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LEIA AS QUESTÕES ABAIXO E ASSINALE COM UM "X" A OPÇÃO CORRETA. NÃO SERÃO ACEITAS RASURAS. CONFIRA SE TODAS AS 5 PÁGINAS FORAM ENTREGUES

QUESTÃO 1

Teodoro MA. Et al., Factors of food choice and nutritional intake of Brazilian older adults according sociodemographic and health characteristics Appetite 199, 1, 2024, 107379

The rapid demographic transition in developing countries has always posed a challenge for the social and economic policies of these nations. The increase in longevity poses new challenges for understanding dietary consumption among different age groups at the old age population. The aim of this study was to evaluate the reasons for food choice and the composition of nutritional intake of older adults and its relationship to individual characteristics. Community-living older adults aged 60 and older were interviewed in their homes at the southeastern region of Brazil, between December 2021 and February 2022. The Food Choice Questionnaire and a Food Frequency Questionnaire were administered to obtain data on the reasons for food choice and nutritional intake. A structured interview was employed to gather information on individual characteristics. 168 older adults (mean age of 72.6 ± 8.9; 69.6% women) participated. The reasons for food choice differed significantly, with weight control being one of the least important and health being one of the most important. But older adults aged 80 and over valued the health criterion less than younger participants (60–69 years old). The intake of macronutrients and energy were below nutritional recommendations. Carbohydrate consumption was positively correlated with the mood motive. There was a relationship between the reasons for choosing food and/or the components of nutritional intake with: gender, age, living with a partner, self-report of depression/anxiety, self-perception of health and nutritional status anthropometric. The results are important to be considered in prevention policies and clinical-nutritional management, with special attention to the oldest-old.

a) O estudo foi conduzido com indivíduos adultos e idosos, predominantemente do sexo feminino, com o objetivo de identificar os fatores associados a suas escolhas alimentares e ingestão nutricional.

b) O estudo foi do tipo transversal e um de seus resultados indicou que houve relação entre a idade e os motivos de escolha dos alimentos e/ou dos componentes da ingestão nutricional.

c) Os resultados do estudo devem ser levados em consideração na elaboração de políticas de prevenção e manejo clínico-nutricional de adultos e idosos, mas em especial dos idosos com mais de 80 anos.

d) As razões para a escolha alimentar diferiram significativamente, estando a saúde como uma das razões apontadas como mais importante, principalmente entre indivíduos mais longevos.

QUESTÃO 2

Influence of nutrient intake on antioxidant capacity, muscle damage and white blood cell count in female soccer players Leyre Gravina et al., J Int Soc Sports Nutr 2012 Jul 19;9(1):32. doi: 10.1186/1550-2783-9-32.

Background: Soccer is a form of exercise that induces inflammatory response, as well as an increase in free radicals potentially leading to muscle injury. Balanced nutritional intake provides important antioxidant vitamins, including vitamins A, C and E, which may assist in preventing exercise-related muscle damage. The purpose of the present study was to determine the effect of macro/micronutrient intake on markers of oxidative stress, muscle damage, inflammatory and immune response in female soccer players. Methods: Twenty-eight female players belonging to two soccer teams of the same professional soccer club participated in this study after being informed about the aims and procedures and after delivering written consent. Each team completed an 8-day dietary record and played one competition match the same week. Participants were divided into two groups: the REC group (who complied with recommended intakes) and the NO-REC group (who were not compliant). Laboratory blood tests were carried out to determine hematological, electrolytic and hormonal variables, as well as to monitor markers of cell damage and oxidative stress. Blood samples were obtained 24 h before, immediately after and 18 h after official soccer matches. Student t-test or Mann-Whitney U-test was used to compare both groups throughout the match. Results: At rest, we observed that the REC group had higher levels of total antioxidant status (TAS), glutathione peroxidase (GPx), and lower levels of creatine kinase (CK) and lactate dehydrogenase (LDH) in comparison to the NO-REC group. Immediately after the match, levels of TAS, GPx, superoxide dismutase (SOD), LDH and % lymphocytes were higher and the % of neutrophils were lower in the REC group compared to the NO-REC group. These differences were also maintained 18 h post-match, only for TAS and GPx. Conclusions: Our data reveal an association between

nutritional intake and muscle damage, oxidative stress, immunity and inflammation markers. The benefit of the intake of specific nutrients may contribute to preventing the undesirable physiological effects provoked by soccer matches.
a) O estudo traz as características de um ensaio clínico randomizado, pois separou as participantes para dois grupos de intervenção.
b) A partir dos dados do estudo, é possível inferir uma relação de causa e efeito entre a ingesta habitual de micronutrientes dentro das recomendações e o estresse oxidativo das atletas.
c) A incapacidade de atingir a ingesta habitual recomendada para os micronutrientes antioxidantes diminuiu o desempenho esportivo das atletas de futebol.
d) O status antioxidante total do grupo REC foi mais elevado tanto no momento 24h antes, quanto nos momentos imediatamente após o jogo e 18h após o jogo.

QUESTÃO 3
Kruszewski M, et al. Effects of Multi-Ingredient Pre-Workout Supplement and Caffeine on Bench Press Performance: A Single-Blind Cross-Over Study. Nutrients. 2022;14(9):1750.
The problem addressed in this study is the appropriateness of using different pre-training supplementation strategies and their ability to improve training performance and psychological measures. The aim of the study is the evaluation of the effectiveness of a multi-ingredient pre-workout supplement (MIPS) containing beta-alanine, L-citrulline malate, arginine alpha-ketoglutarate, L-taurine, L-tyrosine and caffeine compared to an exact dosage of anhydrous caffeine in bench press strength endurance, feeling scale (FS), felt arousal scale (FAS) and session rating of perceived exertion (sRPE). A group of fifteen resistance-trained males, weighing 83.92 ± 8.95 kg and having an average of 5.6 ± 3.38 years of training experience, tested their bench press 10 repetition maximum (79.01 ± 12.13). In a cross-over manner, they participated in two sessions where they were blinded to the order of supplementation they were given: either a MIPS including caffeine or caffeine alone. They completed the bench press strength endurance test with pre- and post-training psychological assessments containing FS, FAS and sRPE. Bench press repetition volume was greater after anhydrous caffeine than MIPS supplementation with no difference in psychological measures. These results indicate that MIPS supplementation is less ergogenic and cost effective than caffeine alone.

a) Considerando que as variáveis de desfecho são contínuas e que apresentem distribuição normal, a diferença entre grupos pode ser verificada observando-se a média e o desvio-padrão.
b) Considerando-se que existem dois grupos, o uso do teste do qui-quadrado é o mais adequado para avaliar a média das repetições no supino entre os participantes.
c) A análise do desfecho principal (teste de repetições no supino) pode ser realizada por meio de um teste t para amostras independentes, uma vez que os participantes foram designados aleatoriamente para dois grupos, pré-treino multiingrediente (MIPS) e pré-treino cafeína anidra.
d) Considerando que os mesmos participantes foram submetidos realizaram duas sessões nas quais não tinham conhecimento da ordem da suplementação que receberam, aplicar o teste t para amostras dependentes seria o mais adequado para análise do desfecho principal (teste de repetições do supino).

QUESTÃO 4
Meena BL et al. Home-based intensive nutrition therapy improves frailty and sarcopenia in patients with decompensated cirrhosis: A randomized clinical trial J Gastroenterol Hepatol. 2023 Feb;38(2):210-218.
Background and Aim: The majority of patients with decompensated cirrhosis suffer from malnutrition, a potentially modifiable contributor to frailty and sarcopenia. The present study investigated the impact of a 6-month dietician-supported home-based intensive nutrition therapy (HINT) intervention on objective frailty and sarcopenia metrics in patients with decompensated cirrhosis. Methods: One hundred adult patients with decompensated cirrhosis, frailty, and sarcopenia at baseline were randomized 1:1 to receive standard medical therapy (SMT) plus HINT (intervention) versus SMT (control) alone. The primary outcome was an improvement in frailty as measured by the liver frailty index (LFI). Secondary outcome measures included sarcopenia metrics, liver disease severity scores, hospitalization, and death. Results: The LFI improved more in the intervention arm as compared with controls (0.8 vs 0.4; $P < 0.001$). Baseline and end-of-study skeletal muscle index (SMI) was available in a subset of 32 male patients, with greater improvements seen in the intervention arm compared with controls (6.36 vs 0.80; $P = 0.02$). Patients in the intervention arm had less hospitalizations over the 6-month follow-up (19 [38%] vs 29 [58%]; $P = 0.04$). On subgroup analysis, in the 64% of patients who were adherent to calorie and protein intake targets at 6 months, significant improvement was seen in liver disease severity scores and survival ($P < 0.05$). Conclusion: In patients with decompensated cirrhosis, frailty, and sarcopenia, a 6-month dietitian-supported home-based intensive outpatient nutrition

therapy was associated with statistically and clinically relevant improvement in frailty. The subgroup of adherent patients showed improvement in their liver disease scores and reduction in mortality. These findings support the key role of food as medicine in the management of cirrhosis.

a) Observou-se que o subgrupo de indivíduos que tiveram suas necessidades calóricas e proteicas atendidas nos 6 meses de segmento apresentaram melhora na gravidade da doença hepática e na sobrevida;
b) Ambos os grupos (suporte padrão e intervenção dietética domiciliar) apresentaram um aumento numérico no marcador de massa muscular esquelética, sendo significativamente mais intenso no grupo intervenção;
c) No que diz respeito ao tamanho amostral nesse tipo de estudo, o mais importante é ter um tamanho amostral que garanta um adequado poder estatístico para encontrar significância estatística no desfecho primário (caso haja), ao invés de uma amostra que seja representativa da população.
d) Todas as afirmativas estão corretas

QUESTÃO 5
de Oliveira Lima M et al. Circadian misalignment proxies, BMI, and chronic conditions: the role for weekday to weekend sleep differences. Sleep Breath. 2024 Aug;28(4):1799-1808.
Objective: To evaluate whether social jet lag (SJL) and weekend catch-up sleep (CUS), proxies of circadian misalignment, were associated with BMI and chronic conditions. Methods: Participants (n = 2,050, 18-65y) were part of a virtual cross-sectional and population-based research. We examined CUS and SJL as continuous and categorical (< 1 h,1–2 h, > 2 h). Linear regression analyses were performed to assess the differences in BMI (outcome) associated with CUS and SJL. Restricted cubic splines were performed to explore the shape of the relationship between weekday-to-weekend variability in sleep duration, midpoint, wake time, and bedtime. Logistic regression models were used to estimate ORs(95%CIs) for chronic conditions and overweight related to CUS and SJL. Analyses were adjusted for sleep duration, biological and behavior-related variables. Results: We found a positive association of SJL and CUS with BMI. The effects remained even after adjustment for weekly sleep duration and demonstrated a proportional increase with the magnitude of sleep variability. Among participants with SJL > 2 h, BMI increased by 2.29 kg/m2 (95%CI:0.84;3.74,p:0.002). They also had 129% higher odds of chronic conditions (95%CI:1.16;4.52, p:0.01) and 119% higher odds of overweight (95%CI: 1.20;3.98,p:0.01). Individuals with CUS > 2 h presented 78% higher odds of overweight (95%CI:1.27;2.50,p:0.001) and an increase of 1.61 kg/m2 in BMI (95%CI: 0.81; 2.40,p < 0.001). Conclusions: Our findings, which demonstrate that even a slight weekend sleep extension and variability of just 1 h is associated with higher values of BMI, suggest incorporating measures for sleep consistency and regularity into clinical protocols and public health guidelines to prevent and treat obesity and related diseases.

a) Ao analisar a associação entre social jet lag e condições crônicas e sobrepeso, o estudo encontrou que os valores de Odds Ratio (OR) foram, respectivamente, 2,29 (95%CI:1.16;4.52, p:0.01) para doenças crônicas e 2,19 (95%CI: 1.20;3.98,p:0.01) para sobrepeso.
b) A associação positiva entre variação no sono e IMC desapareceu após o ajuste para a duração semanal de sono.
c) O estudo não encontrou diferença significativa na probabilidade de sobrepeso entre os participantes com mais de 2 horas de catch-up sleep.
d) O estudo concluiu que apenas a variação no tempo de sono durante os finais de semana (catch-up sleep) está associada a um IMC mais alto.

QUESTÃO 6
The Role of Health-related Behaviors in Gestational Weight Gain among Women with Overweight and Obesity: A Cross-sectional Analysis
Objective To evaluate the influence of health-related behaviors including food intake, physical activity, sleep time, smoking habits, stress, depression, and optimism on excessive gestational weight gain (GWG) among women with overweight and obesity. Methods A cross-sectional study was conducted at the Women's Hospital of the Universidade de Campinas, Campinas, state of São Paulo, Brazil, with 386 mediate postpartum women that fit the inclusion criteria of ≥ 19 years old, first prenatal care visit at or before 14 weeks, and single live baby. Dietary habits, physical exercise practice, sleep duration, smoking and alcohol habits were self-reported. Psychosocial history was evaluated using the Edinburgh Postpartum Depression Scale (EPDS), Perceived Stress Scale (PSS), and Life Orientation Test-Revised (LOT-R). Sociodemographic, obstetric, anthropometric, and neonatal data were retrieved from medical records. Descriptive statistics and stepwise logistic regression were performed. Results The prevalence of overweight and obesity was 29.27% and 24.61%, respectively, according to the body mass index (BMI). Excessive GWG was observed in 47.79% of women with overweight

and in 45.26% of women with obesity. Excessive GWG among overweight and obese women was associated with inadequate vegetable and bean consumption (odds ratio [OR] = 2.95, 95% confidence interval [CI]: 1.35 – 6.46 and OR = 1.91; 95%CI: 1.01–3.63, respectively) and stress (OR = 1.63; 95%CI: 1.01–2.64). After adjustment by maternal age, multiparity, sleep duration, smoking, and alcohol intake, we found that stress (PSS ≥ 20) was associated with excessive GWG in women with overweight or obesity (OR = 1.75; 95%CI: 1.03 – 2.96). Conclusion Among women with overweight and obesity, stress is the main variable associated with excessive GWG. Inadequate vegetables and beans consumption also showed association with excessive GWG.

a) A prevalência de obesidade observada entre as mulheres do estudo foi igual a 29,27%.
b) Considerando os diferentes métodos usados na avaliação das exposições descritas acima, o estudo pode ser classificado como um estudo de intervenção.
c) Nenhuma das razões de chance descritas nos resultados apresentou significância estatística.
d) Mulheres em situação de estresse têm 75% mais chance de apresentar ganho de peso gestacional excessivo, quando comparadas a mulheres que não estão em situação de estresse.

QUESTÃO 7

Effect of High-Dose Omega-3 Fatty Acids vs Corn Oil on Major Adverse Cardiovascular Events in Patients at High Cardiovascular Risk

Importance: It remains uncertain whether the omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) reduce cardiovascular risk. Objective: To determine the effects on cardiovascular outcomes of a carboxylic acid formulation of EPA and DHA (omega-3 CA) with documented favorable effects on lipid and inflammatory markers in patients with atherogenic dyslipidemia and high cardiovascular risk. Design, Setting, and Participants: A double-blind, randomized, multicenter trial (enrollment October 30, 2014, to June 14, 2017; study termination January 8, 2020; last patient visit May 14, 2020) comparing omega-3 CA with corn oil in statin-treated participants with high cardiovascular risk, hypertriglyceridemia, and low levels of high-density lipoprotein cholesterol (HDL-C). A total of 13 078 patients were randomized at 675 academic and community hospitals in 22 countries in North America, Europe, South America, Asia, Australia, New Zealand, and South Africa. Interventions: Participants were randomized to receive 4 g/d of omega-3 CA (n = 6539) or corn oil, which was intended to serve as an inert comparator (n = 6539), in addition to usual background therapies, including statins. Main Outcomes and Measures: The primary efficacy measure was a composite of cardiovascular death, nonfatal myocardial infarction, nonfatal stroke, coronary revascularization, or unstable angina requiring hospitalization. Results: When 1384 patients had experienced a primary end point event (of a planned 1600 events), the trial was prematurely halted based on an interim analysis that indicated a low probability of clinical benefit of omega-3 CA vs the corn oil comparator. Among the 13 078 treated patients (mean [SD] age, 62.5 [9.0] years; 35% women; 70% with diabetes; median low-density lipoprotein [LDL] cholesterol level, 75.0 mg/dL; median triglycerides level, 240 mg/dL; median HDL-C level, 36 mg/dL; and median high-sensitivity C-reactive protein level, 2.1 mg/L), 12 633 (96.6%) completed the trial with ascertainment of primary end point status. The primary end point occurred in 785 patients (12.0%) treated with omega-3 CA vs 795 (12.2%) treated with corn oil (hazard ratio, 0.99 [95% CI, 0.90-1.09]; *P* = .84). A greater rate of gastrointestinal adverse events was observed in the omega-3 CA group (24.7%) compared with corn oil–treated patients (14.7%). Conclusions and Relevance: Among statin-treated patients at high cardiovascular risk, the addition of omega-3 CA, compared with corn oil, to usual background therapies resulted in no significant difference in a composite outcome of major adverse cardiovascular events. These findings do not support use of this omega-3 fatty acid formulation to reduce major adverse cardiovascular events in high-risk patients.

a) Esse estudo ratifica o papel protetor do ômega-3 sobre eventos cardiovasculares adversos.
b) O tipo de estudo deste artigo é o mais adequado para verificar a eficácia de intervenções clínicas.
c) O estudo incluiu ao todo 1384 pacientes.
d) O grupo que recebeu omega-3 apresentou menos eventos gastrointestinais adversos que o outro grupo.

QUESTÃO 8

Pertiwi K., et al. Associations of dairy and fiber intake with circulating odd-chain fatty acids in post-myocardial infarction patients. Nutr Metab (Lond). 2019;16:78.

Background: Circulating odd-chain fatty acids pentadecanoic (15:0) and heptadecanoic acid (17:0) are considered to reflect dairy intake. In cohort studies, higher circulating 15:0 and 17:0 were associated with lower type 2 diabetes risk. A recent randomized controlled trial in humans suggested that fiber intake also increased circulating 15:0 and 17:0, potentially resulting from fermentation by gut microbes. We examined the

associations of dairy and fiber intake with circulating 15:0 and 17:0 in patients with a history of myocardial infarction (MI). Methods: We performed cross-sectional analyses in a subsample of 869 Dutch post-MI patients of the Alpha Omega Cohort who had data on dietary intake and circulating fatty acids. Dietary intakes (g/d) were assessed using a 203-item food frequency questionnaire. Circulating 15:0 and 17:0 (as % of total fatty acids) were measured in plasma phospholipids (PL) and cholesteryl esters (CE). Spearman correlations (rs) were computed between intakes of total dairy, dairy fat, fiber, and circulating 15:0 and 17:0. Results: Patients were on average 69 years old, 78% was male and 21% had diabetes. Total dairy intake comprised predominantly milk and yogurt (69%). Dairy fat was mainly derived from cheese (47%) and milk (15%), and fiber was mainly from grains (43%). Circulating 15:0 in PL was significantly correlated with total dairy and dairy fat intake (both $rs = 0.19$, $p < 0.001$), but not with dietary fiber intake ($rs = 0.05$, $p = 0.11$). Circulating 17:0 in PL was correlated both with dairy intake ($rs = 0.14$ for total dairy and 0.11 for dairy fat, $p < 0.001$), and fiber intake ($rs = 0.19$, $p < 0.001$). Results in CE were roughly similar, except for a weaker correlation of CE 17:0 with fiber ($rs = 0.11$, $p = 0.001$). Circulating 15:0 was highest in those with high dairy intake irrespective of fiber intake, while circulating 17:0 was highest in those with high dairy and fiber intake. Conclusions: In our cohort of post-MI patients, circulating 15:0 was associated with dairy intake but not fiber intake, whereas circulating 17:0 was associated with both dairy and fiber intake. These data suggest that cardiometabolic health benefits previously attributed to 17:0 as a biomarker of dairy intake may partly be explained by fiber intake.

a) Trata-se de uma coorte que avaliou o consumo diário de fibras e sua associação com ácidos graxos de cadeia média em indivíduos que sofreram infarto agudo do miocárdio (IAM), predominantemente do sexo masculino e 21% diabéticos.
b) Os autores trazem como racional da pesquisa os achados de uma coorte de que níveis elevados dos ácidos graxos avaliados (C:15 e C:17) foram associados com redução do risco de diabetes tipo II, e também achados de um ensaio clínico randomizado em humanos, onde a ingestão de fibras levou a aumento desses ácidos graxos, sugerindo sua produção também pela microbiota intestinal.
c) O estudo concluiu que tanto o ácido graxo pentadecanóico quanto o ácido graxo heptadecanóico apresentaram associação com a ingestão de fibras, e que níveis circulantes elevados destes biomarcadores sugerem efeitos benéficos na saúde cardiometabólica de indivíduos no pós-IAM.
d) O consumo de fibras foi avaliada com um questionário de frequência de consumo alimentar composto por 203 itens. As fibras foram os únicos componentes da dieta escolhidos para avaliação e verificação da associação com níveis plasmáticos dos ácidos graxos C:15 e C:17.

QUESTÃO 9
Consider a research project aimed at assessing whether there are differences in blood glucose concentration, measured in milligrams per deciliter (mg/dL) of individuals with obesity treated at the Obesity Outpatient Clinic of the University Hospital, who are submitted to one of two different diets (diet A or diet B). The researcher hypothesizes that individuals with obesity subjected to diet A will exhibit a lower mean glucose level than those subjected to diet B. Regarding the calculation of the sample size for this study, select the correct answer:

a) Antes de fazer o cálculo do tamanho amostral, a pesquisadora precisa testar a normalidade da variável primária (glicose), para saber se procede com análise paramétrica ou não-paramétrica.
b) A pesquisadora necessita saber quantos indivíduos obesos são atendidos ao todo no Hospital Universitário em questão, para poder calcular uma amostra representativa.
c) Para esse tipo de estudo, onde envolve o teste de uma diferença de médias entre grupos, não é necessário fazer cálculo do tamanho amostral.
d) A pesquisadora precisa considerar a hipótese dela, ou seja, de quanto ela espera que seja a diferença de médias entre os grupos, para poder calcular a amostra. Quanto maior a diferença esperada, menor a amostra necessária.

QUESTÃO 10
Have We Found a Diet ThatTruly Works? "Eat less and move more." Oh, such simple advice, but is maintaining a healthy weight really that simple? We live in an era of nutritional misinformation and opinions galore. These days, it seems that everyone feels qualified to offer expert advice on diet, exercise and weight loss. With rising obesity rates all around the world, we are constantly searching for approaches to better manage our weight and our health. For decades, the main strategy for losing weight has been to cut back on calories. what nutritionists call an “energy-restricted diet.” Although this often works in the short term, it rarely produces long-term success. It backfires because it can lead to greater feelings of hunger after the weight is lost, more obsessive

thoughts about food and eating, and a greater risk of overeating due to negative emotions and stress. These complicate the bodily mechanisms that control appetite and partly explain why most people regain the weight in the long term. Other types of restrictive diets, such as the popular high-fat, no-carbohydrate ketogenic regimen, have some of the same problems. Like low-calorie diets, they are difficult to follow over a long period of time, which can lead to feelings of frustration and failure. The challenge for researchers has been to find a strategy that is not restrictive and that can reduce feelings of hunger and improve eating habits and overall health without causing some of these negative side effects."

a) O texto argumenta que fazer dietas não funciona no curto-prazo.
b) O texto afirma que "cortar calorias" é mais desejável que dietas restritivas, como a cetogênica.
c) O texto afirma que vivemos na era da informação nutricional.
d) O texto afirma que a restrição calórica normalmente não é uma boa opção para o longo-prazo.