Nº de inscrição:_____

PROVA DE INGLÊS

Programa de Pós-Graduação em Saúde e Desenvolvimento na Região Centro-Oeste - PPGSD

GABARITO

PROCESSO SELETIVO

2020

06/02/2020

- Escreva o número da inscrição (protocolo) no topo de todas as folhas, inclusive na capa.
- Não identifique a prova com seu nome.
- Será permitido o uso de dicionário e quaisquer outras formas de consulta são expressamente proibidas.
- Desligar o celular (sob pena de eliminação).
- Não faça perguntas sobre as questões, a interpretação da prova faz parte da avaliação, as dúvidas poderão ser reclamadas nos recursos.
- As respostas dever ser escritas em português (tradução e/ou interpretação).
- Escreva com letra legível para evitar anulação da questão.
- Usar caneta preta ou azul.

Observação: Esta prova é exclusiva para o processo de seleção do PPGSD/2020, seu resultado não pode ser utilizado como suficiência ou proficiência para outros fins.

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Texto 1

Coronavirus outbreak: what's next?

Experts weigh up the best- and worst-case scenarios as the World Health Organization declares a global health emergency.

Dyani Lewis

Doi: 10.1038/d41586-020-00236-9

Scientists and health authorities around the world are racing to halt the spread of a deadly virus that emerged in the Chinese city of Wuhan in December. Thousands of people have already contracted the new coronavirus, which causes respiratory illness. The death toll is at 213, and is rising daily. On 30 January, the World Health Organization (WHO) declared the outbreak a "public-health emergency of international concern" — an alarm it reserves for events that pose a risk to multiple countries and which requires a coordinated international response.

Crucial details about the virus and how it spreads are still unknown, but experts are considering best- and worst-case scenarios on the basis of previous epidemics and what scientists already know.
[…]

Is the virus likely to change?
Some researchers are worried that as the China coronavirus spreads, the pathogen could mutate so it can spread more efficiently, or become more likely to cause disease in young people. Currently, the virus has caused severe illness, and death, mainly in older people, particularly those with pre-existing conditions such as diabetes and heart disease. A 36-year-old Wuhan man with no known pre-existing health conditions is the youngest victim reported so far.

Kristian Andersen, an infectious-disease researcher at Scripps Research in La Jolla, California, is not concerned about the virus becoming more virulent. He says that viruses constantly mutate as part of their life cycle, but those mutations don't typically make the virus more virulent or cause more serious disease. "I can't think of any examples of this having happened with an outbreak pathogen," he says.

Questões

1. Qual foi a declaração da Organização Mundial de Saúde e para qual situação ela é utilizada?

Resposta:
In the text:
"*The World Health Organization (WHO) declared the outbreak a "public-health emergency of international concern"*
it reserves for events that pose a risk to multiple countries and which requires a coordinated international response."

A Organização Mundial De Saúde (OMS) declarou o surto como "uma emergência em saúde pública de preocupação internacional".
Esta situação é reservada para eventos que coloca em risco muitos países e que requer uma resposta internacional coordenada.

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2. O que o pesquisador Kristian Andersen fala sobre o coronavírus?

Resposta:

In the text:
"*He says that viruses constantly mutate as part of their life cycle, but those mutations don't typically make the virus more virulent or cause more serious disease. "I can't think of any examples of this having happened with an outbreak pathogen," he says.*"

Ele disse que os vírus sofrem constantemente mutações que fazem parte do ciclo de vida deles, mas que estas mutações não fazem tipicamente os vírus mais virulentos ou causam doenças mais sérias. "Eu não posso pensar em nenhum exemplo a respeito que tenha acontecido com surtos de patógeno", ele afirmou (ou disse).

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Texto 2

The Effect of Flavored E-cigarettes on Murine Allergic Airways Disease

David G. Chapman, Dylan T. Casey, Jennifer L. Ather, Minara Aliyeva, Nirav Daphtary, Karolyn G. Lahue, Jos L. van der Velden, Yvonne M. W. Janssen-Heininger & Charles G. Irvin

https://doi.org/10.1038/s41598-019-50223-y

Abstract

Flavored e-cigarettes are preferred by the majority of users yet their potential toxicity is unknown. Therefore our aim was to determine the effect of selected flavored e-cigarettes, with or without nicotine, on allergic airways disease in mice. Balb/c mice were challenged with PBS or house dust mite (HDM) (Days 0, 7, 14–18) and exposed to room air or e-cigarette aerosol for 30 min twice daily, 6 days/week from Days 0–18 ($n = 8–12$/group). Mice were exposed to Room Air, vehicle control (50%VG/%50PG), Black Licorice, Kola, Banana Pudding or Cinnacide without or with 12 mg/mL nicotine. Mice were assessed at 72 hours after the final HDM challenge. Compared to mice challenged with HDM and exposed to Room Air, nicotine-free Cinnacide reduced airway inflammation ($p = 0.045$) and increased peripheral airway hyperresponsiveness ($p = 0.02$), nicotine-free Banana Pudding increased soluble lung collagen ($p = 0.049$), with a trend towards increased airway inflammation with nicotine-free Black Licorice exposure ($p = 0.089$). In contrast, all e-cigarettes containing nicotine suppressed airway inflammation ($p < 0.001$ for all) but did not alter airway hyperresponsiveness or airway remodeling. Flavored e-cigarettes without nicotine had significant but heterogeneous effects on features of allergic airways disease. This suggests that some flavored e-cigarettes may alter asthma pathophysiology even when used without nicotine.

Questões

3. Traduza para o português, de modo a ter sentido, o objetivo do trabalho.

Resposta:

In the text:
“Our aim was to determine the effect of selected flavored e-cigarettes, with or without nicotine, on allergic airways disease in mice.”

Nosso objetivo foi determinar o efeito de alguns (selecionados) cigarros eletrônicos (e-cigarros), com ou sem nicotina, nas doenças alérgicas das vias respiratórias (alergias respiratórias) em camundongo

4. Qual o resultado do trabalho e o que o mesmo sugere?

Resposta:

In the text:

“Flavored e-cigarettes without nicotine had significant but heterogeneous effects on features of allergic airways disease. This suggests that some flavored e-cigarettes may alter asthma pathophysiology even when used without nicotine.”

Cigarros eletrônicos (ou e-cigarros) aromatizados sem nicotina tiveram efeitos significativos mas heterogêneos nas características das doenças alérgicas das vias respiratórias . Isto sugere que alguns cigarros eletrônicos (e-cigarros) aromatizados podem alterar a patofisiologia asmática mesmo quando usados sem nicotina.

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Texto 3

Lifetime prevalence of intimate partner violence against women in an urban Brazilian city: A cross-sectional survey

Tendai Kwaramba, Jinny J. Ye, Cyrus Elahi, Joseph Lunyera, Aline Chotte Oliveira, Paulo Rafael Sanches Calvo, Luciano de Andrade, Joao Ricardo Nickenig Vissoci, Catherine A. Staton

Doi: 10.1371/journal.pone.0224204

Abstract

Intimate partner violence is a global health burden that disproportionately affects women and their health outcomes. Women in Brazil are also affected by interpersonal violence. We aimed to estimate the lifetime prevalence of three forms of interpersonal violence against women (IPVAW) and to identify sociodemographic factors associated with IPVAW in one urban Brazilian city. Using a cross-sectional design, we interviewed women aged ≥18 years in the urban Brazilian city, Maringá, who currently have or have had an intimate partner. The 13-item WHO Violence Against Women instrument was used to ask participants about their experiences with intimate partner violence, categorized into psychological, physical and sexual violence. We estimated associations between IPVAW and sociodemographic characteristics using generalized linear models. Of the 419 women who were enrolled and met inclusion criteria, lifetime prevalence of IPVAW was 56%. Psychological violence was more prevalent (52%) than physical (21%) or sexual violence (13%). Twenty-eight women (6.4%) experienced all three forms of IPVAW. Women were more likely to experience violence if they were employed, did not live with their partner or had 4 or more children. Educational level, household income, age and race were not significantly associated factors. Our findings highlight a high prevalence of IPVAW in a community in southern Brazil.

Questões

5. Traduza para o português, de modo a ter sentido, a parte do resumo que apresenta a metodologia do trabalho.

Resposta:

In the text:

Using a cross-sectional design, we interviewed women aged ≥18 years in the urban Brazilian city, Maringá, who currently have or have had an intimate partner. The 13-item WHO Violence Against Women instrument was used to ask participants about their experiences with intimate partner violence, categorized into psychological, physical and sexual violence. We estimated associations between IPVAW and sociodemographic characteristics using generalized linear models.

Usando um desenho transversal, nós entrevistamos mulheres de idade igual ou superior a 18 anos, na cidade brasileira de Maringá, que têm ou tiveram parceiros íntimos. O instrumento da Organização Mundial de Saúde sobre Violência Contra a Mulher (ou outra tradução similar) foi utilizado para perguntar às participantes a respeito de suas experiências com a violência de parceiros íntimos, categorizadas como violências psicológicas, físicas ou sexual. Estimamos associações entre *IPVAW* e as características sociodemográficas usando modelos lineares generalizados.

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6. Quais as características das mulheres que mais sofreram violência?

Resposta:

In the text:

Women were more likely to experience violence if they were employed, did not live with their partner or had 4 or more children.

Mulheres que têm maior possibilidade de experimentar violência são aquelas que são empregadas, que não vivem com seus parceiros ou têm 4 ou mais filhos.

As mulheres estavam mais propensas a sofrer violência se elas estivessem empregadas, não morassem com o parceiro ou tivessem 4 ou mais filhos.

Nº de inscrição:_____

Texto 4

Impact of dietary fiber and fat on gut microbiota re-modeling and metabolic health

Alfonso Benítez-Paez, Eva M. Gomez Del Pulgar, Louise Kjølbæk, Lena Kirchner Brahe, Arne Astrup, LesliHingstrup Larsen, Yolanda Sanz

Doi: 10.1016/j.tifs.2016.11.001

Abstract

Background: Scientific evidence suggests that diet plays a role in obesity and its comorbidities, partly via its interactions with the individual's gut microbiota. Likewise, the individual's microbiota influences the efficacy of dietary interventions to reduce body weight. However, we require a better understanding of the key components of the gut microbiota that are responsive to specific diets and of their effects on energy balance in order to use this information in practice.

Scope and approach: This review provides an up-to-date description of the influence of dietary fibers and fat on gut microbiota and the mechanisms presumably mediating their effects on metabolic health. We also discuss the main knowledge gaps and the need to gain greater understanding of the role of diet microbe interactions in obesity and the associated comorbidities.

Key findings and conclusions: Dietary fibers are major drivers of gut microbiota composition and function, stimulating the dominance of bacteria able to utilize these substrates as energy source, although effects vary depending on both the type of fiber and the individual's microbiota. However, the key bacteria and the primary and secondary metabolic pathways mediating specific fiber-induced effects on the metabolic phenotype remain unclear, and this information is necessary to personalize fiber-based interventions.
The literature also shows that gut microbiota contributes to the adverse consequences of high-fat diets on the metabolic phenotype; however, little is known about the effects of dietary fat type.
Further progress is expected from translational approaches integrating controlled dietary intervention human trials, combining functional omics technologies and physiological/clinical endpoints, and mechanistic studies in experimental models. This will ultimately help us to progress towards establishing informed microbiome-based dietary recommendations and interventions, which can contribute to tackling the obesity epidemic and its comorbidities.

Questões

7. Qual o foco da presente revisão?

Resposta:

In the text:

This review provides an up-to-date description of the influence of dietary fibers and fat on gut microbiota and the mechanisms presumably mediating their effects on metabolic health.

Esta revisão fornece uma descrição atualizada a respeito da influência de fibras da dieta e gordura na microbiota intestinal e os mecanismos que presumidamente mediam os seus efeitos sobre a saúde metabólica.

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8. Qual a variável determinante da composição e função da microbiota intestinal?
Resposta: In the text: Dietary fibers are major drivers of gut microbiota composition and function, stimulating the dominance of bacteria able to utilize these substrates as energy source, although effects vary depending on both the type of fiber and the individual's microbiota. **As fibras da dieta são os principais determinantes da composição e função da microbiota intestinal, estimulando a dominância de bactérias capazes de utilizar estes substratos como fonte de energia, embora efeitos variem dependendo do tipo de fibra e da composição da microbiota do indivíduo.**

Nº de inscrição:_____

Texto 5
Earl W. Sutherland's Discovery of Cyclic Adenine Monophosphate and the Second Messenger System **Fractionation and Characterization of a Cyclic Adenine Ribonucleotide Formed by Tissue Particles** *Earl. W Sutherland and T. W. Rall*
Sutherland's discovery and chemical characterization of the cAMP intermediate or "second messenger" was of crucial importance for understanding the mechanism of action of epinephrine and of many other hormones. His discovery implied that epinephrine induces the formation of cAMP in the liver cells and that the nucleotide then converts the inactive phosphorylase to the active enzyme, which leads to the formation of glucose. However, this gave rise to the question of how the hormone stimulates the formation of cAMP from AMP. Sutherland found that this took place by way of an enzyme he called adenyl cyclase. Thus, according to Sutherland's scheme, epinephrine binds to a cell surface receptor, which stimulates adenyl cyclase, causing the formation of cAMP, which then exerts its effect in the cell by activating phosphorylase. Sutherland later suggested that the effects of many other hormones could be explained on essentially similar lines and that the various hormones do not enter the cell but instead bind to surface receptors causing the formation of cAMP which then activates or inhibits various metabolic processes. This general hypothesis was first met with strong criticism by scientists because it seemed to be impossible that a single substance could lead to the numerous effects caused by different hormones. However, eventually it was shown that a large number of polypeptide hormones do exert their effects by way of cAMP, and Sutherland was awarded the 1971 Nobel Prize. In addition to the Noble Prize, Sutherland has received many honors for his research. He was elected to the National Academy of Sciences in 1966 and was awarded the National Medal of Science in 1973. Sutherland served on the National Institutes of Health Pharmacology Training Committee and the Arthritis and Metabolic Disease Program Committee. He was also active on the editorial boards of many journals, including Biochemical Preparations *and the* Journal of Pharmacology and Experimental Therapeutics.
Questões
9. Qual foi a grande contribuição do Sutherland na elucidação do efeito de vários hormônios a exemplo da epinefrina?
Resposta: In the text:*Sutherland's discovery and chemical characterization of the cAMP intermediate or "second messenger" was of crucial importance for understanding the mechanism of action of epinephrine and of many other hormones. His discovery implied that epinephrine induces the formation of cAMP in the liver cells and that the nucleotide then converts the inactive phosphorylase to the active enzyme, which leads to the formation of glucose.* **A descoberta de Sutherland e a caracterização química do intermediário cAMP ou "mensageiro secundário" foi de importância crucial para a compreensão do mecanismo de ação da epinefrina e muito outros hormônios. A sua descoberta implicou (implica) que a epinefrina induz a formação do cAMP nas células do fígado e que então o nucleotídeo converte a fosforilase inativa em enzima ativa, o que leva à formação de glucose.**

Nº de inscrição:_____

10. Que outras honrarias o Sutherland recebeu além do prêmio Nobel?
Resposta: *In the text:* *In addition to the Noble Prize, Sutherland has received many honors for his research. He was elected to the National Academy of Sciences in 1966 and was awarded the National Medal of Science in 1973.* **Além do Prêmio Nobel, Sutherland recebeu inúmeras (muitas) homenagens pelas suas pesquisas. Ele foi eleito para a Academia Nacional de Ciências em 1966 e foi condecorado (premiado) com a Medalha Nacional de Ciências em 1973.**