <0.033$), being smoker ($p = <0.031$), having a child weighing above 4000grs ($p = <0.034$), being hypertensive ($p = <0.017$), having urinary incontinence ($p = <0.012$), being obese ($p = <0.068$), having altered waist circumference ($p = <0.053$), were associated with the presence of cysts in the ovary. Through multiple regression only having a child weighing over 4000grs ($PR = 0.926$; $p = <0.010$), remained associated with the presence of cyst in the ovary. **Conclusion:** Therefore, it was observed high prevalence of ovarian cysts in the investigated population which can be associated with the child's weight. However, further studies should be carried out to confirm if the child's weight actually interferes with the prevalence of ovarian cyst.

Keyword: Ovarian cyst; Menopause; Woman.

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**FACTORS ASSOCIATED WITH THE PRACTICE OF PHYSICAL ACTIVITY
IN PREGNANT WOMEN ASSISTED BY THE FAMILY HEALTH STRATEGY
PROGRAM**

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Introduction: During pregnancy, the practice of physical activity contributes to the conservation of physical and health capacity since it mitigates typical symptoms of pregnancy, promotes improved control of body weight and venous return, reduces pain and birth-related conflicts, improves the performance on daily activities, and provides faster postpartum recovery. **Objectives:** To identify the prevalence of the practice of physical activity during pregnancy relating to gestational trimesters. **Materials and Method:** The research is part of the project “ALGE (Avaliação das Condições de Saúde das Gestantes) Study - Health Conditions Assessment of Pregnant Women of Montes Claros-MG: a longitudinal study”. This is a cross-sectional, analytical study conducted with pregnant women enrolled in groups of the *Family Health Strategy* program in the city of Montes Claros - MG. Data were collected in 2018 and 2019 by a multi-professional team. For data collection, the validated Pregnancy Physical Activity Questionnaire (PPAQ) was used to assess physical activity using a six-item Likert scale, which related the time spent per day to perform these activities. To analyze the association between physical activities and the gestational trimester, the chi-square test was used, which verified a statistical association with a significance level of 5%. For descriptive analysis, the SPSS program version 22 was used. The project was approved by the Research Ethics Committee under opinion no. 2.483.623/2018. **Results:** This study contains partial data from 804 participants. It was found that for the physical activity “walking slowly for fun or exercise”, 91.7% of pregnant women performed less than 30 minutes per day during the first trimester, 92.2% in the second and 91.7% in the third trimester (p-value = 0.908). For the activity “swimming”, 3% of pregnant women performed more than 30 minutes per day in the first and second trimesters, decreasing to 2.2% in the third trimester (p-value = 0.047). A total of 94.9% performed less than 30 minutes of the activity “dancing” per day, 95% in the second, and 94.9% in the third trimester (p-value = 0.981). **Conclusions:** The practice of physical activities “walking slowly for fun or exercise”, “swimming”, and “dancing” are less prevalent among trimesters of pregnancy. Among the researched activities, a statistically significant association was observed between the practice of “swimming” and the gestational trimesters. In this sense, it is necessary to implement public policies focused on the health of pregnant women that emphasize the practice of physical activity.

Keywords: Pregnant women; Motor activity; Public health.

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PUERPERAL PERCEPTION ON THE PRACTICE OF BREASTFEEDING

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Introduction: breastfeeding is a natural and efficient practice, a bonding, protection and nutrition strategy, and a born right of the newborn and whose success depends on greatly of the experiences lived by women and the commitment and technical, scientific and ethical knowledge of the health professionals involved in the practice. Highlighting that breastfeeding is an efficient intervention that reduces the infant morbimortality besides of the impact in the promotion of total health in both mother and child that has impact in whole society. **Objective:** verifying the puerperal perception on breastfeeding. **Method:** qualitative and descriptive study involving 11 puerperal that where assisted in health units in the North of Minas Gerais, having had birth between 0 to 45 days. Semi-structured interviews were used on the month of May 2019. The analyzed content which proposes the description and classification of the subjective experiences of the subject of study was used. **Results:** the puerperal reveal that the meaning of breastfeeding is linked to health, nutrition, affection, protection and immunization promotion to the child. It represents a process that involves deep interaction between mother and child, with impacts in the nutritional state of the child, in its ability in defending itself against infections, in its physiology and its cognitive and emotional development besides the implications on the physical and psychological health of the mother. All puerperal referred that the beginning of the breastfeeding must happen on the first hour of life, and shown knowledge on the composition of breast milk accordingly to the mother's education, pointing out generally the elements present in the milk. The enabling factor mentioned were healthy eating, peace, position and correct latch. **Final Considerations:** It was found that the researched puerperal had a satisfactory perception on breastfeeding. The study allowed the understanding that there is a need to improve the ways of communication and the following up of puerperal as a continuing pre-natal care to obtain success on breastfeeding.

Keywords: Postpartum Period; Breast Feeding; Knowledge.

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PHYSICIAN SALARY AND SOCIAL CONTEXT: ECOLOGICAL STUDY

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Introduction: Salary is an important factor of attraction, fixation and professional satisfaction in Primary Health Care (PHC), especially in the most remote and needy regions. Previous studies have investigated factors that motivate or attract physicians to work in PHC, such as geographical location, working conditions and salary. **Objective:** To investigate the relationship between the salary paid to Family Health Strategy (FHS) hired physicians and socio-demographic, location and care indicators. **Materials and Method:** Ecological and cross-sectional study conducted in municipalities of the Expanded Northern Health Region (ENHR) of Minas Gerais. Data collection was performed in two steps. The first step refers to the collection of contextual data from the municipalities, extracted from official public access databases (independent variables). The second stage refers to the collection of information on the amount of salary paid to physicians hired by the municipalities' FHS (dependent variable), extracted from a database of the Montes Claros Regional Health Superintendence. Data analysis was performed using Statistical Package for Social Sciences (SPSS)[®], Version 18. Descriptive and bivariate analyzes were performed using Pearson's Correlation (numerical independent variable) and T-test or ANOVA (categorical independent variables). **Results:** The average gross salary paid to physicians hired at the ENHR was R\$ 11,188.60. The highest average salary was found in Health Region Manga. The variables *Distance to Montes Claros* (pole municipality) and *Social Vulnerability Index* (SVI) were positively correlated with the amount paid to the salary of the FHS hired physicians, indicating a tendency of the municipalities, which are located geographically more distant from the regional centers and which commonly present populations in conditions of greater vulnerability, besides the lack of professionals, to offer higher salaries as a way to attract and fix physicians for the FHS. **Conclusion:** Associations were identified between the salary paid to physicians hired to work in the FHS and the variables SVI and *Distance to Montes Claros*, related to the sociodemographic context of the municipalities. However, it is still necessary to investigate other subjective situations that may be related to the salary paid, aiming to point out parameters to support the municipalities in the definition of salaries.

Keywords: Salaries; Physicians; Socioeconomic Factors.

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II CONGRESSO INTERNACIONAL EM CIÊNCIAS DA SAÚDE I CONGRESSO INTERNACIONAL EM BIOTECNOLOGIA I CONGRESSO INTERNACIONAL EM CUIDADO PRIMÁRIO À SAÚDE

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RESVERATROL MODULATES SKELETAL MUSCLE TISSUE AND SYSTEMIC CHRONIC INFLAMMATION DELAYS THE ONSET OF CACHEXIA, AND IMPROVES CANCER-RELATED SURVIVAL IN C57BL/6 MICE BEARING SYNGENEIC TUMOR

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Introduction: Cancer-related cachexia (CRC) is a paraneoplastic syndrome characterized as a progressive, systemic physical consumption state of individual during cancer progression. Trans-resveratrol (3,4,5-trans-trihydroxystilbene; Resv) is a naturally occurring polyphenol which modulates inflammatory responses that are frequently showed in a number of low-grade, systemic chronic inflammatory diseases. **Aim:** We investigated the effects of Resv administration on inflammatory plasma biomarkers, anthropometrical parameters, skeletal muscle (SM) mass, volume and strength, and survival of C57BL/6 mice bearing a syngeneic cutaneous-melanoma model (SCMM). **Material and Methods:** Murine B16F10 cells were injected into flank of the fifty-eight female C57BL/6 mice in order to establish a SCMM. CRC diagnosis was individually established in each animal using as parameter weight loss $\geq 5\%$. Resv (200 and 400mg/Kg) was administered using oral gavage. Measurements of water and food consumption, body weight, and tumor size were daily performed. High-sensitive C-reactive protein (CRP) plasma level was measured by an enzyme immunoassay. SM strength, volume, and mass were assessed using a grip strength meter, a high-frequency ultrasound, and an analytical balance, respectively. SM samples were submitted to morphometric and gene expression (Myog, IGF1, IGF2, FBXO32, TRIM63, and TRIM55) analysis by using qPCR. Control and experimental mice were submitted to cancer-related survival (CRS) analysis. This study was approved by an ethics committee in animal well-being and experimentation (CEEBEA/Unimontes N^o: 131/2017). **Results:** Mice treated with Resv significantly reduced CRP levels; exhibited a delayed in CRC occurrence, showed body weight gain, and improved CRS. Resv administration increased SM tissue mass, volume, and muscle strength. Mice treated with Resv showed a higher quantity of SM fibers and higher pro-myogenic factors. The most of these effects promoted by Resv were dose-dependent. **Conclusion:** Resv administration promoted a plethora of anticachectic effects in C57BL/6 mice bearing SCMM, which might influence CRS improvement in CRS.

Keywords: cancer-related cachexia, C57BL/6 mice, B16F10 mouse melanoma cell, myokines, inflammation, cancer-related survival.

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CORN BASED PREPARATIONS HAVE EFFECT ON BREAST MILK PRODUCTION?

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Introduction: The use of galactogogues, which are medications or other substances to aid in the initiation, maintenance, or enhancement of breast milk synthesis, is commonly used to assist in the lactation process. **Objectives:** To test whether corn-based preparations have the effect of increasing breast milk production in hypogalactic lactating women. **Materials and Methods:** This is a before-and-after intervention study evaluating the effect of corn-based preparations on breastfeeding women staying in the “pregnant and postpartum home” of a maternity ward in Diamantina / MG. In the first stage of the study (one week period) lactating women received standardized meals from the hospital plus lactation calorie (500 kcal / day), checked the volume of milk produced in each milking (all perform manual milking) and the consumption to feed. In the second stage, called intervention, the same procedures occurred as in the first stage, however, the additional caloric for lactation consisted of corn-based preparations. Milking of the lactating women took place at a milk collection station, which is assisted by a nurse from the hospital, with experience in lactation. This milking is necessary for mothers to be able to produce milk for their own children. For statistical analysis we used the kolmogorof-Smirnof tests and the Wilcoxon test to compare the medians of breast milk volume produced before and after the intervention. A significance level of 0.05 was adopted. **Results:** We followed 21 lactating women with an average age of 31 years. Most are married (n = 12, 57.1%), had more than 7 prenatal consultations (n = 9, 42.8%), using the Unified Health System (n = 14; 66.6%) and with a general practitioner (n = 13; 61.9%). None used cigarettes and illicit drugs during pregnancy, nor did they use drugs that disrupted lactation. All had premature birth. Regarding milk production, it was observed that in the first week the average production was 288.5mL and in the second week 333mL. Approximately 62% of the lactating women showed an increase in milk production in the intervention week. The Wilcoxon test identified that there was a statistical difference between the median milk volumes produced in the week without and with intervention (p = 0.009). **Conclusions:** According to the partial data of the study it was observed that the corn-based preparations used in the study had a positive impact on the milk production of the evaluated lactating women.

Keywords: Lactation; Galactogogues; Maternal Nutrition.

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MYOCARDIAL METABOLIC CHANGES IN RESPONSE TO EXERCISE: A
SYSTEMATIC REVIEW

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Introduction: Exercise produces a hypertrophic and metabolic effect on myocardial cells, especially those located in the left ventricle. Thus, coronary flow is increased due to increased oxygen demand, resulting in resting bradycardia in athletes and preventing coronary disease through angiogenesis and active hyperemia. Other myocardial metabolic consequences due to ventricular hypertrophy caused by exercise are still discussed. **Objectives:** To analyze the influence of exercise on cardiac cells and to relate the consequences of myocardial hypertrophy to lipid levels and cardiac pathologies such as acute myocardial infarction, arrhythmias and coronary atherosclerosis. **Material and methods:** The survey was conducted at the Virtual Health Library, guided by the guiding question: “Does physical exercise promote metabolic changes in the myocardium?” Only complete human studies published between 2014 and 2019 were included. The descriptors “myocardium” AND “hypertrophy” OR “resistance training” AND “exercise” were used. **Results:** Of the 130 articles found, 54 articles met the inclusion criteria. By reading the titles and abstracts, 40 articles that did not cover the guiding theme were excluded, finishing with 14 articles. **Conclusions:** Exercise increases myocardial tissue oxygen demand by simultaneously stimulating ventricular work, contractility and heart rate. This demand is supplied by increased coronary blood flow with vasodilator effects, β -2 adrenergic stimulation and increased intrinsic myocardial contractility, and by the release of ATP from red blood cells in response to reduced partial oxygen pressure. The effects of physical activity are demonstrated by the reduced resting heart rate of high performance athletes due to myocardial hypertrophy and studies indicate that even one session of intense exercise is sufficient to reduce the risks of acute myocardial infarction, coronary artery disease and arrhythmias, for enhancing the affinity of ATP-sensitive potassium channel subunits in the sarcolemma. There are, however, studies indicating that ventricular dilatation in athletes may contribute to arrhythmogenesis. There are no significant changes in red blood cell 2,3-bisphosphoglycerate levels. The amount of serum free fatty acids in athletes is increased by two-fold due to increased oxidation of myocardial fatty acids.

Keywords: Myocardium; Physical exercise; Cardiac hypertrophy.

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**INDISCRIMINATE USE OF PARACETAMOL AND THE RISKS OF
INTOXICATION**

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Introduction: Paracetamol is a commonly used pain reliever because it is well tolerated and is available without a prescription; however it is one of the main medicines used for self-medication, pain relief and fever reduction. The great popularity of the drug, coupled with the unawareness of the consequences of its abuse by both the population and some health professionals, makes intoxication with this drug a growing health problem.

Objectives: To bring knowledge and explanations about Paracetamol, toxicity, detoxification treatment and understanding about the indiscriminate use of this medicine.

Materials and Methods: The research elaborated in this study is of bibliographical order, of descriptive and explanatory character, as it covers the reading, analysis and interpretation of texts and scientific articles, books and periodicals.

Results: The study brings knowledge and explanations about Paracetamol self-medication to health professionals and users of this medicine. **Conclusions:** It is concluded that it is extremely important that the pharmacist, who specializes in medication, provides information on oral administration of Paracetamol, therapeutic doses, drug interactions and risk of poisoning; and clarify adverse reactions and side effects to ensure maximum treatment efficiency and reduce the risks generated by this drug.

Keywords: Acetaminophen, Paracetamol, Liver poisoning, Self-medication.

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**HARDINESS CLASSIFICATION OF HEALTH PROFESSIONALS IN THE
HOSPITAL AREA**

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Introduction: Health professionals in the hospital area are in contact with various physical and mental stressors, which can cause their illness. Thus, it is necessary that this worker develops means to cope with these adverse situations. A coping strategy is the development of the hardiness personality, characterized by individual attributes that allow resistance to stressors. **Objective:** To evaluate the classification of hardiness scores of health professionals working in hospital services of greater complexity from the north of Minas Gerais- Brazil. **Materials and methods:** A descriptive, cross-sectional study of quantitative approach, conducted in the reference health services in oncology, nephrology, neonatal intensive care and emergency of the municipalities of Montes Claros, Salinas, Janaúba, Brasília de Minas and Pirapora in the from January 2017 to April 2018. The study was conducted with 469 health professionals who provide direct assistance to critically/ chronic patients. The inclusion criterion is that it has been operating for at least six months in the sector. Professionals in the absence of work activities by license or during vacation were excluded from the study. A socio-demographic questionnaire and the Hardiness Scale were used to measure the proposed variables, composed of 30 items arranged on a Four-point Likert scale, addressing the control, commitment and challenge domains. Data were analyzed using SPSS statistical software, version 20.0. The project was approved by the opinion of the Ethics Committee number: 1,687,445. **Results:** A total of 469 health professionals participated in this study, with 368 (65.7%) of the female sex and 161 (34.3%) of the male sex, mostly in the age group of 30-39 years (48.8%). As for marital status, 61.8% are married or in a stable union and 64.4% with children. There was a predominance of Catholic religion (69.1%), and monthly income of 3 to 6 minimum wages (40.9%). Regarding the classification of the hardiness scores in relation to the control, commitment and challenge domains, health professionals with high hardiness present predominance of the challenge domain (38.4%), moderate hardiness prevailing in the domain commitment (49.5%) and low hardiness with predominance of the control domain (23.2%). The classification of the total scores in the hardiness scale, evidenced preponderance of moderate hardiness (48,4%). **Conclusions:** The hardiness personality is strongly related to the health and well-being of the professional active in hospital services that serve critical patients, and it is necessary to foster strategies or the development of greater psychological resistance in these workers. **Keywords:** Psychological Adaptation; Psychological Resilience; Health Professionals; Occupational Health.

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**DESCRIPTIVE ANALYSIS OF PCR IN PATIENTS WITH CHAGAS DISEASE:
SAMI-TROP PROJECT**

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Introduction: Chagas Disease remains neglected after a century of its discovery, although it represents a major economic and social burden for Latin American countries and an emerging global health problem. *Polymerase chain reaction* (PCR) allows the precise identification of the disease-causing agent DNA, confirming the etiology of the disease, acting as a complement in cases of inconclusive or discordant serological results and serving as an indicator of therapeutic failure. A negative PCR test does not exclude the possibility of infection, considering the small and intermittent number of circulating parasites during the chronic phase of the disease; however, a positive test has an absolute diagnostic value. **Objective:** To evaluate factors associated with PCR testing in patients with Chagas disease in two endemic Brazilian mesoregions. **Methodology:** This is a cross-sectional view of the first phase of a Brazilian cohort of people with Chagas disease, developed in 21 endemic municipalities of the North and Vale Jequitinhonha of Minas Gerais, between 2011 and 2012. 2047 people with Chagas Disease participated in this study. The dependent variable was the qualitative examination of PCR and the independent variables were age, gender and previous treatment with benzonidazole. Simple (n) and relative (%) frequencies were estimated and descriptive analysis performed sequentially. **Results:** Of the 2047 patients evaluated, 740 (36.2%) had positive PCR. Comparing the independent variables, 38.2% of patients over 60 years old and 34.3% of patients up to 59 years old presented positive PCR. Regarding gender, 40.2% of men had positive PCR and 34.1% of women had positive PCR. Untreated patients had higher positivity (41.3%) than previously treated patients (21.5%). **Conclusion:** Given the above, it was observed that older male patients not treated with benzonidazole had higher positivity for PCR.

Keywords: Chagas Disease; Diagnosis; Polymerase chain reaction.

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**THE PROPOSAL OF ELDERLY HEALTH MATRICITION IN BASIC CARE
AND ITS POSITIVE POINTS- A SISTEMYC LITERATURE REVIEW**

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Introduction: The world elderly population presents exponential growth demanding health policies that focus on the qualification of Family Health Strategy teams in the particularities of this age group. Understanding about public health, the aging process involves physiological changes that determine vulnerabilities and, consequently, risk of weakening. Health care in the elderly requires strategies that determine a differentiated model of care to be provided to the elderly. In this context, matriculation or matrix support promotes the articulation between continuous educational and care practices within the Unified Health System, allowing a partnership between primary and secondary care. It is also presented as a broader view of the process of health care of users in public care systems. **Objectives:** This study aims to describe the importance of implementing health matrix in health services, in addition to clarifying the positive and negative points routinely in health services. **Materials and method:** This is a descriptive quantitative study based on literature review. Data collection was performed in PubMed, Scielo and Google Scholar databases. The inclusion criteria analyzed were that the articles were available in Portuguese and English, free of charge and according to the objective of the study from 2013 to 2019. Initially 15 articles were selected using the keywords: Unified Health System, Attention Primary, Public Health, Matriciation and Matrix Support, of these only 10 articles met the criteria for the study. Theses, dissertations and books on the proposed theme were excluded. **Materials and method:** This is a descriptive quantitative study based on literature review. Data collection was performed in PubMed, Scielo and Google Scholar databases. The inclusion criteria analyzed were that the articles were available in Portuguese and English, free of charge and according to the objective of the study from 2013 to 2019. Initially 15 articles were selected using the keywords: Unified Health System, Attention Primary Care, Public Health, Matrixing and Matrix Support. Thus, of these only 10 articles met the criteria for the study. Theses, dissertations and books on the proposed theme were excluded. **Results:** It is worth considering that public health matriculation facilitates the management of primary care in face of the difficulties present in everyday life, favoring the protection of specific audiences. The 2014 study, entitled “Possibilities and Challenges of Matrix Support in Primary Care: Professional Perceptions”, pointed out that matrix support or support demonstrates an important articulation basis involving different levels of attention of the mental health care network. and / or elderly, also describes being a reliable support for family health teams. **Conclusions or Final Considerations:** Thus, the understanding of the importance of matriculation in the whole health process became clear, reinforcing the positive points of

the proposal in the care networks, also revealing difficulties in the attributes of adaptation by professionals.

Keywords: Matriciation; Old man; Public health; Aging.

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**UNDERSTANDING HYPODERMOCLYSIS INVASIVE TECHNIQUE- A
REVIEW LITERATURE SYSTEM**

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Introduction: Hypodermoclysis, also understood as subcutaneous invasive therapy, is a centuries-old tactic that corresponds to the infusion of pharmacological substances and / or fluids into the subcutaneous space. This practice is not a realistic one coming from the hospital sectors as first aid, emergency care unit, intensive care center, because it does not add reliable in emergency causes. However, patients who adhere to palliative care, as they have a deficit in the mechanisms that match nutritional adequacy, hydration, need alternating pathways for optimal clinical support and survival. **Objectives:** According to the facts mentioned, this study aimed to concretize a knowledge about the “Hypodermoclysis”, consenting to the importance of this procedure, based on the scientific literature. **Materials and method:** This study is characterized as an integrative literature review, influential in the Scielo and PubMed databases. A total of 12 articles were selected, of which only 08 specifically addressed the concrete theme of this scientific review. The documents included for resourcefulness were filtered based on the years 2014 and 2019, while the theses, books or studies that presented the specific period lower than the proposed years were excluded. The keywords to search for these studies were hypodermoclysis, palliative care, subcutaneous and infusion, both registered according to the Health Sciences Descriptors. **Results:** However, the aging process associated with the accumulation of chronic noncommunicable diseases had a negative impact on the life of society and instead of being understood as a biological dimension, it is summarized with the end of life, almost always early or full of complications. . According to a study carried out in Lisbon in 2018, entitled “The subcutaneous route in the management of end-of-life symptoms: Health professionals' perspective”, the discussion arose that one of the essential ways of providing Quality of life and comfort to the terminally ill patient is subcutaneous administration, and although it is a mechanism of second choice in inferring the continuous and intermittent therapeutic infusion to patients in palliative care, this technique prevents greater suffering of this patient. and minimize possible venipuncture damage. **Conclusion or Final Considerations:** Thus, it is noteworthy the relevance of new technologies that are situated in public health and favor the magnitude of quality of life, comfort to the sick and family members that idealize their favorable outcome. In addition it was possible to realize the importance of the “Hypodermoclysis”, particularly in terminally ill patients.

Keywords: Subcutaneous route; Patients; Palliative care; Infusion.

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ARTERIAL HYPERTENSION IN CHAGASIC PATIENTS

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Introduction: Chagas disease (CD) is an infectious disease caused by the protozoan *Trypanosoma cruzi*. It is one of the most prevalent diseases in Latin America and has been advancing to non-endemic countries, alarming factor for world public health. Studies suggest that the pathogenic mechanisms of CD contribute to increased blood pressure, but there is controversy. **Objective:** To evaluate the relationship between demographic, biochemical and anthropometric factors with the occurrence of hypertension in chagasic patients. **Method:** This is a cross-sectional view of the second wave of the Sami-trop project (cohort study with patients with CD). The dependent variable was considered to be hypertensive. And as independent variables: physical activity, smoking, income, health Service, literacy, self-declared skin color, age, sex, consultation time (used the service in the last year), heart failure marker (BNP) categorized by age, cholesterol and body mass index (BMI). Simple (n), relative (%) and bivariate (Chi-square) tests were estimated. **Results:** The bivariate analysis showed a relationship between hypertension and income (p= 0.000), literacy (p= 0.000), age (p= 0.000), consultation time (p= 0.005), BNP (p= 0.019), hypercholesterolemia (p= 0.000) and BMI (p= 0.000). **Conclusion:** There was a relationship between sociodemographic factors (income, literacy, age and length of consultation), biochemicals (cholesterol and BNP) and anthropometric (BMI) with the occurrence of hypertension in chagasic patients. In this context, further studies are important, with in-depth analyzes on the subject aiming at new discoveries about Chagas disease and its aggravating factors.

Keywords: Chagas disease; Arterial hypertension; Epidemiology.

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PREVALENCE OF SLEEP ALTERATION IN THE ELDERLY

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Introduction: Aging is a process that causes changes in various systems of the body, and it is a new phenomenon to which even the most developed countries are trying to adapt. Sleep alterations associated with the aging process may be more frequently or severely present in certain groups of elderly people and are of particular relevance among this population, as they are common and may cause damage to daily life and health. These signs may be interpreted as indicative of cognitive impairment or dementia. **Objective:** To evaluate the quality of sleep in the elderly assisted at the Senior Health Reference Center of the State University of Montes Claros, Minas Gerais. **Method:** We performed a cross-sectional study with a sample of 616 elderly people aged 60 or more. Data collection occurred between April and September of 2018. Sociodemographic data and information on the sleep pattern of each participant were collected. Sleep quality was assessed by the Pittsburgh Sleep Quality Index. Data were analyzed by absolute and relative frequencies and statistical associations were calculated by binary analysis. **Results:** The average age of the population was 71.9 years, and 81.3% had less than four years of schooling. The prevalence of poor sleep quality was 77.1%. Regarding the bivariate analysis, the study found a statistically significant association for the variables gender (p-value = 0.02), age (p-value = 0.001), and education (p-value = 0.014). Women, very old, and poorly educated elderly had higher occurrences of poor sleep quality. **Conclusion:** The study reinforces that sociodemographic factors are important variables associated with sleep quality and should be considered by health professionals as potential risk factors for poor sleep quality and the consequences that are associated with this condition.

Keywords: Aged; Sleep; Aging.

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HOME VISIT: AN INTEGRATIVE SYSTEMATIC REVIEW OF LITERATURE

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Introduction: home visiting is part of a set of actions for prevention and diseases treatment, rehabilitation, palliation and health promotion, delivered at home. It emerges as a means to break the curative and medicalizing logic, given its more personal approach, which spells out the various dimensions of the individual and families. **Objectives:** to analyze the available scientific production related to home visits in the context of primary health care; identify the impacts of home visiting as a care tool; analyze the role of this tool in the teaching process in health areas; identify the impact of home visiting on the management of chronic diseases and discuss the difficulties related to it. **Materials and method:** an Integrative Systematic Review was performed. The articles were searched in April and May 2019 in the LILACS, SciELO and MedLine databases, applying the following combination of descriptors: “visita domiciliar” and “atenção primária à saúde”. **Results:** the initial search yielded 383 studies. Inclusion criteria (full text articles available for free; from the last 10 years, 2009 to 2019; published in English, Portuguese and Spanish) and exclusion (articles that escaped the central theme after reading the title and abstract and repeated articles) underwent critical reading, considered in the structuring of the review, 11 studies. **Final considerations:** It can be stated that home visiting ensures follow-up at all levels of health care, having a welcoming character, stimulating community participation and shortening the distance in the relationship between the team, individuals and families. It is a means to improve the training of health professionals, and can be a tool to enhance communication skills, accountability and welcoming families, requiring the student to create strategies to identify problems and resources to combat them. The visit is also a health care that increases adherence to treatment of chronic diseases, thus, using light technologies, represents a simple and inexpensive way to significantly increase the population life quality. However, this approach is still little explored, mainly due to the lack of adequate infrastructure, the unavailable professionals and the difficulty of moving them to their homes. Therefore, the underuse of home visits in the context of health is noteworthy, highlighting the need for greater investments to ensure the potential of this impacting tool.

Keywords: home visit, primary health care, family health.

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**CARDIOVASCULAR RISK FOOD CONSUMPTION AND ABDOMINAL FAT
EXCESS IN ADOLESCENTS**

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Introduction: Adolescents are part of the age group that stimulates the nutritional transition process, increasing the prevalence of overweight and obesity, and may be caused by excessive food consumption of ultra-processed, high-calorie, preservative-poor and nutrient-poor foods risk of non-communicable chronic diseases such as cardiovascular disease. **Objective:** To verify the association of excess abdominal fat with cardiovascular risk food intake. **Materials and Method:** This is a cross-sectional and quantitative study, component of a project entitled “School Health: nutritional assessment and cardiovascular risk among adolescents from public schools”. The study included 880 adolescents from 11 to 14 years old, enrolled in elementary school in municipal public schools in the urban area of Montes Claros. For data collection, a self-administered food consumption questionnaire was used and the students' physical evaluation was performed. In this study we used waist circumference and height. This research was approved by the Research Ethics Committee, under protocol N° 1,908,982. **Results:** The assessment of food intake showed that 58.7% and 32.4% of adolescents had consumed goodies (candies, chewing gum and lollipops) and fried or stuffed sweet cookies, more than 5 times in the last week, respectively. The analysis of the relationship between waist circumference and height diagnosed that 6.9% of the students had excess abdominal fat, thus presenting a risk of developing cardiovascular disease. In the association of excess abdominal fat with food intake, the intake of fried or stuffed sweet cookies was statistically significant ($p=0.004$). However, the relationship established between this association was inverse, since adolescents who were obese had lower consumption of these foods. **Conclusions:** In this study, part of the adolescents presented excess fat and inadequate food consumption, which can be considered a risk for cardiovascular diseases.

Keywords: Food Consumption; Abdominal fat; Teens.

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**OCCUPATIONAL FACTORS ASSOCIATED WITH SELF-PERCEPTION OF
HEALTH OF PROFESSIONALS OF HIGH COMPLEXITY HOSPITAL
SERVICES**

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Introduction: The hospital environment is classically considered unhealthy and stressful, which contributes to the physical and emotional illness of health professionals. **Objectives:** This study aims to verify the existence of associations between occupational factors and the perception of health of professionals in highly complex services. **Material and Methods:** Cross-sectional, descriptive and analytical study. A total of 469 health professionals participated in all reference services for oncology, hemodialysis, neonatal intensive care unit and emergency room care in the northern macro-region of Minas Gerais/Brazil. Professionals with more than six months of work in the sector and who agreed to participate in the study were included. The sample calculation was made by simple random sampling technique with replacement, considering a tolerable sample error of 5%, confidence interval of 95% and prevalence for the event of 50%. Self-applied questionnaires were used to assess the variables, with questions related to socio demographic, occupational and health characteristics. The data were tabulated using statistical software Statistical Package for the Social Science (SPSS®), version 20.0, where they were analyzed. To verify the existence of an association between the dependent variable "health perception" and other independent variables, the chi-square test was performed. The present research is part of a larger study, approved by the Research Ethics Committee of the Montes Claros State University under opinion number 1,687,445/2016. **Results:** Most of the health workers studied are less than 40 years old (76.4%), are technical level professionals (66.2%), with working time in the area less than 10 years old (52.3%), work exclusively during the day (54.2%), with weekly workload greater than 44 hours (43.3%). As for their own health status, 79.9% of professionals perceive themselves as having good/excellent health, and this perception was significantly worse in those with lower level of satisfaction and happiness with their work, as well as in those who feel more fatigued in their performance of their function ($p < 0.05$). **Conclusion:** It is evident that the level of health self perceived by the professionals surveyed is significantly conditioned to the degree of satisfaction and contentment in the performance of work. Thus, it is necessary to expand institutional projects to improve working conditions and coping strategies to promote the health of workers, strengthening their ability to maintain personal and professional well-being, positively impacting the quality of health services of high complexity. **Keywords:** Work, Occupational health, health professional.

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FAMILY HISTORY OF CANCER AND AUTISTIC DISORDER: A CASE-
CONTROL STUDY

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Introduction: Autistic Spectrum Disorder is a neurodevelopmental dysfunction characterized by various stages of severity, leading to symptoms like impaired social interaction and communication, restricted interest and repetitive behavior. Genetic factors account for about 35 to 40% of known causes for Autistic Disorder, while 60 to 65% are related to prenatal, perinatal, and postnatal environmental factors. This disorder is among the top ten causes of disability worldwide in children aged 5 to 9 years, which can be explained by the link between Autistic Disorder and other health problems, including cancer. **Objectives:** The purpose of this paper is to investigate the association between family history of cancer and Autistic Disorder. **Materials and Method:** A case-control study consisting of 243 individuals with Autism Spectrum Disorder (cases) and 886 neurotypes (controls) was performed. A semi-structured questionnaire was applied and multiple logistic regression was performed. **Results:** Through bivariate analysis (*odds ratio* - 1.97; 95% confidence interval: 1.47-2.63) and multiple analysis (*odds ratio* - 1.53; 95%: 1.11-2.11), was observed that children / adolescents with Autism Spectrum Disorder are more likely to have a family history of cancer when compared to adolescent/children without Autism Spectrum Disorder. In this case-control study, that investigated family history of cancer and Autistic Disorder in a Brazilian population, it was perceptible that in both bivariate and multiple analysis, children / adolescents with Autistic Disorder are more likely to have family history of cancer when compared to adolescent children without the disorder. The family history of cancer in the case group was more common in first-degree relatives (father and / or mother) and in any other kinship (cousins, uncles, great-grandparents, etc.), except in second-degree relatives. **Conclusion:** These results can be clinical and public health utility, and individuals diagnosed with Autism Spectrum Disorder should be screened more frequently for cancers for which they may have genetic susceptibility.

Keywords: Neoplasms; Autistic Disorder;

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**CHRONIC HEALTH CONDITIONS: ASSESSMENT OF ITS RELATIONSHIP
WITH SOCIAL CAPITAL BETWEEN BASIC EDUCATION TEACHERS**

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Introduction: Chronic health conditions, although preventable, treatable, are a public health problem worldwide. Social capital is a resource of the social structure that involves trust, reciprocity and can benefit people and contribute to the occurrence of collective actions. It influences the well-being and cooperation among people and in the community. Therefore, their presence on the existence of chronic health conditions is of great importance, encouraging individual care with a chronic health condition. **Objective:** Evaluate the relationship between chronic health conditions and social capital among teachers of basic education. **Materials and Method:** Cross-sectional study conducted among teachers of basic education. Probabilistic cluster sampling was performed in a single stage (schools). The sample calculation considered event prevalence = 50%, confidence level = 95%, standard error = 5%, Deff = 2 and an increase of 10% to compensate for losses. The estimate was 700 participants. A self-administered questionnaire was used, which assessed structural and cognitive social capital (World Bank Integrated Questionnaire for Measuring Social Capital) and made it possible to self-report diabetes, cholesterol / triglycerides, depressive symptoms (Beck Depression Inventory), stress symptoms. (Adult Stress Symptom Inventory) and Burnout Symptoms (*Cuestionário para la Evaluación del Síndrome de Quemar se por el Trabajo*). Physical assessments were performed, which allowed the survey of obesity and hypertension. Bivariate analyzes were conducted using the Statistical Package for Social Science (SPSS) program, version 18.0. Ethical precepts were respected and the project was approved by the Ethics Committee of the State University of Montes Claros (Approval No. 1.293.458.). **Results:** The following variables were related to structural social capital: diabetes (0.031), depressive symptoms (0.005), burnout symptoms (0.005) and hypertension (0.046) and related to cognitive social capital were depressive symptoms (0.002) and burnout symptoms (0.001). **Conclusion:** Some chronic health conditions may be influenced by social capital, both structural (diabetes, depressive symptoms, burnout symptoms and high blood pressure) and cognitive (depressive symptoms and burnout symptoms). Therefore, it is important to deepen studies in this context, with more robust analysis, multiple modeling. It is necessary to understand the relationships of trust and participation of the subject in society, which contribute to minimize health problems. **Keywords:** Teachers; Chronic diseases; Social Capital; Epidemiology.

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**SPACE DISTRIBUTION OF AMERICAN TEGUMENTARY LEISHMANIASIS
IN THE MUNICIPALITY OF MONTES CLAROS, MINAS GERAIS**

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Introduction: American Tegumentary Leishmaniasis is a neglected wild-type zoonosis that primarily affects wild animals, natural reservoirs, and secondarily domestic animals and humans, accidental hosts. Studies have recorded the rapid expansion of leishmaniasis worldwide and occurrences of cases of cutaneous leishmaniasis in urban centers. The main causes pointed to this are the anthropic impacts on the environment, which contribute to the emergence of new patterns of disease transmission. The municipality of Montes Claros, located in the north of Minas Gerais State is considered endemic for American Tegumentary Leishmaniasis and yet many aspects related to this endemic are still poorly described and clarified. The use of spatial techniques may contribute to a better understanding of the eco-epidemiology of American Tegumentary Leishmaniasis and, consequently, a better definition of disease control strategies. **Objective:** To analyze the spatial distribution of human cases of American Tegumentary Leishmaniasis (2007-2011) in the municipality of Montes Claros, Minas Gerais. **Materials and Methods:** Notification data related to cases of patients who had American Tegumentary Leishmaniasis, between 2007 and 2011, residing in the municipality of Montes Claros were collected at the Municipal Health Department of the municipality. The annual incidence of American Tegumentary Leishmaniasis was calculated by considering the at-risk population estimated from population data from the 2000 and 2010 demographic censuses using an exponential growth equation. The probable sites of infection of the patients were georeferenced, and their spatial distribution was analyzed by kernel density estimation using the QGIS 3.4.8 program. **Results:** Between 2007 and 2011, 320 cases of American Tegumentary Leishmaniasis were reported in the municipality of Montes Claros, Minas Gerais, of these 204 cases were included in the study. The incidence of the disease over the period evaluated ranged from 6.2 to 16.6 cases / 100,000 inhabitants, with increasing rates between 2009 and 2011. There were cases of the disease in all areas of the municipality, however, the highest densities cases were observed in the peripheral urban areas, with high intensities in the northern region of the city. **Final Considerations:** The municipality of Montes Claros has a high incidence of American Tegumentary Leishmaniasis, and the largest number of reported cases, between 2007 and 2011, occurred in the urban area, suggesting a possible home or peridomestic transmission. In this context, the need to adopt integrated control strategies (epidemiological and environmental surveillance) to combat the urbanization of American Tegumentary Leishmaniasis in the municipality is highlighted.

Keywords: Environmental health; Spatial analysis; Surveillance.

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**EFFECT OF HEALTH EDUCATION ON THE SELF-CARE BEHAVIOR OF
DIABETICS TREATED IN PRIMARY HEALTH CARE**

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Introduction: From the second half of the twentieth century, Brazil experienced significant changes in its demographic scenario, as well as in the morbidity and mortality profile of the population, due to the increased prevalence of overweight and obesity. One consequence of overweight and obesity is Type II Diabetes Mellitus, which is a worldwide public health problem. This discussion highlights an emerging challenge for public health: promoting health education interventions and promoting the autonomous and voluntary practice of healthy lifestyles¹⁷. Thinking about this, we realize the need of society, the patient and the scientific community, to be aware of the impact of health education on the lives of these individuals. **Objectives:** To compare self-care behavior in type II diabetic mellitus before and after health education intervention. **Materials and Methods:** This was a longitudinal, prospective, intervention and uncontrolled before and after study. Data were collected from a questionnaire that addressed sociodemographic, economic, lifestyle, eating habits, self-care behavior and anthropometric measures. **Results:** We evaluated 25 people of both sexes, with a mean age of 62.3 years. After health education interventions, it was observed that people significantly increased the average number of days they evaluated blood sugar ($p = 0.048$), evaluated blood sugar the number of times recommended by the doctor ($p = 0.033$), examined the feet ($p = 0.000$), examined the shoes before putting them on ($p = 0.041$) and injected insulin as recommended ($p = 0.046$). **Conclusion:** These findings point to the need to implement health education strategies, carried out by a multidisciplinary team, as a way to ensure quality of life preventing disease complications through self-care.

Keywords: Diabetes Mellitus; Health education; Health Care

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LARVICIDATED ACTIVITY OF THE AQUEOUS EXTRACT FROM
Mauritiella armata RACHILLA ABOUT *Aedes aegypti*.

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Introduction: *Aedes aegypti* (L.) (Diptera: Culicidae), known as dengue mosquito, is the main vector of various arboviruses such as Dengue, Urban Yellow Fever, Zika, Chikungunya and Mayaro. The arboviruses have increasing territorial dispersion, due to difficulty in the vector control. The conventional treatments with chemical larvicides select resistant populations of *Aedes aegypti* and cause negative effects on the environment and human health. The use of palm by-product extracts found in veredas is a sustainable alternative to vector control. **Objectives:** To evaluate the larvicidal activity of the aqueous extract of *Mauritiella armata* rachilla against *A. aegypti*. **Materials and Method:** *Mauritiella armata* (Xiriri) is a key species of vereda. The plant material was collected at the Environmental Protection Area (APA), Pandeiros, and it was deposited at Montes Claros Herbarium (Unimontes). The aqueous extract was prepared with 10 g of crushed *M. armata* rachilla diluted in 100 ml of distilled water, incubated in a water bath at 40° for 60 minutes. To detect larvicidal activity, 3rd and 4th instar larvae of *Aedes aegypti* (Rockefeller cepa) from an already established closed colony were used. The larvae were separated and transferred to disposable cups containing 30 mL of extract, at concentrations 89; 66, 75; 44,5; and 22,25 mg/ mL, plus the control group, containing only mineral water. The experiment was performed in triplicate containing 10 larvae in each container, totaling 150 larvae. The mortality was evaluated after 24 and 48 hours, being considered dead those who did not present movements to the stimuli. A comparison of the regression analyzes between mortality versus concentration on the times 24 e 48 hours was performed using the SAEG 2.1 (2007) package. Regression analysis calculation to estimate the concentration capable of causing 90% larval mortality (CL) was determined by Probit analysis with the same statistical program (p <0.05). **Results:** A significant difference was found between the tested concentrations (p <0.001). After 24 hours of incubation, *Mauritiella armata* induced the elimination of intestinal contents of larvae. However, the 48h incubation period promoted higher larval mortality (p <0.001) and presented larvicidal activity from 89.33% to 89 mg / mL (p <0.001). The lethal concentration 90 was determined to be 101.47 mg / ml. **Conclusion:** The aqueous extract of *Mauritiella armata* rachilla represents a promising alternative for the *Aedes aegypti* control, as it presented a larvicidal effect.

Keywords: Biological test, One health, vector control.

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**LOW BACK PAIN PREVALENCE IN PREGNANT WOMEN FOLLOWED BY
THE FAMILY HEALTH STRATEGY**

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Introduction: The occurrence of low back pain during pregnancy is a common event. The transformations undergone by the woman's body to shelter the fetus until birth, the anterior projection of the abdomen, postural habits, and other factors contribute to this discomfort. **Objective:** To describe the occurrence of low back pain during pregnancy according to the gestational trimester. **Materials and Methods:** This is a cross-sectional study aligned with a population-based cohort, based on partial data from the “ALGE Study - Health Conditions Assessment of Pregnant Women in Montes Claros - MG: longitudinal study”, which includes pregnant women accompanied by Family Health Strategy of the municipality of Montes Claros, Minas Gerais (MG) - Brazil. Data collection took place face to face, and upon consulting the pregnant woman's card, occurred in the Family Health Strategy units and in households. The analysis was performed using SPSS 22.0 software. Descriptive analyzes of absolute and relative frequency and the chi-square test were performed to verify the relationship between low back pain and gestational trimester. Ethical research precepts were fulfilled and the project was approved under protocol no. 2,483,623 / 2018. **Results:** 803 pregnant women distributed as follows: 167 in the first trimester, 321 in the second trimester and 326 in the third trimester of pregnancy. Among those in the first trimester, 64.7% complained of low back pain. In the second trimester 71% complained and in the third trimester the percentage increased to 80.4%. There was a statistically significant relationship between low back pain and gestational trimester ($p = 0.002$). **Conclusions:** The results of this investigation are in line with what is observed in the literature. Low back pain tends to worsen as the gestation time progresses.

Keywords: Pregnancy; Low Back Pain; Prevalence.

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THE MENTAL HEALTH OF PUBLIC SCHOOL TEACHERS ACCORDING
TO GENDER DIFFERENTIALS

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Introduction: The teaching class is pointed out as one of the professional categories most affected by mental suffering, which is strongly marked by gender differences. **Objective:** To describe the prevalence of psychosomatic diseases among teachers according to gender differentials. **Method:** This is a prevalence study using a probabilistic sample by conglomerates of public elementary school teachers. The Stress Inventory for Adults (ISSL) was used to assess stress symptoms, the Survey for the Assessment of Quemarse by Work Syndrome (CESQT) for Burnout Syndrome (SB) and the Back Depression Inventory (BDI) for depression symptoms, we also used the questionnaire with sociodemographic characteristics and occupational profile. Prevalences corrected by sample design and bivariate analyzes (Person's Chi-square and Fisher's Exact tests) were estimated to identify potential differences (α of 5%) between genders. **Results:** Of the 745 teachers investigated, 40.3% had symptoms of stress, 23.2% of depression and 13.8% of burnout. Women represented a large majority (85.4%), with higher proportions of married ($p = 0.000$), with children ($p = 0.000$), lower social class ($p = 0.013$), higher workload ($p = 0.012$), higher prevalence of stress ($p = 0.000$). Men had higher titration ($p = 0.000$), lower workload ($p = 0.012$), more satisfied with work ($p = 0.026$), effective employment ($p = 0.002$) and lower perception of stress effects ($p = 0.000$). Depressive ($p = 0.663$) and Burnout ($p = 0.062$) symptoms were not associated with gender. **Conclusion:** Stress as mental distress was associated with gender, especially with a high prevalence in women. The depressive and burnout symptoms did not show this difference in this study. The socioeconomic and occupational profile was also associated with gender. Thus, in teaching, there were important differences between genders suggesting that the coping strategies of the problems identified need to be distinct in the teaching class.

Keywords: Mental Health; Teachers; Gender difference.

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DISTRIBUTION AND NATURAL INFECTION OF TRIATOMINES IN THE
MUNICIPALITY OF MONTES CLAROS, MINAS GERAIS

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Introduction: Chagas disease (CD) still represents a serious public health problem. In Brazil, there are approximately two to three million chagasic with about six thousand deaths per year. Currently, the Chagas Disease Control Program is in the stage of epidemiological surveillance. However, it is weakened and disjointed. **Objectives:** To evaluate the occurrence of triatomines and natural infection by *Trypanosoma cruzi* in the municipality of Montes Claros, Minas Gerais. **Materials and Methods:** For this study, it has been used the data provided by the Zoonosis Control Center (ZCC), referring to the capture of triatomines in Montes Claros, Minas Gerais, through passive and active entomological surveillance, and natural infection by *Trypanosoma cruzi*, between the years 2017 and 2019. In the *Microsoft Excel* program, a descriptive statistical analysis of the proportions of triatomine species found in the peridomicile and intradomicile was performed. The sites of occurrence of the positive insects for *Trypanosoma cruzi* were georeferenced using a global positioning system and analyzed in the ArcGIS 10.5 program. **Results:** In the evaluated period, 999 triatomines were captured, 89.8% (n = 897) in rural zone and 10.2% (n = 102) in urban area. The majority of the specimens were captured in the peridomicile (88.1%). The species with the highest number of specimens captured was *Triatoma sordida* (n = 947), followed by *Triatoma pseudomaculata* (n = 33), *Panstrongylus geniculatus* (n = 9), *Panstrongylus diasi* (n = 7) and *Rhodnius neglectus* (n = 5), all found infesting the intradomicile and peridomicile. The species *Rhodnius plolixus* (n = 1) was found only in urban area and *Triatoma melanocephala* (n = 5) and *Panstrongylus megistus* (n = 2) only in rural zone. The natural infection rate by *Trypanosoma cruzi* of these insects was 0.7% (n = 7). The infection was observed in exemplaries of the species *Triatoma sordida* (n = 3), *Triatoma pseudomaculata* (n = 3) and *Panstrongylus diasi* (n = 1), all captured inside home of urban areas. **Final considerations:** The presence of different species of triatomines infested with *Trypanosoma cruzi* infecting the intradomicile of residential units in urban areas in the municipality of Montes Claros is worrying, suggesting risk of transmitting the parasite to humans and domestic animals. In this context, it is necessary to continue the performance of entomological surveillance activities in the municipality in order to avoid the colonization of the home units by triatomines.

Keywords: Chagas Disease; One health; Spatial analysis.

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FACTORS ASSOCIATED WITH PHYSICAL INACTIVITY IN THE ELDERLY

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Introduction: Aging is a process that causes changes in various systems of the body and it is a new phenomenon to which even the most developed countries are trying to adapt. Among behavioral and lifestyle factors, physical activity is considered one of the main determinants of active aging and plays an important role in improving quality of life, as well as reducing disability and morbidity. Physical activity, whether in the form of physical exercise or routine daily activities and limited sedentary time, is an important indicator of health in the elderly. **Objective:** To evaluate the prevalence of inactivity in the elderly population treated at the Senior Health Reference Center of the Montes Claros State University, Minas Gerais. **Method:** We performed a cross-sectional study with a sample of 616 elderly people aged 60 or more. Data collection occurred between April and September of 2018. Sociodemographic data were collected and information on physical inactivity was measured by the International Physical Activity Questionnaire (IPAQ). Data were analyzed by absolute and relative frequencies and then binary analysis was performed using the Pearson Chi-Square test, adopting a significance level of $p < 0.05$. **Results:** The prevalence of physical inactivity was 90.3% among the surveyed. Regarding the bivariate analysis, the study found a statistically significant association for the variables gender, age, and education, being p -values = 0.002, 0.01, 0.022, respectively. It was found that men, young old (60-69 years), and poorly educated elderly (0-4 years) had higher occurrences of physical inactivity. **Conclusion:** The statistical association was observed for gender, age, and schooling. The present study reinforces that sociodemographic factors are important variables associated with physical inactivity and should be considered by health professionals as potential risk factors for the condition under study.

Keywords: Aged; Motor activity; Aging.

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II CONGRESSO INTERNACIONAL EM CIÊNCIAS DA SAÚDE I CONGRESSO INTERNACIONAL EM BIOTECNOLOGIA I CONGRESSO INTERNACIONAL EM CUIDADO PRIMÁRIO À SAÚDE

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BASELINE ASSESSMENT OF POST-SURGERY SENSITIVITY IN BULK FILL RESIN RESTORATIONS COMPARED TO CONVENTIONAL RESINS UNDER DIFFERENT ADHESIVE SYSTEMS

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Introduction: The evolution of dentistry minimally invasive as well as the improvement of the physical and chemical properties of the direct composites has allowed the introduction of innovative restoration materials referred to posterior teeth which associate aesthetics with stages and clinical time reductions. In light of the clinical efficiency associated with the practicality of the restoring technique, the present decade witnesses the outbreak of the single filling resins or Bulk fill. **Objective:** To compare the clinical performance of the Bulk fill resin to the one of a conventional composite resin in the face of different adhesive strategies. **Materials and Method:** This is a randomized controlled prospective longitudinal clinical study. For this study, patients were recruited from those who went to the Dental Clinics of the Faculdades de Odontologia da Universidade Estadual de Montes Claros, Faculdades Pitágoras and Faculdades Unidas do Norte de Minas, routinely. Each restoration chosen as a sample received one of the six types of treatment tested with conventional resin, Bulk fill flow and regular Bulk fill. As a tool for the assessment of the clinical performance of the restorations, the criteria and notations of the International Dental Federation (IDF) were used. This research was approved by the Ethics Committee under the number 2.890.866. **Results:** 35 patients took part in this study, of which 25 were women and 10 men, with ages ranging from 21 to 55 years old. 155 class I restorations were performed in posterior teeth, of those 116 molars and 39 premolars distributed in the 6 study groups. The assessments were carried out by two trained and calibrated assessors. The inter and intra-assessor agreements were verified by the Kappa index, being 85% the minimum of expected agreement. When assessing the baseline restorations, through the IDF method, eleven patients out of 30 sample units (46,5%) reported some kind of dental sensitivity in the first week post-restoration. Among those, (20,5%) belonged to group 1, (18,5%) to group 2, (13,04%) to group 3, (13,04%) to group 4, (18,18%) to group 5 and (34,6%) to group 6. **Conclusion:** After the analysis, it could be observed that both in the control group and in the other test groups, the sensitivity was present in the first week after the restoration and there was no significant difference among the groups, confirming the hypothesis that concerning dental hypersensitivity the single fill resins present a clinical performance similar to that of the conventional ones.

Key words: Bulk fill, Clinical trial, High viscosity.

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COMPLEMENTAR ADDITION OF DISTILLED WATER OR ISOTONIC
SALINE SOLUTION IN THE MICRODILUTION METHOD FOR
Enterobacteriaceae BACTERIA AND PROBIOTICS

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Introduction: The microdilution method is a validated tool used for microbiological drug sensibility tests, regulated in Brasil, North America and Europe. In the treatments called “control” it’s necessary to add volumes of inert fluids in a way such as to equal the concentrations of the substances in evaluation. Many elements may provide, difficult or even inhibit microbial growth. When bacterial cells are in aqueous media, they may suffer lysis or dehydration because of large solute concentration difference present in the solution. **Objective:** to compare the interfering effects arising from the addition of sterile distilled water (SDW) or isotonic solution (NaCl, 0.9% m/v) on *Enterobacteriaceae* species and lactic acid bacteria, in a microdilution test. **Materials and Method:** A suspension was inoculated on a microtiter plate, and it comprehended *Escherichia coli* ATCC 8739, *Enterococcus faecalis* ATCC 4083, *Lactococcus lactis* NCDO 2118, *Enterobacter sakazakii* ATCC 29544, *Klebsiella oxytoca*, *Salmonella enteritidis*, *Lactobacillus rhamnosus* and two isolated *E. coli*, obtained from animals submitted to alcoholic ingestion. All procedures were done in accordance to the standards from The Clinical and Laboratory Standards Institute. At the end of the trial the measurement of the absorbance was performed (OD, $\lambda=630$ nm) as well as the plating, in triplicate, of aliquots from all treatments for posterior estimation of surviving cells. The bacteria density was expressed in Log_{10} UFC.mL⁻¹. Furthermore, the Pearson correlation between the OD registries and the viable bacteria density (VBD) in treatments was estimated. **Results:** a lesser growth was observed on the *E. coli* obtained from animal submitted to alcoholic ingestion, *L. rhamnosus* and *L. lactis* in the treatment with the addition of isotonic NaCl solution, when compared with their growth on SDW. Therefore, it was not observed any mathematical correlation between OD and VBD. Besides, the addition of saline solution on the test was prejudicial to the microorganisms, which suggests there is interference in the final solute concentration already arising from the culture medium. **Conclusion:** the addition of saline solution to the “control” treatments in the microdilution method should be practiced with criteria and prior knowledge of bacteria sensitivity. The using of SDW is safer in generic protocols for drug sensitivity tests. **Keywords:** *Enterobacteriaceae*, Lactic acid bacteria; SDW; NaCl 0,9%.

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II CONGRESSO INTERNACIONAL EM CIÊNCIAS DA SAÚDE I CONGRESSO INTERNACIONAL EM BIOTECNOLOGIA I CONGRESSO INTERNACIONAL EM CUIDADO PRIMÁRIO À SAÚDE

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**TRAFFIC ACCIDENTS IN A CITY IN THE NORTH OF MINAS GERAIS,
BRAZIL: PARTIAL RESULTS**

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Simone de Melo Costa³

Introduction: In a study of the World Health Organization, it was recorded, in 2009, about 1.3 million deaths from traffic accidents in 178 countries. Approximately 50 million people survived with sequelae. The traffic events come from the combination of factors related to the system and its users, the environment and vehicles. Traffic accidents are characterized as multidimensional problems and therefore requires a comprehensive approach of the determinants, outcomes and possible solutions. Transit systems are complex, dynamic and embracing. **Objective:** To describe aspects related to people who were involved in traffic accidents, in 2018, in a municipality of the north of Minas Gerais. **Materials and Method:** Epidemiological descriptive cross-sectional study with secondary data collection through the Military Fire Department bulletins in 2018. The data refer to traffic accidents that occurred in the urban area of the municipality. The profile of the injured, the type of vehicle and the type of trauma were described. Descriptive statistics were performed using the IBM SPSS version 22.0 program using absolute and percentage values. Research project approved by the Ethics Committee, opinion n° 3.040.538. **Results:** These are partial results, including in this study the analysis of 600 reports of occurrences, involving people from one to 79 years. Most of the injured were male (64.8%) and had completed high school (54.4%). Singles, 42,5%. Regarding the type of vehicle involved, the motorcycle showed the highest rate (80.0%) and 5.3% were in transit in service. Head / head trauma was detected for 9.0% and chest trauma for 2.7%. **Conclusions:** The results show that men were more involved in traffic accidents, with the motorcycle being the most frequent vehicle. Major trauma were observed among injured. In this sense, the need is observed to enable educational actions with a view to prevent traffic accidents, currently considered a public health problem. **Keywords:** Traffic accidents; Public health; Epidemiology.

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**EVALUATION OF PHYSICAL ACTIVITY ON THE COGNITION OF
ADOLESCENTS**

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Introduction: Every learning process occurs through brain stimuli. The mechanisms by which individuals interpret, perceive and utilize the knowledge acquired, are related to the cognitive spectrum, which should be potentialized and maximized in the learning process, through sources that generate these stimuli. **Objectives:** This systematic review sought to highlight the role of physical activity in the process neuro-learning in adolescents, contributing to the school and cognitive performance. **Materials and Methods:** The following databases were used for this research: MEDLINE / PubMed, Web of Science, nature neuroscience. Ten studies were analyzed in this systematic review. The inclusion criteria were based on the executive function response from exercise and assessments in adolescents. **Results:** Of the ten articles analyzed, six reported significant effects of physical activity on cognitive improvement in adolescents. In the findings, two of them affirmed the inconsistency of evidence of cognitive and beneficial performance in adolescents, the other findings refer to few evidence or little improvement in their cognition. **Final Considerations:** The studies included in this systematic review indicated the potential performance relationship and cognitive improvement of adolescents through the physical activity. However, more research is necessary, because the different ways of assessing the relationship of physical activity and cognition based on the intensity parameters, influence of sex and type of activity and exercise periods, may justify a certain variation in the results.

Keywords: cognitive function; health promotion; teenagers; physical activity.

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ADEQUACY OF HOSPITAL TREATMENT TO PREVENT VERTICAL
TRANSMISSION OF SYPHILIS

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Introduction: Congenital syphilis remains a challenge to public health in many countries. The Pan American Health Organization has defined its elimination as a priority, adopting as a goal the reduction of incidence to 0.5 or less per 1000 live births. Considering the epidemic infection, the objective of this study was to describe and evaluate the actions aimed at preventing vertical transmission of syphilis and reducing its morbidity and mortality. **Materials and Method:** A retrospective cohort study performed in two maternity hospitals in the city of Montes Claros, Minas Gerais, Brazil. The population was women diagnosed with syphilis, who were attended to during delivery, from 2014 to 2017 and their respective newborns. The variables of interest were collected from the medical records and analyzed in a descriptive and inferential manner by the SPSS software version 20.0. **Results:** A total of 250 pairs of parturients / puerperae and newborns exposed to syphilis were included in the study. The coefficient of detection of syphilis in pregnant women in the period was 10.4 / 1000 live births and the incidence rate of congenital syphilis of 11.9 / 1000 live births. Hospital management of parturients / puerperae was inadequate in 54.0% of the cases and in 74.2% of the newborns. The main reasons for the inadequacy of the assistance to women were the lack of treatment (11.8) and referral of the same to the end of treatment / cure control (65.2%). The non-notification of the case (67.6%) and the failure to perform X-rays of long bones (28.9%) were the most noteworthy for the newborn. Significant association with maternal management was found in the following variables: case of syphilis reported during pregnancy ($p = 0.033$); ($p = 0.036$), parturient / puerperal VDRL titration ($p < 0.001$), number of previous abortions ($p = 0.006$), maternity partner treatment ($p < 0.001$), and period of labor ($p < 0.001$). For the newborns, the following independent variables were associated with the outcome: long bone RX ($p = 0.001$), congenital syphilis definition criterion ($p = 0.006$), case report ($p < 0.001$) and period of occurrence of birth ($p < 0.001$). **Conclusion:** These results indicate that hospital health care professionals do not follow all the guidelines and recommendations of the Ministry of Health.

Keywords: Congenital syphilis; Prevention; Health assessment

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**SOFTWARE DEVELOPMENT AND MOBILE APPLICATION FOR
RESEARCH MANAGEMENT**

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Introduction: The research, whether at the population or clinical level, is the essential mechanism for monitoring determinants of morbidity and mortality, contributing to policy and intervention projects development, while the data collect assuming an important aspect in this process. The data collect through electronic devices, such as smartphones and tablets, was considered more accurate and timely than the research on paper, highlighting the saving of time and money in data tabulation. The technology applied to the research has become an important mean to improve stages of information processing and organization, favoring the data management; presenting security and agility in the availability, supporting the research development and the analysis of results.

Objectives: Describe the development of a software to the management of health research through mobile app, to data gathering. **Materials and methods:** Applied research of technological production with the development of a system, called Research Management System (RMS), which will be applied on health research with the following functionalities: construction and insertion of research instruments; exportation of mobile search instruments; development of mobile device for application of research in the data collection process; calibration of examiners with Kappa statistical calculations; reports issuance, database exportation for analysis in other systems. Software developed with Web interface, in Hypertext Preprocessor® (PHP®). The Android® operational system was used on the app. **Resultados:** The software development was based on study and data structure modeling, allowing field research, with previously set up quizzes. The Web interface guaranteed the software reliability, portability, readability and reusability. The database form has the advantage of grouping questions, so it can generate new quizzes, with questions in many ways, dynamically. The app allows the receipt of questionnaires created on the RMS and the information gathering, enabling an information crossing between the research instruments. It guarantees dynamism, safety and economy on the information gathering process in the research. The data is transmitted to the server, accessed with username and password defined by the coordinator, with exportability in XLS format. **Conclusions and final considerations:** The RMS will help conduct the research, allowing the development of instruments, research data collection and management, with safety and dynamism regarding the record, storage and sending information. The app can be used offline, making the process more functional.

Keywords: Data collect; Informatics in public health; Technology and Software apps.

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A NUTRITIONAL INTERVENTION PROGRAM INFLUENCE ON WEIGHT LOSS AND RISK FACTORS ASSOCIATED WITH THE METABOLIC SYNDROME GENESIS IN ADULTS

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Background/Objectives: The high prevalence of overweight, obesity and metabolic syndrome (MetS) are major concerns of the world public health. The obesity treatment besides weight loss (WL), requires dietary environment changes and healthy lifestyle. Therefore, the aim of the present study was to evaluate the effects of an individualized nutritional intervention (INI) on the weight loss and risk factors associated with MetS.

Subjects/Methods: 400 patients were enrolled in a 12-week (T0 to T1 (4 weeks), T1 to T2 (4 weeks), and T2 to T3 (4 weeks)) INI, being evaluated before the diet plan delivery (through nutritional anamnesis, RD24h, anthropometric and metabolic evaluation) at T0 and after this period, with final adherence of 237 participants. The demographic and nutritional parameters were described in distributions of frequency at baseline. To compare gender frequency, the chi-square test was performed. The anthropometric and biochemical parameters were compared using an unpaired Student's t-test. The nutritional intervention effects over time were evaluated using a two-way ANOVA test. The significance level was set as 0.05. **Results:** The calorie deficit of 500 to 600Kcal/day promoted a WL of 6.7% in males and 5% in females (decreased Body Mass Index (BMI) and Waist Circumference (WC)). The INI promoted statistically significant reductions in the glucose, Total Cholesterol (TC) and Triglycerides (TG) levels and increase in the levels of HDL, along with decreased risk factors for MetS in women and a few men.

Conclusions: We conclude that the INI effects were effective in the weight loss management and metabolic control.

Keywords: Nutritional intervention; obesity; weight loss; metabolic syndrome; lifestyle

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**WOMEN'S PERCEPTION OVER OBSTETRIC ASSISTANCE IN BRAZIL: A
SYSTEMATIC REVIEW**

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Introduction: Motherhood represents a unique moment in a woman's life. Considered an important physiological process that involves the partner, the family, and the professional team, it consists of joy and good expectations as well as fears and insecurities regarding the quality of care. **Aims:** Conduct a systematic review of literature on Brazilian women's perception of childbirth care and whether the implementation of good humanization practices in childbirth alters this perception. **Materials and Methods:** This is an integrative literature review, which performed a retrospective electronic search in the PUBMED, BDENF (Brazilian Nursing Database), LILACS (Latin American and Caribbean Health Sciences Literature) and MEDLINE databases using the following descriptors: “birth care” and “perception” or “birth” or “humanized” or “pregnant” or “woman” or “postpartum”. In addition to these databases, the SciELO electronic library was also consulted, ending the search in journals available on Capes' Portal to verify possible repetition of articles. Inclusion criteria were: research articles in Portuguese, English, and Spanish published in Brazil, which addressed women's perceptions of childbirth care in Brazil from 1984 to 2018. This research did not consider dissertations, theses, and research articles conducted abroad. **Results:** Of the 158 studies found, 20 met the inclusion criteria. Some publications positively highlighted good practices at labor and birth, such as the welcoming and support of professionals, especially those of the Nursing team, the implementation of non-pharmacological ways for pain relief, techniques of relaxation in labor, the stimulus of a bond between mother and child and the practice of breastfeeding. In contrast, other publications have pointed out some negative aspects that contradict the foundations of the Humanization of Childbirth Policy, that interfere with the implementation of good practices such as the routine performance of lithotomy, episiotomy, and amniotomy, excessive medicalization, insensitivity, as well as inadequate communication and professionals' physiognomic expression. **Final considerations:** it is expected that this review contributes to the development of new research on this theme, in order to identify obsolete and technocratic practices that go against the principles of humanization and completeness care, and thus reinforce the need for reflection and strengthening of public policies that prioritize the humanized and qualified conditions of care, which are based on technical competence, interpersonal relationships and the appropriate infrastructure for the care of the mother-child binomial. **Keywords:** Childbirth Assistance; Humanization of Childbirth; Obstetric Nursing.

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SYMPTOMS OF ANXIETY BY GESTATIONAL TRIMESTERS

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Introduction: Pregnancy is a time of transition that implies numerous intrapsychic, familiar and social changes. Such changes represent a time of emotional fragility, which may increase the risk of anxiety during this period, and there is also an association between gestational age and anxiety. **Objective:** To identify the prevalence of anxiety symptoms associated with the gestational trimesters in pregnant women under the care of the “Estratégia Saúde da Família” (ESF) in Montes Claros. **Material and Methods:** The research is part of the project “Estudo ALGE - Avaliação das Condições de Saúde das Gestantes de Montes Claros - MG: estudo longitudinal”. It is a cross-sectional, analytical study done with pregnant women registered in teams of the ESF in the city of Montes Claros - MG. Data were collected in 2018 and 2019 by a multiprofessional team. In order to collect the data, the tool Brazilian State-Trait Anxiety Inventory (STAI) was used. Descriptive analysis of the data was done with absolute and relative frequency. In order to analyze the association between the symptoms of anxiety and the gestational trimester, the chi-squared test was used, in which a 5% level of statistical significance was adopted. For the descriptive analysis, the program SPSS version 22 was used. The project was approved by the Unimontes Ethics Committee with the n°. 2.483.623/2018. **Results:** 804 pregnant women under the care of the ESF of Montes Claros - MG participated in the study. It was verified that, among women who are in the first gestational trimester, 56.4% stated that are quite calm or very much calm (p-value = 0.130). Among women who are in the second gestational trimester, 67.8% stated that are absolutely not uneasy or are a little uneasy (p-value = 0.780); 59.8% stated that are absolutely not too worried or are a little too worried (p-value = 0.812); 85.1% stated that absolutely do not feel nervous or feel a little nervous (p-value = 0.933); 88.9% stated that absolutely do not feel tense or feel a little tense (p-value = 0.206). **Conclusions:** Symptoms of anxiety are present among pregnant women, however, there was no significant statistical association between symptoms of anxiety and a specific gestational trimester. Therefore, it is important for the ESF teams to be alert for the symptoms of anxiety in all gestational trimesters.

Keywords: Anxiety; Pregnancy; Pregnancy trimesters

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TITLE: EVALUATION OF DENTAL ANOMALIES IN PATIENTS WITH CONGENITAL MICROCEPHALIA CAUSED BY ZIKA VIRUS INFECTION

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Introduction: Zika virus (ZIKV) is an arbovirus belonging to the family Flaviviridae and genus Flavivirus, transmitted by the gnat *Aedes aegypti*. The most common symptoms presented by individuals with ZIKV infection are fever, polyarthralgia, maculopathy, conjunctivitis, muscle pain, vomiting and neurological impairment. However, 80% of individuals are asymptomatic. From November 2015 to April 2016, the Brazilian Ministry of Health declared the implication of ZIKV in the microcephaly outbreak as a Public Health Emergency of National Importance. Orofacial development begins in the 4th week of intrauterine life, undergoing complex modifications until reaching morphofunctional maturity. Few studies have evaluated the presence of ZIKV infection in oral development. **Objective:** To identify and describe dental anomalies in patients diagnosed with congenital microcephaly caused by congenital Zika Virus infection. **Material and Methods:** Longitudinal, descriptive study, according to data collected through interviews with parents and clinical and radiographic findings, observed in patients belonging to the “*Association Mothers of Microcephaly*” in the region of Montes Claros, Minas Gerais, Brazil and diagnosed in the period between 2014 to 2017. **Results:** Nine children were included in the study. Of these, 5 had agenesis in deciduous dentition. 3 cases of Microdontia and 1 of twinning. Eight have delayed chronology and bruxism and 7 short lingual frenulum. **Conclusion:** Dental alterations present in the evaluated patients include: opacity and hypoplasia, bruxism, changes in the timing and sequence of primary teeth eruption, dental anomalies, enamel defects, agenesis. The late dental eruption being the most prevalent oral characteristic in the studied population. There are few published studies in the field of dentistry, so one should consider more about such an important change, aiming at a better knowledge of the clinical characteristics presented by this disorder, in order to collaborate with new diagnoses and multidisciplinary treatment. It is important to emphasize that this was the first study in the literature to report cases of dental agenesis in association with Zika virus.

KeyWords: zika vírus, microcephaly, agenesis.

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**CONSTRUCTION OF EDUCATION GUIDELINES IN THE FIELD OF
TRAINING OF HEALTH PROFESSIONALS: INTEGRATIVE REVIEW**

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Introduction: the need to train health professionals with a profile more suited to social needs triggered questions, discussions and proposals for curriculum revision, generating new pedagogical models. **Objective:** to understand the process of elaboration and application of curricular guidelines for health courses, analyzing successes, gaps and development of teaching methodologies, as well as the participation of the actors involved. **Materials and Method:** an integrative literature review guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) was conducted with the key question “What is exposed in the literature related to the development and application of Curriculum Guidelines in health education?”. The survey took place in May 2018 at Medical Literature Analysis and Retrieval System Online (MEDLINE) and Latin American and Caribbean Health Sciences Literature (LILACS) using the search algorithm “(Education, Medical, Undergraduate) AND Guidelines”. Articles that addressed the theme were selected and from them an overview was drawn. **Results:** the implementation of the National Curriculum Guidelines took place in the face of international and national transformations - such as the advent of the Alma Ata Conference and the creation of the Unified Health System - with a view to consolidating the holistic approach to health. National Curriculum Guidelines values a professional with a generalist, humanist and critical-reflexive background, capable of balancing technical excellence and social relevance. Specialists, health organizations and entities in the area contributed to its construction, but the participation of Higher Education Institutions was not clear. These, however, were considered key elements in the application of the guidelines, with the help of teachers and students, although there are determinants that make this process varied. In addition, it was found that the guidelines recommend active learning methodologies, but leave it up to schools to define their type. **Final Considerations:** the guidelines were developed through the joint participation of key agents, but this does not guarantee effectiveness in their implementation. This is because, at this stage, the way Higher Education Institutions deal with what is proposed depends on human and technological resources within their peculiarities, resulting in varied profiles of trained professionals.

Keywords: Health education; Medicine; Curriculum.

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**CARDIOVASCULAR RISK ASSESSED BY CONICITY INDEX IN CLIMATE
WOMEN: A COMPARATIVE ANALYSIS BETWEEN PRE AND POS
MENOPAUSE PERIODS**

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Introduction: Cardiovascular diseases are the leading cause of death in both developed and developing countries. Its high prevalence does not depend on gender, but in females, it increases significantly during the climacteric period. **Objective:** To evaluate cardiovascular risk by the conicity index in climacteric women by having pre and post menopause periods compared. **Materials and Methods:** This is a cross-sectional, analytical study conducted in 2014 and 2015 in the Family Health Strategies in the city of Montes Claros, Minas Gerais, Brazil. A two-stage cluster probability sample was adopted, consisting of women aged 40 to 65 years. Women who had a good assessment of general health conditions were included, and those with a diagnosis of cardiovascular disease and type I diabetes mellitus were excluded. Cardiovascular risk was determined by obtaining the conicity index, based on body weight, height and waist circumference measures, called the dependent variable, and the classification of the climacteric period was given according to the Brazilian Climacteric Society and later dichotomized into pre and post menopause. For statistical analysis, the absolute and relative frequency of the variables were estimated. The association between the dependent variable cardiovascular risk and the climacteric period was analyzed using Logistic Regression, and the level of 5% was assumed in the final model. This study was approved by the Ethics Committee under No. 817.166. **Results:** The sample consisted of 874 women whose average age ranged 51.03 ± 7.9 years old. The prevalence of cardiovascular risk estimated by the Conicity Index was 81.8% in the analyzed group. After logistic regression analysis, postmenopausal women demonstrated a 16% risk of cardiovascular disease (OR = 1.687; 95% CI: 1.157-2.459) ($p < 0.007$). **Conclusion:** The prevalence of cardiovascular risk in this population was high and is associated with the climacteric period. Investments in educational actions are necessary to prevent this condition and to control risk factors and their complications in the context of Primary Health Care.

Keywords: Climacteric; Obesity; Primary Health Care.

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**MATERNAL-FETAL ATTACHMENT IN PREGNANT WOMEN REGISTERED
IN THE *FAMILY HEALTH STRATEGY* PROGRAM**

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Introduction: The mother-child bond is strengthened after birth, but it begins during pregnancy and will influence the individual's entire existence, in their relationship with parents, with their peers and even in their future role as mother/father. Thus, the concept of maternal-fetal attachment emerges: the intensity with which the pregnant woman manifests behaviors that represent affiliation and integration with the fetus. The development of a secure attachment profile and better developmental outcomes for the child is related to the mother's sensitive responsiveness and the interactive patterns of the mother-fetus pair. **Objective:** To analyze items related to maternal-fetal attachment in pregnant women enrolled in the *Family Health Strategy* program. **Materials and Method:** Cross-sectional study nested in a population-based cohort conducted in Montes Claros, northern Minas Gerais - Brazil. The sample was calculated in 866 pregnant women, registered in all centers of the *Family Health Strategy* (FHS) program of the urban zone. Pregnant women regularly enrolled in family health teams who agreed to participate in all stages of the study were included. Data collection took place face-to-face in health facilities and households, having started in October 2018, and continuing to the present day. In this work, we used the Maternal-Fetal Attachment Scale, translated and validated in Brazil. Descriptive analyzes were processed. The research project was approved by the Research Ethics Committee Involving Human Beings, under protocol no. 2.483.623/2018. **Results:** The present work contains partial data from 804 participants, collected so far. It was observed that: 483 (60.3%) of the pregnant women said they were eager to see how the baby will be; 391 (48.8%) reported never calling the fetus by a nickname; 447 (55.7%) reported having imagined feeding the baby. Also, 175 (21.8%) and 186 (23.2%) claimed that they had not decided on the name they would give their child, whether girl or boy, respectively. **Conclusion:** The present study allowed to describe preliminary results about maternal-fetal attachment in pregnant women assisted in family health services. Disturbing findings were identified regarding naming the fetus by a nickname, as well as having thought of a name for the child. Thus, the results are important, highlighting the peculiar and complex nature of the maternal-fetal relationship, which demands greater attention from the *Family Health Strategy* teams in prenatal care. **Keywords:** Maternal-Fetal Relations; Pregnancy; Prenatal Care; Epidemiology.

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EVALUATION OF ORAL MANIFESTATIONS OF SECONDARY SYPHILIS

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Introduction: Syphilis is a sexually transmitted disease caused by *Treponema pallidum*. However, there are of hematogenic and vertical transmission. Oral manifestations are, in many cases, one of the first signs of the disease and can guide the correct and early diagnosis. The clinical features of syphilis are diverse, presents in three phases: primary, secondary, tertiary. This disease secondary stage is characterized by systemic involvement and diffuse and painless maculopapular cutaneous rash. **Objectives:** This study to analyze and compare four clinical cases of secondary syphilis that were diagnosed based on lesions in the oral cavity with published literature. **Material and Methods:** This is a clinical and laboratory study. Four patients aged 17 to 42, of both sexes. All patients were recruited from the in the Oral Medicine Service of the State University of Montes Claros, Minas Gerais State, Brazil, Literature reviews and clinical cases where the diagnosis of syphilis was initially addressed through oral lesions were used to compare the data. All patients were submitted to a clinical evaluation, and oral examinations. **Results:** Were analyzed, confirmed syphilis from manifestation of oral lesions together with analysis of serological laboratory tests and histopathological analyses. Patients were classified as 1 to 4. Patients 1 and 2 presented bilaterally lesions on the tongue and lower lip. Patients 3 and 4, in addition to oral lesions on lip and labial commissure, had blackened lesions on the skin and palms of the hands. All the patients were submitted to an incisional biopsy on the tongue, labial commissure or lips. Thus, in the 4 reported cases of secondary syphilis, the diagnosis was established by the clinical, laboratory and microscopic characteristics. **Discussion:** Lesions were found in classic sites such as lips, tongue and skin. However, there were also lesions on the hard palate, and labial commissure, they appear as oval reddish maculae or maculopapular eruptions (syphilitic rosette). Lesions similar to condyloma latum may occur in the oral cavity. At this stage, the appearance of spots or mucous plaques slightly elevated. The size of the lesions is variable and the margins are delimited. The histopathologic characteristics of secondary syphilis are as variable as the lesions. **Conclusions:** The acknowledgment of the oral manifestations of syphilis in all its period of training for health professionals is of basic importance, the association of clinical features, histopathological findings and serological tests are required to complete the diagnosis and correct treatment.

Key words: Oral syphilis; *Treponema pallidum*; secondary syphilis.

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PROFILE OF PREGNANT WOMEN AFFECTED BY HYPERTENSIVE SYNDROMES OF PREGNANCY

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Introduction: The Hypertensive Pregnancy Syndromes rank the second position in the ranking of maternal deaths causes. Second only to hemorrhages; accounting for about 14% of all maternal deaths worldwide. In Brazil, gestational hypertension is the leading cause of maternal death, especially in its most severe types. There are many other typical complications of the gestational period, and they illustrate the frame of hypertensive diseases. Among them, there are Chronic Hypertension, Pregnancy-Induced Hypertension, Preeclampsia, Superimposed Preeclampsia, and Hellp Syndrome. **Aims:** Describe the sociodemographic variables of pregnant women hospitalized suffering from Hypertensive Pregnancy Syndrome in public maternity in the countryside region of Minas Gerais. **Materials and Methods:** Quantitative, exploratory, descriptive, retrospective and documentary study, accomplished through the evaluation of medical records of pregnant women with the diagnosis of the hypertensive syndrome, admitted to the maternity ward of a public hospital located in the countryside region of Minas Gerais. We analyzed 102 medical records of pregnant women hospitalized between August 2014 and August 2015. We obtained the data collection and analysis instruments through a semi-structured form, taking into consideration the socio-demographic variables such as age, education, marital status, occupation, and race/color. The Human Research Ethics Committee approved the studies according to Opinion No. 3,085,439. **Results:** According to the medical records analyzed, 30.39% of the pregnant women were between the ages of 25 and 30 years, 44.13% did not report their level of education, 40.20% were single, 35.29% reported being housekeepers, 45.88% were from other cities and 60.79% said they had brown skin. **Conclusions:** We concluded that to minimize the complications resulted from Hypertensive Pregnancy Syndromes and to reduce the high rates of maternal and perinatal morbidity and mortality, it is relevant to reflect on health actions and evaluate the quality of care provided by health indicators. In this context, nurses are fundamental in the implementation of specific strategies and protocols that guarantee the promotion, prevention, and health recovery of these pregnant women.

Keywords: Gestational Hypertension; Women's Health; High-Risk Pregnancy.

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CLINICAL RELEVANCE OF BREAST AND GASTRIC CANCER-
ASSOCIATED POLYMORPHISMS AS POTENTIAL SUSCEPTIBILITY
MARKERS FOR ORAL CLEFTS IN THE BRAZILIAN POPULATION

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Introduction: Oral clefts and cancer may share similar genetic etiology. Genetics studies revealed that polymorphic variants in *AXIN2* and *CDHI* are risk factors for nonsyndromic cleft lip with or without cleft palate (NSCL±P) and tooth agenesis. Polymorphisms in *AXIN2* and germline *CDHI* mutations confer an increased risk for cancer. **Objective:** To evaluate the association of 9 single nucleotide polymorphisms (SNP) in *CDHI* and *AXIN2* with the risk of NSCL±P using a family-based study design (case-parent trios) in the Brazilian population. **Materials and Methods:** The cohort was composed of 223 trios composed of one affected offspring and two healthy parents. The SNPs were selected based on their minor allele frequencies, including rs16260, rs9929218, rs7186053 and rs4783573 in *CDHI* and rs7591, rs7210356, rs4791171, rs11079571 and rs3923087 in *AXIN2* were genotyped. The transmission disequilibrium test (TDT) and the haplotype-based analysis were conducted. The Z-score value measures the deviation from the null hypothesis. The pair-wise linkage disequilibrium (LD) was estimated from the combined data of all trios calculating D' and r² using the using Haploview software. The p value of <0.05 was considered statistically significant. **Results:** The minor A allele of *AXIN2* rs7210356 was significantly under-transmitted to patients with NSCL±P (p=0.01). HBAT analyses showed the C-G-A-A and A-G-A-G haplotypes formed by rs16260, rs9929218, rs7186053 and rs4783573 in *CDHI* were significantly transmitted from parents to the children with NSCL±P (p=0.01 and p=0.008, respectively). In *AXIN2* gene, the frequency of the T-G-G-A-G haplotype formed by rs7591, rs7210356, rs4791171, rs11079571 and rs3923087 SNPs was also under-transmitted to patients with NSCL±P (p=0.03). The LD values between *CDHI* SNPs were low, whereas *AXIN2* SNPs rs7591, rs7210256 and rs4791171 were in complete linkage disequilibrium (rs7591 and rs7210356: D' = 0.97 and r² = 0.10, rs7591 and rs4791171: D' = 0.93 and r² = 0.68, rs7210356 and rs4791171: D' = 0.95 and r² = 0.12). **Conclusions:** In the present study identified one SNP and one haplotype in *AXIN2* gene and two haplotypes in *CDHI* gene significantly associated with NSCL±P susceptibility in Brazilian population. Though, the population size in our study is small and the significant results need to be confirmed in larger groups with known family history of breast and gastric cancer to better understand the interactions between *AXIN2* and *CDHI* in the development of NSCL±P.

Keywords: Cleft lip; Cleft palate; Breast cancer; Gastric cancer; *AXIN2*; *CDHI*.

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EPIDEMIOLOGIC CLINICAL PROFILE OF PREGNANT WOMEN WITH
SYPHILIS IN MINAS GERAIS

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Introduction: Syphilis during pregnancy has increased significantly in number of cases in recent years, representing a challenge and a confrontation for health services in Brazil and in the world. Syphilis has deleterious effects on the mother and newborn binomial such as miscarriage, premature birth, low birth weight, malformation and even perinatal death. **Objectives:** To describe the clinical epidemiological profile of syphilis in pregnant women in the state of Minas Gerais. **Materials and Method:** This is a retrospective, descriptive cohort study with quantitative approach. The historical data series corresponded to the period from 2010 to 2018. Data were processed and analyzed using software and Excel (Microsoft®), whose results received simple treatment of descriptive statistics with variables in absolute and relative frequency. The variables were selected from the secondary database of the Syphilis Indicators and Basic Data in Brazilian cities. **Results:** Brazil registered 231,905 cases of pregnant women with syphilis. The Southeast region reported 108,731 cases of syphilis in pregnant women (2010 to 2018), in the historical series the state of Minas Gerais presented 15,168 cases of syphilis, that is, 13.95% of cases in the Southeast region. In 2010, 362 cases were reported and in 2017 there were 3,612 cases which correspond to an increase of 897.79% of syphilis in pregnant women; in 2017 the detection rate was 13.7. The prevalent age range was 20 to 29 years with 7,893 (52.03%) cases; 16.56% (2515 pregnant women) had not completed the 5th to 8th grade in school, self-declared that their skin color was brown 41.24% (6254 pregnant women). During this same period, 135,827 cases of congenital syphilis were reported. Diagnosis of maternal syphilis occurred during prenatal care in 29.97% of pregnant women, in 20.76% diagnoses occurred at the time of delivery and/or curettage. Regarding clinical conditions, primary syphilis was diagnosed in 5145 (33.92%) pregnant women, in 38.31% (5,811 pregnant women) the clinical condition was ignored, the cases of syphilis according to gestational age were 40.05% (6,076 pregnant women) in the third trimester of pregnancy, penicillin was the first choice in 80.64% of the cases. Inadequate treatment was identified in 330 (4.49%) pregnant women. **Final Considerations:** The increase in the number of syphilis cases in pregnant women is noticeable, which makes it clear that strategies are necessary to identify gaps and failures during the puerperal pregnancy cycle to reduce the number of cases and, consequently complications for the pregnant women and the newborn child.

Keywords: Epidemiological Profile; Syphilis; Latent syphilis.

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EPIDEMIOLOGICAL CLINICAL PROFILE OF CONGENITAL SYPHILIS IN
MINAS GERAIS

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Introduction: Congenital syphilis has increased significantly in number of cases in recent years, which represents a challenge and a confrontation for health services in Brazil and in the world. Congenital syphilis has deleterious effects on newborns such as preterm birth, low birth weight, malformation and even perinatal death. **Objectives:** To describe the clinical epidemiological profile of congenital syphilis in the state of Minas Gerais. **Materials and Method:** This is a retrospective, descriptive cohort study with quantitative approach. The historical data series corresponded to the period from 2010 to 2018. Data were processed and analyzed using software and Excel (Microsoft®), whose results received simple treatment of descriptive statistics with presentation of variables in absolute and relative frequency. The variables were selected from the secondary database of the Syphilis Indicators and Basic Data in the Brazilian cities. **Results:** In Brazil, 135,872 cases of congenital syphilis were reported. The Southeast region reported 58,732 (43.24%) cases of congenital syphilis. In the historical series, the state of Minas Gerais reported 8,481 cases which corresponds to 6.27% and 14.44% of the reported cases in Brazil and Southeast region respectively. In 2010, 309 cases were reported and in 2017 there were 1,812 cases, corresponding to an increase of 486.40% of congenital syphilis cases, in 2017 the detection rate was 6.8. The prevalent age group of newborns' mothers with syphilis was 20 to 29 years old with 4,367 (51.49%) cases; 16.20% (1,374 pregnant women) had incomplete schooling ranging from 5th to 8th grades, the self-declared skin color was brown 98.10% (4,396 pregnant women). Treatment of newborns' mothers was considered inadequate in 59.63% of reported cases. The cases of congenital syphilis according to the child's age younger than seven days of life were 8,165 (96.27%). Cases according to the final diagnosis of recent congenital syphilis were 7,980 (94.09%) cases, late 23 (0.27%) cases, abortion due to syphilis 189 (2.22%) and stillbirths due to syphilis 330 (3.89 %). Deaths of children under the age of 2 in 2015 were 23 with a gross mortality coefficient of 8.6. **Final Considerations:** The increase in the number of congenital syphilis cases is noticeable, which shows the necessity to identify gaps and failures during the pregnancy / puerperal cycle to reduce the number of cases and, consequently the complications and deaths from this condition.

Keywords: Epidemiological Profile; Syphilis; Congenital syphilis.

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ENALAPRIL IMPROVES OBESITY LIVER INJURY AND SYSTEMIC METABOLIC MARKERS IN MICE MODULATING ANGIOTENSIN CONVERTING ENZYMES ACE EXPRESSION

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Abstract: Obesity is a chronic disease caused by the association of multiple factors that result in excessive accumulation of body fat. The development of Metabolic Syndrome is also related to obesity, among other causes of an imbalance on the Renin Angiotensin System. **Aim:** analyze the effects of Enalapril on the metabolic function and hepatic steatosis of obese mice evaluating Angiotensin Converting Enzyme (ACE) expression. **Methods:** the experiment was performed with 32 male Swiss mice (8 weeks old) equally and randomly divided into 4 groups (n = 8). The groups were divided in standard diet (DP), standard diet plus Enalapril (DP+ ENAL), hyperlipidic diet (DH) and hyperlipidic diet plus Enalapril (DH + ENAL). Weekly measurements of animal weight and feed consumption were performed. At the end of treatment period a glucose tolerance test (TTG) and insulin sensitivity test (IST) were performed, and ultrasonography was used for hepatic and epididymal fat pad evaluation. Animals were sacrificed by decapitation, blood and tissue samples were collected after. Liver samples were submitted to HE histology and gene expression analysis was conducted by RT-PCR. **Results:** the main results demonstrate a decrease in body weight after treatment with Enalapril, as well as the size of epididymal adipose tissue (EAT). Hepatic echogenicity and steatosis measurement were lower in the groups treated with Enalapril. **Conclusions:** enalapril use reduced hepatic steatosis from the RAS-linked pathway by decreasing ACE expression. **Keywords:** Renin-angiotensin system; Enalapril; Obesity; ACE; Fatty liver.

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**EFFECT OF *SYZYGIUM JAMBOLANUM* HOMEOPATHIC PREPARATION
ON DIET-INDUCED OBESITY MICE**

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Introduction: Obesity is a serious worldwide public health problem, characterized by excess of body fat. It is one of the key components for the development of metabolic syndrome, which leads to several complications that directly impact on life expectancy and quality of life. Surgical complications and drug side effects contribute to the search for new therapies. Among the alternatives is homeopathy, an ancient practice adopted by the Sistema Único de Saúde (SUS) in Brazil, which uses dilutions of substances from minerals, plants and animals. Homeopathic preparations of *Syzygium jambolanum* are used in glycemic control, but their role is not well investigated. **Objective:** to evaluate the pharmacological action of *S. jambolanum* preparation on the body and metabolic dressings in mice with diet induced obesity. **Methodology:** Male-Swiss mice were used, allocated under standard conditions in the bioterium of the Universidade Estadual de Montes Claros, respecting the ethical principles according to protocol number 176/2018. Obesity was induced by high-lard/high-sugar diet according to team work, while the control received rodent chow diet. After eight weeks of induction, the animals were treated by gavage with *S. jambolanum* homeopathic preparation (20 mL/ 100g Body weight (BW)/ Day) and metformin (250 mg/kg BW/ Day) for 30 days using water as vehicle. Body composition parameters as well as biochemical parameters were evaluated. **Results:** There was a decrease in weight gain of obese animals treated with homeopathy. Adipose tissues from the *S. jambolanum*-treated group showed considerable improvement compared to those from the metformin-treated group. In this sense, both the weight loss of animals through the use of homeopathy and the treatment with metformin have been shown to decrease insulin resistance. These findings may be due to modulation of the AKT pathway, improving insulin sensitivity which may directly influence adipose tissue, as corroborated by another studies. **Conclusion:** The use of homeopathy may have positively impacted the weight loss of obese animals and decreased glycemia, thus validating safe use, as well as its importance in clinical practices in its recommendation by SUS.

Keywords: Diabetes *Mellitus*. Complementary and alternative medicine. *Syzygium jambolanum*.

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ARTERIAL STIFFNESS IN BLACK PEOPLE FROM BRAZIL AND ANGOLA

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Introduction: Arterial Stiffness is a predictor of cardiovascular risk and mortality, and may be estimated by the carotid-to-femoral pulse wave velocity (cf-PWV). As higher the cf-PWV levels, higher is the arterial stiffening. Black people have higher PWV as compared to white, regardless of the classical risk factors. **Objective:** The present study aimed to compare the cf-PWV levels between two black populations from Brazil and Angola. **Methods:** 748 black adult individuals of both genders were evaluated, being 133 Brazilians (48.9% women) and 615 Angolans (52.2% women). The groups were stratified by sex and the multiple statistical analysis were adjusted for the arterial stiffness known risk factors (age, systolic arterial pressure (SAP), glycaemia, uric acid, body mass index). **Results:** We observed that Brazilian black people presented higher cf-PWV as compared to the Angolans, regardless of gender, and after the adjustment for the confounding factors (Men: 10.7 ± 1.8 in Brazil and 9.9 ± 1.8 in Angola; Women: 10.3 ± 1.5 in Brazil and 9.2 ± 1.3 in Angola). Although the systolic arterial pressure values were similar between Brazilians and Angolans (Men: 134.3 ± 19.2 in Brazil and 136.7 ± 22.7 in Angola; Women: 134 ± 24.3 in Brazil and 133.3 ± 26.6 in Angola), the increase in SAP with age is greater in Angolans as compared to Brazilians, independent of the gender. Our data confirm that the cf-PWV increases with age, in Brazilians and Angolans. However, the cf-PWV increment with age, is higher in Angolan men as compared to Brazilian Men, results not observed among women. The cf-PWV increment slope was similar among women in Brazil and Angola. However, among men, the Angolans presented a higher cf-PWV increment slope with age, matching the Brazilians PWV levels when considering the ≥ 45 years old age group. **Conclusions:** Possibly, the aging conditions for Angolan men are less favorable as compared to the Angolan women. The Brazilian black people on the other hand, are historically submitted to social, economic and psychological vulnerability over life, which exposes those to greater potential cardiovascular risk factors, although not evaluated in this study. The Angolan men experienced the vulnerability after maturity and were similar to Brazilians.

Keywords: Arterial Hypertension, Arterial Stiffness, Black, Brazil, Angola

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GEOGRAPHICAL DISTRIBUTION AND PROFESSIONAL PROFILE OF
ORAL CLEFTS ASSISTANCE IN BRAZIL

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Introduction: The treatment of oral clefts requires clinical and surgical care by a multidisciplinary team. In Brazil, the public health system offers the service in free and universal access to Oral Cleft Malformation Treatment Centers. **Objective:** To evaluate the geographical distribution and professional profile of the Oral Cleft Malformation Treatment Centers enabled by the Brazilian public health system. **Materials and Method:** This is an ecological study. The units of analysis included the Oral Cleft Malformation Treatment Centers enabled by the public health system, in the geographic regions, federative units and municipalities of the country. The information was obtained from the National Register of Health Facilities, by location and registered human resources. Professional categories were obtained from Ministerial Ordinance nº 62 of 1994. Statistical analysis was performed using Pearson's correlation coefficient, with $p < 0.05$ and bivariate and multivariate analysis. All analyzes were performed using the *Statistical Package for the Social Sciences* (SPSS)[®], version 24. **Results:** The Brazilian public health system has 30 enabled Oral Cleft Malformation Treatment Centers, present in 100% (n=5) of the geographic regions and 55.6% (n=15) of the country's federative units, with a predominance in the Southeast and South regions (n=20; 66.7%). Most Centers (n=16; 53.3%) are in the capital of the federative unit. No Center has the registration of all required professional categories. The Centers in Bauru-SP, Cascavel-PR and Porto Alegre-RS stood out with 94.4% (n=17) of the minimum required professionals. The most frequent professional categories were nurse, speech therapist and psychologist (n=30; 100%), followed by the otolaryngologist (n=29; 96.7%), plastic surgeon and pediatrician (n=28; 93.3%). The most frequent professional categories of dentistry were general dentistry (n=25, 83.3%), oral and maxillofacial surgeon (n=22, 73.3%) and orthodontist (n=20; 66.7%). There was no significant difference in the coverage of professional categories between the geographic regions, federative units and municipalities of the country. **Conclusion:** Oral Cleft Malformation Treatment Centers enabled by the Brazilian public health system are present in all geographic regions of Brazil, however the distribution is still heterogeneous, with many federative units without service enabled. The Centers evaluated do not have all the minimum professional categories defined by federal legislation, putting at risk adequate multiprofessional assistance to individuals with oral clefts. Further studies need to be conducted to better characterize oral cleft treatment services in Brazil.

Keywords: Mouth abnormalities; Patient care team; Health services; Human Resources.

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UTILIZATION OF OPERATING FIELD ABSOLUTE INSULATION IN
DENTAL CLINICS IN THE CITY OF MONTES CLAROS – MG

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Introduction: The correct control of the humidity in the operating field can allow materials used in restorations to be more effective, thus improving the performance and reliability of the restoration, as well as reducing exposure to bacteria in the oral cavity. There are two types of insulation in the operative field: absolute insulation with rubber dam and relative insulation with cotton rollers. **Objectives:** To investigate the use of absolute isolation of the operative field by dental surgeons of private practices, enrolled in the CRO, in the city of Montes Claros, MG. **Materials and Methods:** The final sample is consisted of 48 professionals, who have agreed to answer a question. **Results:** Amongst the 48 dentists surveyed, it was observed that 52.1% were female, and 45.7% had 10 to 20 years of training. In addition, 22.9% of the participants worked only in private practice and public service. In regards to the insulation of the surgical field, 85% (40) stated that they did so, however 15% (8) stated that they did not perform any type of isolation. From the 48 subjects surveyed, 58.3% reported using both the relative and the absolute. Most surgeons are used to perform endodontic treatment (74.3%), using absolute isolation in composite resin restorations (57.1%). The techniques for conducting absolute isolation, during graduation, were considered by the majority as satisfactory 56.5% (26). **Conclusion:** After analyzing the data, we observed that most dental surgeons use both isolations, being absolute isolation and relative isolation.

Keywords: Absolute Isolation. Contamination. Rubber dam

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MECA GENE IN METHICILLIN-RESISTANT *STAPHYLOCOCCUS AUREUS*
ISOLATED FROM BRAZIL

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Introduction: *Staphylococcus aureus* is a bacteria that has been associated with opportunistic infections of lungs, skin, bloodstream and food poisoning. Methicillin is a penicillin that has been developed to combat resistant penicillinase-producing bacterias. One of the genes responsible for methicillin resistance is the *mecA* gene that encodes alteration in the PBP-2A protein, making it difficult to bind the drug to the bacterial cell and thus preventing its action. Due to the constant use of antibiotics, resistant strains are prevailing, multiplying and becoming a problem in public health. **Objective:** To determine the frequency of the *mecA* gene among methicillin resistant *Staphylococcus aureus* reported in Brazil. **Materials and Method:** An integrated search was performed on the Scopus, Web of Science and Medline / Pubmed databases, using as search terms "*Staphylococcus aureus*" and "*mecA*" and "Brazil" or "Brasil". They were included in this study the peer-reviewed articles published from 2017 to 2019 that presents results of *mecA* gene searched in methicillin-resistant *Staphylococcus aureus* isolated from Brazil. The total number of methicillin-resistant *Staphylococcus aureus* subjected to research the *mecA* was added, as well as the number of these isolates that presented the gene. From these data, the relative frequency was calculated. **Results:** A total of 131 isolates of methicillin-resistant *Staphylococcus aureus* have been reported in the literature on *mecA* gene researches. Of this total, 112 (Relative Frequency = 85.5%) presented gene amplification by Polymerase Chain Reaction. Data from six scientific publications were used. In two of these articles, the *mecA* gene was also investigated in methicillin-sensitive *Staphylococcus aureus* and its presence was occurred in 16 of the isolates (not included in the above numbers), indicating some mechanism of suppression. **Final Considerations:** Although there are other genes that can determine methicillin resistance, the participation of *mecA* gene is expressive. The percentage of this gene tends to increase over time, both by multiplication of resistant strains after antimicrobial selection, and by the possibility of gene transfer via plasmid. As multiresistant strains are becoming more frequent, it is necessary to search for new antimicrobials or new alternatives (adjuvant drugs) able of suppressing the expression of this gene in pathogens.

Keywords: Methicillin Resistance; *Staphylococcus aureus*; Polymerase Chain Reaction

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**RESOLUTION OF INFRAORBITAL NERVE PARESTHESIA AFTER
DIFFERENT ZYGOMATIC FRACTURE TREATMENTS**

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Introduction: The infraorbital nerve paraesthesia is reported as one of the main complications of zygomatic fracture. The usual time for paraesthesia resolution is from 6 months to one year; however, in some cases, it can be permanent. Researches have shown that the surgical procedure for zygomatic fractures reduction and fixation has minimized the persistent paraesthesia sensation. However, according to the fracture type, the treatment can vary from observation to closed reduction, or open reduction without fixation, and open reduction with internal fixation. Thus, to know the best treatment method for zygomatic fractures, that presents better results for ION paraesthesia resolution, is important to ensure the best post trauma quality of life. **Purpose:** Evaluate the prevalence of ION paraesthesia and its resolution comparing treatment methods in zygomatic fractures through a retrospective analysis. **Results:** A total of 46 zygoma fractures were analysed. The majority of the patients were men, ratio 8:1 and average age of 42.5 years. The most prevalent trauma etiology was motorcycle crash, followed by falls and interpersonal violence. The commonest signs and symptoms were: infraorbital nerve paresthesia (36) and step (25). The conservative or non-surgical method was the most used (34.8%), followed by the open reduction and internal fixation method (ORIF) in the frontozygomatic process and infraorbital rim (32.6%), ORIF in the frontozygomatic process (19,6%) and ORIF at the infraorbital rim (13%). The total resolution of paresthesia was only observed in 12 patients. Among them, 5 were treated with ORIF on frontozygomatic process and on infraorbital edge; 1 was treated with ORIF only on infraorbital edge; 2 were treated with ORIF only on frontozygomatic process; and 4 had a conservative treatment. **Conclusion:** The most effective method to resolve paresthesia was ORIF in the infraorbital rim and frontozygomatic process.

Keywords: Fracture Osteosynthesis; Zygoma; Paresthesia.

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AGE AND TIME MANAGEMENT DURING THE PREGNANCY:
POPULATION BASED STUDY, MONTES CLAROS – MINAS GERAIS

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Background: The inability to manage daily time is one of the causes of stress in humans. Pregnancy is a time of the life when the amount of daily activities can increase, especially with regard to maternal-fetal health care, such as going to medical appointments and performing periodic examinations. Thus, the pregnant woman is more vulnerable to experiencing stressful moments related to the control of spending time, as it is a period of intense physical, social and psychological changes and that usually requires the association of many activities. However, it was found that the age of the pregnant woman is directly related to the ability to deal with this situation. **Objective:** Associate the ability to manage daily time with the age of the pregnant woman. **Materials and methods:** This is a cross-sectional study based on partial data from the “ALGE Study - Health Conditions Assessment of Pregnant Women in Montes Claros - Minas Gerais: longitudinal study”. Starting in 2018, the current sample has 804 pregnant women, registered in all poles of the Family Health Strategy. One of the applied questionnaires was the Perceived Stress Scale, with 14 questions. For data analysis, IBM SPSS Statistics version 22.0 for Windows® software was used. This investigation was approved by the Research Ethics Committee Involving Human Beings under protocol no. 2.483.623/2018. **Results:** Regarding the question: “Have you been able to control the way how you spend your time?”, the alternatives never/almost never/sometimes were informed by 379 (89%) pregnant women up to 34 years and 47 (11%) of those with 35 years and older. Responses almost always/always were reported by 289 (80.7%) pregnant women up to 34 years old and 69 (19.3%) pregnant women with 35 years old or older, with $p < 0.002$. **Conclusions:** It was noticed that the ability to deal with time is directly proportional to the age of the pregnant woman. The ability to control how time is used is related to the amount of tasks a particular person performs and the ability to plan their actions. A pregnant woman over 35 years of age, for having more life experience, can, for example, make more effective planning than those up to 34 years, as verified in this study. Time management behaviors are important in all periods of life, especially gestational. As a result of these actions, people become more efficient, less stressed and more satisfied.

Keywords: Pregnancy; Stress, Psychological; Primary Health Care.

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**DAVILLA ELLIPTICA IMPROVES LIPID PROFILE IN SWISS MICE FED
NORMOLIPID DIET**

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Introduction: *Davilla elliptica* (Dilleniaceae) A. St.-Hil, also popularly known as “lixerinha”, “sambaibinha”, “muricizinho”, “cipó-caboclo” e “cipó-de-carijó” is a native species of the Brazilian Savanna, occurring in the Pandeiros river basin, and presenting shrub habits and branched sub-bushes. This plant presents in its chemical composition a wide diversity of secondary metabolism substances, such as flavonoids, saponins, steroids, tannins, coumarins and triterpenoids. These bioactive compounds have anti-inflammatory, antioxidant, antitumoral, anti-nociceptive, anti-microbial, anti-mutagenic and gastroprotective activities. **Aims:** The present study aimed to evaluate the effects of *Davilla elliptica* extract and leaves on the glycemic and lipid metabolism of Swiss mice submitted to normolipid diet. **Materials and methods:** The mice swiss were randomly divided into four groups (n = 5 per treatment). The animals were fed the following diets for 4 weeks: Standard Diet (ST); ST plus EA (fraction of ethyl acetate); ST plus HE (hydroalcoholic extract); ST plus PL (leaf powder), (0.26 mg/Kg/body weight). The experiment featured an approval committee Ethics in Experimentation and Animal well-being CEEBEA protocol No. 164/2018. *D. elliptica* leaves were collected in municipality of Bonito de Minas- MG, Brazil. The pulverized samples were submitted to extraction with absolute ethanol in proportion 1:10 de sample: solvent. For the fractionation of the extract, the samples obtained in the previous procedure were resuspended in a mixture of ethanol: water (7:3), in the ratio of 3 g of extract to 250 mL of 70% ethanol. Partitions containing the compounds of interest were brought to the stove under air circulation at 38 °C until the solvents dried. Serum was obtained after centrifugation (3200 rpm for 10 min). Total serum cholesterol, triglycerides and glucose were evaluated using enzyme kits (Wiener® Argentina). All data were analyzed by Graph Pad Prism software (version 5.0®, San Diego, USA) and subjected to specific tests with a statistical confidence of 95% (p<0.05). **Results:** Significant differences were observed in the total cholesterol levels of the animals treated with Standard ST diet vs. ST plus EA p<0.01, ST vs. ST plus HE p<0.001, and ST vs. ST plus PL p<0.001. Levels of triglycerides were significantly decreased between ST groups vs. ST plus EA p<0.05, and ST vs. ST plus PL p<0.0. No statistical differences were found in plasma glucose. **Conclusion:** The findings of the present study indicate the *Davilla elliptica* improving plasma levels of total cholesterol and triglycerides. However, new studies need to be performed to elucidate which pathways *D. elliptica* acts.

Key words: Sambaibinha; Brazilian Savanna; Medicinal plant.

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Introduction: Occupational stress has affected workers in their various areas and it is caused by various phenomena in the workplace, such as organization, administration and human relations. **Objective:** Analyze occupational stress in primary health care professional. **Materials and Methods:** This is an exploratory, descriptive and quantitative study, developed between September 2018 and September 2019, in the city of Montes Claros, state of Minas Gerais, according to the opinion of the Research Ethics Committee at Montes Claros State University, number 2.896.726. The study target population consisted of 448 professionals from the family health strategy units, who agreed to participate in the study by signing the Informed Consent Form. A sociodemographic questionnaire was used, and Karasek's summary scale that covers 17 questions, which are distributed in the psychological demands, work control and social support dimensions. Data analysis was performed by summing the questions of the demand and control dimensions, and later originated the low and high categories. From these categories we defined the quadrants high work wear, active work, passive work and low wear. The initial three quadrants are considered harmful to the worker's health. Low wear, on the other hand, is the ideal condition for a healthy work environment, as it meets low demands and greater control in the work process. The collected data were analyzed by the Statistical Package for the Social Science program, version 20.0. **Results:** The sample consisted of 87 (19.4%) nurses, 87 (19.4%) nursing technicians and 274 (61.2%) community health workers, 86.2% of the participants are female, 49.3% have completed high school, 74.6% have worked for more than 2 years, 80.1% have a contract of employment, 91.7% have only one job and 55.1% receive three or more minimum wages. The analysis of the demand/control dimensions occurs through the categories low and high demand and low and high control. From these categories were defined the quadrants high work wear, active work, passive work and low wear. The presence of passive work was verified in these professionals, with the combination of low demand, low control and low social support, which causes many health problems, as it interferes with the development of skills, contributes to the discouragement and dissatisfaction of the worker. **Conclusion:** With the study it was found that nursing professionals need attention regarding their quality of life at work, so it is necessary to have a planning with measures to prevent occupational stress.

Keywords: Occupational stress; Nursing; Family Health Strategy.

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GLYCEMIC PROFILE, INFLAMMATORY MARKERS, BIOCHEMICAL PARAMETERS AND HEPATOTOXICITY IN MICE FED WITH FUNCTIONAL FOOD CONTAINING OIL OF CLOVE (*Syzygium aromaticum*)

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Introduction: The search for increasingly healthy, preservative-free, functional foods has become a constant among the food industry, healthcare professionals and the consumers themselves who seek for a higher quality of life. **Objectives:** to analyze the glycemic profile, biochemical parameters, histopathological characteristics and also the expression of anti-inflammatory and proinflammatory cytokines in the liver of mice fed with a functional food, a fermented milk beverage added with essential oil of clove as a natural preservative. **Materials and Method:** twenty-four male *Swiss* mice were divided into three groups (G1 - control group with non-dairy diet, G2 – diet with potassium sorbate preservative in a fermented milk beverage and G3 - diet with fermented milk beverage added with essential oil of clove) and submitted to insulin sensitivity tests (IST) and glucose tolerance tests (GTT). After 30 days of treatment, liver biochemical analyzes were performed with creatinine, alanine aminotransferase, aspartate aminotransferase, albumin, total cholesterol, high density lipoprotein and glucose levels. Histopathological analysis of the liver was performed by making histological slides stained with Hematoxylin and Eosin (H&E). Five different areas of the right liver lobe on each slide containing 100 hepatocytes were evaluated under the conventional light microscope. The anti-inflammatory and proinflammatory markers were evaluated using the real-time quantitative reverse transcriptase polymerase chain reaction (qRT-PCR), searching for tumor necrosis factor alpha, interleukin 6, interleukin 10, interleukin 1 beta and glyceraldehyde-3-phosphate dehydrogenase. **Results:** The group that received the fermented milk beverage with essential oil of clove (G3) had lower glycemic level in glucose tolerance tests (GTT), higher insulin sensitivity and higher constant of glucose disappearance rate (Kitt). About the biochemical parameters, histopathological analysis and expression of anti-inflammatory and proinflammatory cytokines in the liver, the results did not differ between experimental and control groups, and no alterations were found that indicated toxicity in mice during the experimental period. **Conclusion:** These results demonstrate that the fermented milk beverage added with essential oil of clove did not produce any toxic effects on the mice organism, besides presenting an important result with the reduction in their glycemic levels.

Keywords: whey, glycemia, cytokines, toxicity

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**IDENTIFICATION AND MOLECULAR CHARACTERIZATION OF
CANDIDA sp. ISOLATED SPECIES OF PIGEON'S FECES**

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Introduction: Pigeon droppings can carry microorganisms like *Candida* species that have high genetic variability and are considered the most common opportunistic pathogens in humans. **Objective:** To identify yeast species isolated from pigeon droppings through the MALDI-TOF proteomic approach as well as to characterize the genetic profile of the isolates by the PCR-RFLP and ERIC-PCR genomic methods. **Materials and Method:** Yeast samples kept in a fungiteca were subjected to MALDI-TOF analysis for species identification. The PCR-RFLP and ERIC-PCR methods were used for characterization of genetic profile and diversity analysis among isolates. **Results:** *Candida krusei* (3/5) and *Candida rugosa* (2/5) species were identified among the yeast isolates (MALDI-TOF \geq 2000 real-time identification score). Phylogenetic analysis of both genomic methods employed was consistent in differentiating *Candida krusei* and *Candida rugosa* species into distinct groups (Group I and II). The low intraspecific genetic variability of yeast may be justified by the proximity of the points where the samples were collected. The MALDI-TOF method was able to identify yeast at species level. The PCR-RFLP and ERIC-PCR methods produced similar results and were useful for studies of genetic diversity and interspecific differentiation of the yeast strains analyzed. **Conclusion:** The significance of this study is to establish fast, reliable and simple methods for identifying pathogenic yeasts, including *Candida* species. The genetic profiles established by the genomic methods of this work will be used to construct a database for yeast identification in the laboratory where this study was performed.

Keywords: Yeast identification; Molecular phylogeny; MALDI-TOF; ERIC-PCR; PCR-RFLP

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ABSENTEEISM DUE TO VOICE DISORDERS AMONG SCHOOL TEACHERS

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Introduction: Dysphonia is classified into three categories: functional dysphonia, which is based on vocal behavior; organic-functional, it results from a late diagnosed functional dysphonia which evolved into an organic lesion; and organic dysphonia, the one whose emergence is independent of the misuse of the voice. **Objectives:** To verify work absenteeism due to vocal disorders among teachers in the year of 2017 in the city of Montes Claros, Minas Gerais. **Materials and Method:** An analytical cross-sectional study, with secondary data about the occurrence of absences of elementary school teachers from the city's municipal education system. The data were consolidated in the statistical program *Statistical Package for Social Science* and the absenteeism rate was calculated through a formula, which considers the number of hours lost divided by the number of planned hours of work in the month, multiplied by 100. **Results:** It was registered 27 teachers with leave of absence, with the absenteeism rate of 0,21%. The average age was 49,1 years old and a median of 50 years old, minimum of 37 and highest of 60, with a predominance of females (96,3%), most of them (88,9%) with a workload of 20 hours per week in the municipal school, since 74,1% act as teachers in Basic Education I (1st to 5th grade) and 25,9% in Basic Education II (6th to 9th grade). Regarding the length of service, the average was 19,8 years with a minimum of 7 years and a maximum of 32 years. Concerning the reasons for the absences, the reports presented during the year are, according to the International Code of Diseases and their relative and absolute data: 92,6% (n = 25) with ICD R49.0 (dysphonia), whom 11,1% (n = 3) also had ICD J.38.0 (vocal cord and larynx paralysis), 3,7% (n = 2) with ICD J38.2 (vocal cord nodules), 3,7% (n = 1) with ICD J38.3 (other vocal cord diseases); the other two teachers (7,4%) received ICD J38.3 (other vocal cord diseases). **Conclusion:** The absenteeism due to vocal disorders was 0,21% among municipal school teachers. Vocal illness is a frequent factor of absence from work.

Keywords: Absenteeism; School teachers; Dysphonia.

Support: Scientific Initiation Program.

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THE SCENARIO OF STOMATOLOGY IN HEALTH UNIC SYSTEM

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Introduction: The National Oral Health Policy (*Brasil Sorridente*) defined the creation of the Centers for Dental Specialties (CEO), aiming to expand and qualify the oral health care network, in order to achieve integrality of care. Given the CEO's role in reducing inequities in access to specialized dental services, these establishments should be evaluated for continuous improvement in quality of care. In this sense, the Ministry of Health proposed in 2013 the Program for Improving Access and Quality of Centers of Dental Specialties (PMAQ-CEO). The dimensions pertinent to stomatology present in the external evaluation were the basis for the present study. **Objectives:** To analyze PMAQ-CEO 1st cycle data related to stomatology and describe the current status of the Brazilian public health service. **Materials and Method:** Quantitative, descriptive and analytical study using secondary data from the PMAQ-CEO. An analysis was made of the indicators related to the stomatology specialty, present in the external evaluation of the 930 CEOs evaluated in Brazil, in 2014. **Results:** Most professionals (63%) only had a degree in dentistry. In most CEO (82%), there are no predefined quotas for oral health staff to refer users to the stomatology service and the estimated waiting time for the user to be attended is between 0 to 7 days. About 80% of CEO perform biopsy, and 71% perform in the same day or up to a week. However, 8% of them, reported no reference for histopathological examination of biopsied specimens. The transportation of the part to the laboratory is carried out by 41% of CEOs by the municipal health secretary. Most of the time (56%), the pathologist's report takes up to 30 days. A significant percentage (46%) have no record of users diagnosed with oral cancer, and 80% have reference to direct the confirmed cases of the disease. **Conclusion:** The present study reveals that most professionals responsible for stomatology do not have postgraduate studies in the area. Although most perform biopsy, a limited percentage do not refer the piece for analysis revealing a deficiency in some regions in the diagnosis of oral lesions. Although oral cancer represents an important cause of morbidity and mortality and is most often diagnosed at an advanced stage, there are no records of these users in a significant percentage of CEOs, which shows the fragility of the oral health care network in this specialty, in some places.

Keywords: Health evaluation. Public health dentistry. Stomatology.

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**IDENTIFICATION, ENZYMATIC CHARACTERIZATION, ANTAGONIST
ACTIVITY AND RESISTANCE PROFILE TO ANTIBIOTICS ISOLATED ON
BRAZILIAN THERMAL AQUIFER**

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Introduction: natural hot springs represent unique environments for microorganisms, which can be sources of new genes, molecules, antimicrobials and enzymes of biotechnological interest. The physical and chemical parameters of the water can influence the microbiota of these environments. **Objective:** To identify, trace enzymes of biotechnological interest, and profile of antimicrobial resistance, and verify the antagonistic activity of microorganisms isolated in thermal aquifers from Caldas Novas, Goiás, Brazil. **Materials and Methods:** Deep water samples were collected in three artesian wells in the Caldas Novas city. After collection, samples were inoculated in enriched culture media and incubated at 40°C to obtain the isolates. The obtained colonies were microscopy and macroscopically analyzed, and also subjected to Gram staining. The identification of bacteria at the species level was performed by MALDI TOF proteomic analysis. The bacteria identified were submitted to *screening* for enzymatic profile: amylase, cellulase, gelatinase, caseinase, lipase and pectinase according to standard methods described in the literature. A diffusion disc test was performed to determine the susceptibility profile of bacteria to the antimicrobials tested. The antagonistic activity of the bacteria against *Escherichia coli* ATCC8739 and *Staphylococcus aureus* ATCC 25923 multidrug-resistant strains was also performed. **Results:** Four colonies identified as Gram-positive bacilli were obtained, whose result of the proteomic analysis revealed to be *Bacillus pumilus*, *Bacillus subtilis* and two different *Bacillus megaterium*. All isolates produced caseinase and gelatinase proteases. None isolates produced detectable amylase, cellulase neither lipase enzymes. Three isolates had optimum growth at 50°C and exhibited antagonistic activity against *Staphylococcus aureus* strain. One isolated *B. megaterium* was resistant to methicillin but the others isolates were sensitive to all antimicrobials tested. **Conclusion:** The isolated bacteria in this study revealed to belong to genera found in thermal aquatic environments already described in the literature. The enzymatic screening indicated the low potential of the isolated to produce enzymes of biotechnological interest tested here. However, the antagonist activity against *S. aureus* multi-drug resistant strain opens a perspective for future studies to identify secondary metabolites with potential antimicrobial activity.

Key words: Bioprospecting; Enzymes; Thermo-tolerant; Antagonism; Caldas Novas.

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THE FIFA 11+ KIDS – IS KIDS EFFECTIVE?

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Introduction: The participation of children in soccer is high. However studies in these athletes are unusual. They appear to have more upper limbs fractures and injuries than youth and adults. The maturation may be involved in this process. Therefore, prevention protocols should be specific to this age group. In the context, the FIFA 11+ KIDS warm- up program is intended to prevent the number of severity of soccer related injuries. **Objectives:** Conduct a systematic review of the literature on the effectiveness of FIFA 11+ KIDS reducing the number and severity of injuries, as well as optimized sports gestures and recommended training frequency, and the coaches classification of warm-up program. **Materials and method:** This is systematic review of randomized controlled trials in the databases, Cochrane, Pubmed, MEDLINE, PEDro and LILACS. The articles will refined with filter , year of publication (2019 – 2015), without language restriction. Results: The program FIFA 11+ KIDS proved effective in reducing injuries in childrens soccer, but there was not influence on serverity of the injuries. There was na improvement in jumping performance, balance and agility in children who performed the warm-up program , and its execution is recommmended twice a week. Coaches rate FIFA 11+ KIDS as effecient because of the high quality and the resonable time. **Finals Considerations:** The FIFA 11+ KIDS should be implemented to reduce injuries in children, preventing negative effects on sports participation and long term-health. **Keywords:** Disease Prevention; Soccer; Child.

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PERCEPTION OF BODY IMAGE AMONG ADOLESCENTS IN PUBLIC SCHOOLS

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Introduction: Throughout the ages the concept of healthy or beautiful body has undergone transformations; The beauty model currently imposed corresponds to a thin body that most of the time does not consider aspects related to health and the different physical constitutions of the population. Body dissatisfaction has often been associated with discrepancy between perception and desire for body size. **Objective:** The aim of the study was to evaluate the perception of body image among frequent adolescents in public schools. **Materials and Methods:** Project approved by the Research Ethics Committee number 1,908,892. This is a cross-sectional and quantitative study, composed of adolescents from 6th to 9th grade. Investigations of body image perception were performed using self-administered questionnaires. Evaluated through the Body Shape Questionnaire (BSQ). This instrument measures body shape concerns, self-deprecation due to physical appearance and feeling of being "fat". Each question consists of six answer alternatives, ranging from "always" to "never". For each alternative chosen points are awarded from 1 to 6 (always = 6; very often = 5; often = 4; sometimes = 3; rarely = 2; never = 1). The result of the test is the sum of the 34 items contained in the questionnaire, and the classification of the results reflects the levels of concern with body image. Result ≤ 70 is considered a normality pattern and considered as absence of body image distortion; Results between 70 and 90 points are classified as slight distortion of body image; 91 to 110 as moderate distortion; and ≥ 110 points the classification is the presence of severe body image distortion. **Results:** A total of 1475 adolescents who participated in the study were studied, being 50.2% sex F and 49.8% M indicating the concern of both sexes. The final classification by levels of body image concern indicated 58% of adolescents did not present self-image alterations, while 10% had severe distortion. It was observed that 9% of adolescents who presented normal / mild BSQ results also presented dissatisfaction with weight as complementary information to the scores obtained with the application of BSQ. **Conclusion:** the results found in this study show that the ideal of thin body imposed by society prevails, because even adolescents with adequate weight presented dissatisfaction with their body image, wanting to change it to suit social standards.

Keywords: Disorders; Body composition; Body image.

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**COMPLEMENTARY THERAPIES IN PRIMARY HEALTH CARE: A
DESCRIPTION OF STRUCTURE, PROCESS AND OUTCOMES.**

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Introduction: The conventional model care, although predominant, hasn't answer to many health problems partly of the population, due to its mechanistic character, whose focus is the disease and not the whole patient. The Complementary Therapies (CT) are a vitalist and holistic model care, because they consider beliefs and cultural knowledge inseparable part from the care - cure process, becoming a humanized model person-centered care. Recent achievement was the insertion of CT in Primary Health Care (PHC) of the Brazilian Unified Health System (SUS), contributing to the possibility of developing generalists practices and health care promotion. It was considered that PHC description of services and activities performed by the professionals working with CT should be described considering Starfield PHC description and Donabedian's theoretical framework, as it demonstrates that health services should be supported by three dimensions: Structure, Process and Outcomes. **Objective:** To describe the insertion of CT in PHC units in the health southeast region of the São Paulo city considering structure, process and outcome. **Method:** The research was cross-sectional, descriptive and qualitative. Data collection was obtained with 3 semi-structured interviews with 9 professionals who worked with CT in 5 PHC units; observation of practices; field journal; informations about the health care services obtained from photos/images. The strategy used for data analysis was categorization of professional's speeches using MAXQDA software; health care unit observation and the professional practice; interpretation of field journal and "reading" photos of PHC units according to Janesick. For data organization was considered: the structure, the process and the outcomes. **Results:** in relation to Structure - Inadequacy of physical spaces; supplies only for Acupuncture, Homeopathy and Auriculotherapy; Process - Accessibility difficulties to CT; Appropriate professional training by the manager and Outcomes - Resolutivity of CT for patient and PHC. **Conclusions:** Although there is a specific CT National Policy and appropriate trainee building by the manager, CT haven't yet been effectively implemented in these services. Many health care services require physical space to offer CT, physical access to health care services and patient to CT therefore these itens must be expanded. Consistency is needed in the supply of CT inputs/equipment, especially considering financial issues related to PHC. This research identified aspects related to structure, process and outcome in order to build an effective and homogeneous model to offer and supply CT in the city of São Paulo.

Keywords: Complementary Therapies, Primary Health Care, Quality Management, Health Management.

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LUNG CANCER AND SMOKING IN BRAZIL: TEN YEARS ANALYSIS

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Introduction: Lung cancer is one of the most incident in the world. Smoking is one of the main risk factors and governments have invested in initiatives aimed at reducing and making the population aware of it. In Brazil, since the 1970s, there have been tobacco control movements led by health care professionals. Nowadays, the country is a reference and develops actions through the National Tobacco Control Program. **Objective:** To evaluate the number of smokers in Brazil in the last ten years and compare with the registered numbers of lung cancer in this country in the same period. **Materials and Method:** It was analyzed the estimates of the frequency of smokers in Brazil from 2007 to 2017, made available by the Health Vigilance Secretariat through Vigilance of Risk Factors and Protection for Chronical Diseases by Telephone Survey. By comparison, the estimates of lung cancer incidence in Brazil during the same period, made available by José de Alencar Gomes da Silva National Cancer Institute, were also analyzed. **Results:** The frequency of adult smokers ranged from 20.9% males and 12.6% females in 2007 to 13.2% males and 7.5% females in 2017 (date of last estimate). Estimates of new cases of lung cancer in men ranged from 19 per 100 thousand men in Brazil in 2007/2008 to 18.16 per 100 thousand men in 2017/2018. For women, this number ranged from 10 new cases per 100 thousand in 2007/2008 to 11.81 new cases per 100 thousand in 2017/2018. The reduction in the number of smokers has occurred more pronounced and the reduction in the number of lung cancer cases has occurred softer in men, demonstrating the great cumulative carcinogenic potential of smoking. In women, there has been an increase in the number of new lung cancer cases. It is known that smoking negatively affects women more than men, especially if it was combined with birth control pill. **Final Considerations:** In addition to lung cancer, smoking is a risk and aggravating factor for other respiratory, cardiovascular, pregnancy complications, sexual impotence and premature aging. We need to further reduce the number of smokers in Brazil. Investing in tobacco reduction is investing in the future, and this initiative needs to be included in each country's policy proposals.

Keywords: Lung Cancer; Tobacco Use Disorder; Tobacco Use Cessation.

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NUTRITIONAL STATUS OF SCHOOL ADOLESCENTS IN A NORTHERN
CITY IN MINAS GERAIS, BRASIL.

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Introduction: The nutritional status of adolescents, in addition to highlight the condition of a population, it also indicates their perspective of health in adulthood. The growing number of youth obesity can have negative consequences, either short or long term, such as the development of chronic diseases. The Body Mass Index (BMI) has been used in epidemiological studies for its simplicity and ease acquisition. In adolescents, the classification of overweight and obesity according to BMI it is associated with adiposity. The normal range is established by age and sex-specific BMI curves, classified as overweight for those with Z-BMI scores between $> +1$ and $< +2$ and obesity for those with Z-BMI scores $> +2$ after 5 years old. **Objective:** This study aimed to evaluate the nutritional status of school adolescents in a northern city in Minas Gerais, through BMI. **Material and Methods:** A total of 908 schoolchildren aged from 11 to 14 years old from the municipal system of Montes Claros, MG, were evaluated. Regarding the sample calculation, it was considered the expected maximum prevalence of events estimated at 50%, confidence level of 95%, error of 5%. The sample was a probabilistic clustering type, obtained through the drawing of the schools by probability proportional to its size, and class selection by simple random sampling. A questionnaire about the sociodemographic conditions was used. The weight was obtained on a portable, digital, electronic scale. Height was assessed by a portable stadiometer, with a scale of 35,0 to 213.0 cm and accuracy of 0,1 cm. The data were analyzed through descriptive statistics and investigated associations through the chi-square test with *Statistical Package for Social Sciences* (SPSS) IBM version 20.0. This research was approved by the Research Ethics Committee under protocol nº 1.908.982 and funded by FAPEMIG. **Results and Discussion:** A total of 930 adolescents took part in this research, from them 494(53,1%) female, 50(9,91%) from this number were classified as overweight and 22(4.45%) as obese. Among a total of 436(46,9%) male adolescents, 50(11,5%) were overweight and 22(5,04%) were obese. The highest percentage of overweight by age was female 16(14,8), and obesity was for male 7(6,6%), at the age of 14 for both sexes. There was no significant difference in the percentage of overweight and obesity between genders $p=0,464$ and $p=0,969$ respectively for females and males. **Conclusion:** The highest percentage of overweight and obesity occurred in older adolescents, with no significant difference related to gender.

Keywords: Obesity; Adolescent; Anthropometric measurements.

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**EVALUATION OF THE PRESCRIPTIONS OF ANTIDEPRESSANTS
DISPENSED BY A DRUGSTORE IN THE MANGA'S COUNTY – MG**

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Introduction: Depression is a pathology that affects the central nervous system and affects thousands of people around the world. Antidepressants are medications used for treatment and they act improving the patient's main symptoms. In Brazil, according to Ordinance N° 344/98, to have access to this class of medications patients need to have a prescription as special control. **Objectives:** Evaluate the prescriptions of antidepressants dispensed by a drugstore in the Manga's County -MG. **Materials and methods:** This is a descriptive, quantitative and documental study of the prescriptions of antidepressants dispensed by a drugstore during the period from September 2018 to February 2019. **Results:** 709 prescriptions were evaluated, of these 57.2% were prescribed for female patients and 42.8% for male patients. The most prescribed antidepressants were Amitriptyline (25.7%), Imipramine (17.6%), Nortriptyline (12.5%) and Escitalopram (10.2%). Among the medical specialties, the general practitioner was the professional who prescribed the most (64.7%), followed by psychiatrists (14.7%) and neurologists (7.2%). It is further observed that 70.7% of the prescriptions come from the public health system and 29.3% from private clinics or practices. Regarding readability, 51.2% of the prescriptions were considered readable, 33.1% little readable and 15.8% as unreadable. **Conclusions:** We conclude the importance of conducting studies on the analysis of prescriptions to know the reality about the use of antidepressants in the various localities of the country.

Keywords: Depression; Remedy; Pharmacy.

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ANXIETY BY PLANNED PREGNANCY

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Introduction: Pregnancy is a period in which physiological, psychic, hormonal and social changes increase anxiety and emotional stress in women. If this pregnancy is not planned by the couple, there is an increased risk of anxiety, especially in the puerperal period. **Objective:** To identify the prevalence of anxiety symptoms related to pregnancy planning in pregnant women enrolled in teams of the Estratégia Saúde da Família of Montes Claros - MG. **Material and Methods:** The research is part of the project “Estudo ALGE - Avaliação das Condições de Saúde das Gestantes de Montes Claros - MG: estudo longitudinal”. It is a cross-sectional, analytical study conducted with pregnant women enrolled in teams of the Estratégia Saúde da Família in Montes Claros-MG. Data were collected in 2018 and 2019 by a multiprofessional team. For data collection, the Brazilian State-Trait Anxiety Inventory (STAI) instrument was used. Descriptive analysis of the data was performed with absolute and relative frequency. To analyze the association between anxiety symptoms and pregnancy planning, the chi-square test was used, in which a statistical significance of 5% was adopted. For descriptive analysis, the SPSS version 22 program was used. The project was approved by the Unimontes Ethics Committee with the number 2,483,623 / 2018. **Results:** It was observed that among women who reported almost never feeling safe or sometimes feeling safe, 65.1% had unplanned pregnancies (p value = 0.026). Among pregnant women who reported feeling disturbed, 64.7% did not plan pregnancy (p value = 0.025). Women who claimed to be quite nervous or very nervous, 66.7% had not planned the pregnancy (p value = 0.111). Among the pregnant women who reported feeling restless often, 67.7% did not plan pregnancy (p value = 0.002). **Conclusions:** Among the symptoms “feeling unsafe”, “disturbed”, “nervous” and “restless”, “feeling restless” and “disturbed” and “not feeling safe” were statistically associated with pregnancy planning. Therefore, it is necessary that Estratégia Saúde da Família track anxiety symptoms among pregnant women, especially those with unplanned pregnancies.

Keywords: Pregnant; Anxiety; Planning.

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FACTORS RELATED TO NT-PROBNP ALTERATIONS IN CHAGAS
DISEASE PATIENTS

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Introduction: Chagas disease (CD) is a tropical disease classified as a neglected disease that has high morbidity and mortality. In the Americas, it is estimated that approximately 8 million people are affected by Chagas, mainly in rural and poorer areas. Cardiac complication is the most severe form of the disease and can occur in up to 30% of cases. The main cardiac outcomes are conduction disorders, represented by bundle branch block, atrial fibrillation, and brady or tachyarrhythmias due to conductive fibrosis. Among individuals with cardiac involvement, 20 to 30% develop chronic chagasic cardiomyopathy, the most severe form of the disease, expressed as heart failure. Natriuretic peptides (BNP and NT-ProBNP) are indicators of heart failure and there is a correlation between their increase and the presence of heart failure. **Objective:** To identify factors related to NT-ProBNP alteration in patients with CD. **Materials and Method:** Cross-sectional study in which baseline data from a Brazilian cohort of patients with CD, developed in 21 cities in the state of Minas Gerais endemic for the disease, were analyzed. A total of 2,106 patients with CD participated in this study. The dependent variable was the NT-ProBNP dosage (altered vs. unchanged) and the independent variables were gender, color, marital status, age, literacy, income, hypertension, diabetes, physical activity, alcoholism, smoking, functional class and QRS complex duration. For data analysis, simple (n) and relative (%) frequencies were estimated and bivariate analysis was conducted using Pearson's chi-square test. **Results:** Of the 2,106 patients with CD, most were women (66%), aged 59 years or younger (51.6%) and only 11.8% had altered NT-ProBNP. The following were associated with altered NT-ProBNP, male gender ($p < 0.001$), older age ($p < 0.001$), QRS complex duration above 120 ms ($p < 0.001$), functional class with limitation ($p < 0.001$), and physical inactivity ($p < 0.001$). **Discussion:** It is important to understand the associations involved between NT-ProBNP and CD, as this marker may help in risk stratification and the adoption of earlier and more incisive therapies, which may improve morbidity and mortality of Chagas patients with heart failure. **Conclusion:** The results of the present study should be interpreted considering the limitations of a cross-sectional study. However, they encourage further studies to elucidate the association of NT-ProBNP dosage with sociodemographic, clinical and behavioral variables of Chagas disease patients.

Keywords: Chagas disease, Natriuretic peptides, Tropical Medicine.

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ANALYSIS OF APPETITE CHANGES PER TRIMESTER OF GESTATION IN PREGNANT WOMEN ASSISTED IN PRIMARY HEALTH CARE IN MONTES CLAROS

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Introduction: Depression is conceptualized by the World Health Organization as a mental disorder, characterized by prolonged sadness, associating with the abandonment of daily tasks for a period of at least two weeks. During pregnancy, it is a multifactorial phenomenon related to the anatomical, biochemical and psychic alterations experienced by the pregnant woman. These modifications, in turn, lead to an increase in the degree of dependence of the pregnant woman in relation to the relatives and the team that provides prenatal care. Due to the symptoms of gestational depression, there is a reduction in the woman's sense of self-care, which is reflected in loss of appetite, which may impact on her nutritional status, along with that of the conceptus. **Objective:** Describe the occurrence of appetite alteration during pregnancy in each gestational trimester. **Methodology:** This is a cross-sectional research based on partial data from the “ALGE Study - Health Conditions Assessment of Pregnant Women in Montes Claros - Minas Gerais: longitudinal study”. Beginning in 2018, the sample is currently 804 pregnant women attending Primary Health Care. For data analysis, the IBM SPSS Statistics version 22.0 for Windows® software was used. This investigation complied with the ethical precepts, approved by the Research Ethics Committee Involving Human Beings under protocol no. 2,483,623 / 2018. **Results:** When questioned about the number of days that did not have the desire to eat or had little appetite in the period of last week, 80.7% of the pregnant women in the first trimester responded that for two days or less and 19.3% that for three days or more. As for pregnant women in the second trimester, 79.2% reported that this alteration occurred for two days or less and 20.8% for three or more days. Of the pregnant women in the third trimester, 82.9% responded for two days or less and 17.1% responded for three days or more. Results with P value less than 0.002. **Conclusion:** Appetite changes for two days or less are more significant in the third trimester, while this phenomenon occurs more significantly for three days or more in the second gestational trimester. Thus, it is important for professionals to be alert to loss of appetite as a sign for the possible early diagnosis of depression during pregnancy, thus avoiding unfavorable outcomes for the mother-child binomial.

Key words: Pregnancy; Appetite; Depression

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**MATERNAL CONSUMPTION OF TOBACCO AND CAFFEINE AS RISK
FACTOR FOR THE DEVELOPMENT OF ORAL CLEFTS**

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Introduction: Oral clefts are congenital malformations of embryological origin that have a high incidence rate. Its etiology is multifactorial; however, it has an important social impact as a source of substantial morbidity and mortality worldwide. Based on epidemiological characteristics and embryological time, the oral cleft is traditionally divided into cleft lip (NSCL), cleft lip and palate (NSCLP) and cleft palate (NSCP). In 70% of the cases, the cleft lip and/or palate are non-syndromic (NSCL/P). **Objectives:** Investigate environmental factors, such as caffeine and tobacco (secondhand smoke), which were recently described as susceptible to NSCL/P in delimited populations, observing whether there is a difference in consumption between the group of mothers of children with oral clefts and mothers of children without oral clefts. **Materials and Methods:** The case-control study held at the Center for Rehabilitation of Craniofacial Anomalies, Minas Gerais - Brazil, where they were recruited 132 mothers who were accompanying their children to include the group of cases with children up to 24 months old. The age with NSCL/P and 277 mothers in the control group of children with no craniofacial changes being followed was randomly obtained at the University Pediatric Dentistry Clinic. **Results:** There was a statistically significant association between relative maternal smoking and NSCL/P (relative risk = 1.34), in which 84 of 132 mothers in the case group reported being exposed to smoking (63.60%), while 59 of 277 mothers of the control group were exposed (21.30%), showing that there is a predisposition for mothers that their children are cracked when exposed to smoke. In the other hand, the association between high coffee intake and oral clefts was slightly higher in the case group mothers, lower than the control group 87.00% and 97.00%, respectively, being statistically significant. **Final Considerations:** Harmful habits, such as alcohol using up, and mainly in an inhalation of active tobacco agents, even passively, cause harm to the fetus, including the oral cleft. Moreover, the high consumption of caffeine in the first trimester of pregnancy by the mother increases the risk of the appearance of oral cleft in the children.

Keywords: Cleft lip; Cleft palate; Tobacco; Caffeine.

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**PREVALENCE OF OVERWEIGHT AND OBESITY IN SCHOOL STUDENTS
OF THE MUNICIPAL SYSTEM IN A NORTHERN CITY OF MINAS GERAIS**

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Introduction: The prevalence of overweight and obesity has increased worldwide. By 2020, it is estimated that 70 million young people worldwide will be overweight or obese. Brazilian indicators show prevalence above 20% in adolescents. Studies indicate that the central location of body fat is strongly associated to cardiometabolic risk. The Waist/Height Ratio is considered an additional anthropometric measure to assess obesity and central adiposity, and it is considered favorable for early identification of adolescents with nutritional risk. **Objective:** To evaluate the prevalence of overweight and obesity in school students of a municipal school in a northern city of Minas Gerais by means of Waist/Height Ratio. **Material and Methods:** A total of 908 students with ages between 11 to 14 years old of the municipal system of Montes Claros, MG were evaluated. Regarding the sample calculation, it was considered the expected maximum prevalence of events estimated at 50%, confidence level of 95%, error of 5%. The sample was a probabilistic clustering type, obtained through the drawing of the schools by probability proportional to its size, and class selection by simple random sampling. A questionnaire about the sociodemographic conditions was used. Weight was obtained on a portable, digital, electronic scale. Height was assessed by a portable stadiometer, with a scale of 35,0 to 213.0 cm, accuracy of 0,1 cm. The abdominal circumference was checked with an inelastic tape measure during the normal expiration, using as reference point the average distance between the iliac crest and the last rib. The cutoff point for calculating the wais/statue ratio was 0.40 for girls and 0.42 for boys. The data were analyzed through descriptive statistics and investigated associations through the chi-square test with Statical Package for Social Sciences (SPSS) IBM version 20.0. This research was approved by the Research Ethics Committee under protocol N° 1.908.982 and funded by FAPEMIG. **Results:** 851 students were evaluated, 460 of them (54,1%) female, 225 (4,9%) from this number were above the reference point for weight. There was a lower percentage of overweight adolescents in males, which corresponds to 45,5% of 391 male participants, $p = 0.001$. Regarding the age range, 11-year-old males presented the highest percentage of overweight, corresponding to 33 (64,7%) of 51 participants. **Conclusion:** The results indicate a percentage of general overweight predominantly in females, but in relation to the age range, the percentage was higher in males of 11 years old.

Keywords: Obesity; Adolescent; Anthropometric measurements.

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**EXPOSURE OF VACCINE ROOM EVALUATION SCALE USER
PERSPECTIVE - EASV-U**

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Introduction: Vaccination, a priority action in the Unified Health System (SUS), has been considered an essential strategy since 1973, when the National Immunization Program (NIP) was implemented in Brazil. This program is internationally respected because Brazil, with continental dimensions, has been able to eliminate or keep under control several infectious diseases. In this sense, the NIB should be continuously monitored to ensure the quality of the services provided. The evaluation of the physical structure, organization and functioning of the vaccine rooms is observed, however, these evaluations do not consider the perspective of users. Validated assessment tools are needed to consider this theme. After literature review, no instrument was found on the topic. **Objectives:** To present an instrument capable of measuring or assessing the level of satisfaction of users regarding health care in vaccination. **Materials and Method:** Through a methodological cross-sectional survey, the User Perspective Vaccine Room Rating Scale (EASV-U) was applied in 2015 for a probabilistic sample of 1,300 users. EASV-U content validity and reliability were estimated, with satisfactory internal consistency and reproducibility. The construct validity, through exploratory and confirmatory factor analysis, also with satisfactory results. Data were processed by SPSS 24.0. The research project complied with the ethical principles of Resolution of the National Health Council No. 466/2012 and was approved by the Research Ethics Committee of the State University of Montes Claros, under Opinion No. 313,870 / 2013. **Results:** EASV-U consists of 11 questions that address: 1. Satisfaction with waiting time for vaccination 2. Satisfaction with accessibility 3. Satisfaction with opening hours 4. Satisfaction with physical structure / comfort of the vaccine room 5. Satisfaction with the courtesy / kindness of the professional 6. Satisfaction with the perception of the professional's level of preparation 7. Satisfaction with receiving the vaccine information 8. Satisfaction with the opportunity to answer questions 9. Confidence level regarding services provided 10. Satisfaction with availability of vaccines 11. Satisfaction with availability of materials **Conclusions:** EASV-U was considered useful to assess users' level of satisfaction with the vaccination service. Its use by management is indicated, because user satisfaction should be considered a goal to be achieved and, therefore, be monitored, aiming at the improvement of these services. **Keywords:** Validation Studies; Scales; User Satisfaction; Quality Indicators in Health Care; Health Services Management.

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COGNITIVE COMMITMENT AND ASSOCIATED FACTORS IN NA
ELDERLY POPULATION

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Introduction: The aging of the world population is a current reality. In Brazil, about 13.4% of the population is elderly and the projection for 2060 is that this percentage will reach 32.2%. It is estimated that 5 to 8% of the elderly population has dementia in Brazil. Dementia is the decline in one or more cognitive domains that cause social and occupational impairment and is one of the most disabling and costly health conditions. Screening tests can identify early patients early and can be used in the context of Primary Care. **Objectives:** The objective of this study was to estimate the prevalence of cognitive impairment and associated factors in an elderly population in Montes Claros, Minas Gerais, Brazil. **Materials and Method:** This is a cross-sectional and analytical study conducted in the municipality of Montes Claros, Minas Gerais, Brazil. The population sample consisted of elderly registered and accompanied by the urban teams of the Family Health Strategy. Elderly people who were seriously ill, bedridden or hospitalized during the data collection period were excluded. The sample calculation was made by the infinite population formula. The defined confidence level was 95% and the sample error margin 3%. The sample selection was probabilistic by cluster. Data collection was performed by interviewers previously trained in a pilot study. The instrument used for data collection was the Brazilian Older Americans Research and Service Multidimensional Function Assessment Questionnaire. Data were analyzed using Statistics Package for Social Science software, version 20[®]. Initially, the descriptive analysis was performed presenting absolute and percentage values followed by bivariate analysis using Pearson's chi-square test. This study was approved by the Institutional Ethics Committee in Research. **Results:** Participated in the study 1,746 people. Among respondents, there was a higher percentage of women (63.4%), individuals aged 60 to 79 years (81.1%), with low and medium education (69.9%), with partner (54.2%) and with average monthly family income between one and two salaries (35.9%). Of the evaluated elderly, 11.5% had cognitive impairment. The associated risk factors were elderly over 80 years (OR = 4.443; CI = 3.160-6.304); illiterate (OR = 3,996; CI = 2,716-5,791); no partner (OR = 1,989; CI = 1,388-2,850); sedentary (OR = 1.777; CI = 1.208-2.613) and with a history of stroke (OR = 3.635; CI = 2.213-5.971). **Conclusions:** Cognitive impairment was associated with variables subject to preventive actions, such as access to schooling and healthy lifestyle habits.

Keywords: Health of the elderly; Cognitive impairment; Neuropsychological tests.

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**FOOD CONSUMPTION OF INDIVIDUALS WITH DIABETES AND/OR
HYPERTENSION SEEN IN PRIMARY HEALTH CARE**

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Introduction: Diabetes mellitus and systemic arterial hypertension are considered important public health problems, posing a challenge for health managers and staff who should act by promoting educational actions that stimulate adequate food and nutritional consumption. **Objective:** To evaluate the dietary intake of individuals with diabetes and / or hypertension treated in Primary Health Care. **Methodology:** Cross-sectional epidemiological, observational and quantitative study. Held in the city of Montes Claros – Minas Gerais, Brazil; the food consumption data were collected using a food frequency questionnaire and then analyzed using AVANUTRI[®] software version 3.1.1. **Results:** 89 adult patients participated in the study; (66.3%), with a family income of ≤ 1 minimum salary (80.9%). Regarding the clinical aspects, 14.6% of the population had associated DM and SAH. Regarding the quantitative analysis of food intake of macronutrients, it was observed that the consumption of lipids reached the average of 151.86 grams, carbohydrate consumption reached the median of 256 grams and the protein intake of 145.13 grams. In addition, high consumption of sodium and cholesterol, which were 3583.45 milligrams and 936.00 milligrams, respectively. **Conclusion:** Diabetic and/or hypertensive individuals treated in primary health care have inadequate dietary behaviors, which may be associated with difficult access to healthy foods, which are exacerbated by poor socioeconomic status.

Keywords: Diabetes Mellitus; Systemic Arterial Hypertension; Food Behavior; Primary Health Care.

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CLINICAL RESULTS OF WATER IMMERSION IN THE SECOND STAGE OF
LABOUR

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Introduction: The use of water immersion is increasing in childbirth care. It has a relaxing effect on the parturient's body, can reduce the sensation of pain and increase the elasticity of the perineum, reducing the incidence and severity of perineal tear. Its use still raises much controversy, especially when the parturient remains in the water during the second stage of labor. **Objective:** To compare clinical results between immersed and non-immersed primiparous women during the second stage of labor. **Materials and Method:** Quantitative, prospective cohort study conducted in a maternity facility attended by the public health system in Belo Horizonte. The study included 77 primiparous women (45 parturients in the non-immersed and 32 in the immersed group) with low risk pregnancy and spontaneous delivery. Data collection took place between August and December 2018, through a screening tool developed by researchers and completed by midwives who assisted the women. The analysis was performed using absolute and relative frequencies, Fisher's chi-square, exact test and student's T test, considering a level of 5% of significance. For the analysis was used STATA Software, version 12. Sofia Feldman Hospital Ethics Committee under Opinion No. 2786135 /2018 approved the study. **Results:** Both groups presented homogeneous distribution regarding sociodemographic and clinical variables including: perineum preparation during pregnancy, type of pushing, duration of the second stage of labor (more than 60 minutes), weight of the newborns and their cephalic circumference. Among the parturients, 14.3% had intact perineum (21.9% of immersed women and 8.9% of non-immersed) and there were no third or fourth degree lacerations in any group. First degree laceration was prevalent in both groups (80% in the immersed and 70.7% in the non-immersed group). However, the difference was not statistically significant, as well as the Apgar score within the first five minutes of the newborn's life. One in each group received an Apgar score of less than seven. There was a significant higher prevalence in the non-immersed group for occurrence of perineal edema (15.9% versus 0%) and the use of oxytocin (27.9% versus 3.1%), epidural analgesia (32.6 % versus 6.2%) and *hands on technique* by professionals in the second stage of delivery (35.6% versus 6.5%). **Conclusion:** Despite the quality of the methodology adopted in the study, the results cannot be generalized due to the small sample size. However, it seems that water immersion during labor does not cause harm and reduces the use of oxytocin and analgesia.

Keywords: Women's health; Parturition; Obstetric labor; Natural Childbirth; Maternal outcome; Immersion.

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BASELINE ASSESSMENT OF POST-SURGERY SENSITIVITY IN BULK FILL RESIN RESTORATIONS COMPARED TO CONVENTIONAL RESINS UNDER DIFFERENT ADHESIVE SYSTEMS

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Introduction: The evolution of dentistry minimally invasive as well as the improvement of the physical and chemical properties of the direct composites has allowed the introduction of innovative restoration materials referred to posterior teeth which associate aesthetics with stages and clinical time reductions. In light of the clinical efficiency associated with the practicality of the restoring technique, the present decade witnesses the outbreak of the single filling resins or Bulk fill. **Objective:** To compare the clinical performance of the Bulk fill resin to the one of a conventional composite resin in the face of different adhesive strategies. **Materials and Method:** This is a randomized controlled prospective longitudinal clinical study. For this study, patients were recruited from those who went to the Dental Clinics of the Faculdades de Odontologia da Universidade Estadual de Montes Claros, Faculdades Pitágoras and Faculdades Unidas do Norte de Minas, routinely. Each restoration chosen as a sample received one of the six types of treatment tested with conventional resin, Bulk fill flow and regular Bulk fill. As a tool for the assessment of the clinical performance of the restorations, the criteria and notations of the International Dental Federation (IDF) were used. This research was approved by the Ethics Committee under the number 2.890.866. **Results:** 35 patients took part in this study, of which 25 were women and 10 men, with ages ranging from 21 to 55 years old. 155 class I restorations were performed in posterior teeth, of those 116 molars and 39 pre-molars distributed in the 6 study groups. The assessments were carried out by two trained and calibrated assessors. The inter and intra-assessor agreements were verified by the Kappa index, being 85% the minimum of expected agreement. When assessing the baseline restorations, through the IDF method, eleven patients out of 30 sample units (46,5%) reported some kind of dental sensitivity in the first week post-restoration. Among those, (20,5%) belonged to group 1, (18,5%) to group 2, (13,04%) to group 3, (13,04%) to group 4, (18,18%) to group 5 and (34,6%) to group 6. **Conclusion:** After the analysis, it could be observed that both in the control group and in the other test groups, the sensitivity was present in the first week after the restoration and there was no significant difference among the groups, confirming the hypothesis that concerning dental hypersensitivity the single fill resins present a clinical performance similar to that of the conventional ones.

Key words: Bulk fill, Clinical trial, High viscosity.

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**DIGIT RATIO (2D:4D) IN BRAZILIAN MEN WITH AND WITHOUT
PROSTATE CANCER**

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Hercílio Martelli Junior³

Introduction: Digit ratio (2D:4D) has been suggested as a proxy biomarker for prenatal androgen activity and has been linked to prostate cancer, since the genes that regulate the formation and differentiation of the fingers are also related to the carcinogenesis of prostate cancer. **Objectives:** To compare the 2D:4D ratios of Brazilian subjects with and without prostate cancer and to investigate the relationship between 2D:4D and the aggressiveness of the disease to correlate this marker to Gleason scores. **Methods:** A cross-sectional study was performed with a total of 100 patients with prostate cancer (PCA Group) and 100 healthy controls. Digital measurements of the lengths of the index and ring fingers of both hands of PCA group and healthy control individuals were obtained using a digital vernier caliper. Means of the 2D:4D ratios were compared. Data were analyzed by the Student's *t*-test for unpaired samples, Mann-Whitney test, and Spearman's Correlation with a significance level of 5%. **Results:** The PCA group presented significantly lower right and left 2D:4D ($p=0.001$ and $p=0.002$, respectively) in comparison to healthy controls. In addition, digit ratios were not correlated to Gleason score for either hand. **Conclusions:** 2D:4D seems to be a marker for screening patients for prostate cancer in an admixed population, suggesting that an overexposure of testosterone *in utero* (high prenatal testicular activity) could influence the development of disease in adulthood, since males with prostate cancer present lower 2D:4D than healthy subjects. On the other hand, 2D:4D does not appear to be associated with the severity of prostate cancer.

Keywords: Digit ratio; 2D:4D; Prostate cancer.

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CACHEXIA IN INDIVIDUALS WITH HEAD AND NECK SQUAMOUS CELL
CARCINOMA

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Introduction Head and neck squamous cell carcinoma (HNSCC) is the most prevalent cancer that affects the upper aerodigestive tract mucosa. During HNSCC progression, individual frequently exhibits anorexia, dysphagia, an increased catabolic activity in skeletal muscle and white adipose tissues, and a low-grade, chronic systemic inflammatory state that characterize the paraneoplastic syndrome known as cancer related-cachexia (CRC). **Aims** The present study aims to investigate the association between CRC stages (precachectic and cachectic) in individuals with HNSCC and a number of clinical, anthropometrical, plasma biochemical parameters. **Material and Methods** This study evaluated 70 individuals with HNSCC (male:female ratio: 3/1; age: 60.5 ± 8.9) and controls (male:female ratio: 3/1; age: $59,6 \pm 8,77$). Individuals with HNSCC were evaluated for unintentional body weight loss over a period of six months and were categorized as non-cachectic, pre-cachectic, and cachectic (Fearon et al., 2011). The anthropometric and nutritional assessed were arm circumference (AC), triceps skinfold thickness (TCT), and body mass index (BMI). Serum high-sensitive C-reactive protein (CRP) and albumin levels were used to calculate modified Glasgow (mGPS) and high-sensitivity mGPS (HS-mGPS) prognostic scores. Moreover, individuals were submitted to assessment of the muscle strength using a hand grip dynamometer. This study was approved by a human research ethics committee (CONEPE N^o: 19462/2019). **Results** Individuals with HNSCC in cachectic stage significantly exhibited higher unintentional body weight loss and dysphagia. However, individuals with CRC exhibited lower AC, TCT, BMI, handgrip strength, and concentration of plasmatic albumin. Individuals with HNSCC in cachectic stage showed higher CRP plasma levels and HS-mGPS scores. **Conclusions** CRC in individuals with HNSCC is associated with occurrence of low-grade, chronic inflammatory state and a higher declining physical functioning. Early diagnosis of CRC in individuals with HNSCC might be encouraged in order to obtain a better prognosis.

Keywords: Cancer-associated cachexia, head and neck squamous cell carcinoma, anthropometry, plasma, C-reactive protein, albumin, inflammation, skeletal muscle strength.

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