CURSO FERNANDA PESSOA ONLINE

INGLÊS

com **Marco Antônio**

Enem e vestibulares

Exercises

Exercises

The Amazon rainforest is now emitting more carbon dioxide than it is able to absorb, scientists have confirmed for the first time. The emissions amount to a billion tonnes of carbon dioxide a year, according to a study. The giant forest had previously been a carbon sink, absorbing the emissions driving the climate crisis, but is now causing its acceleration, researchers said.

Most of the emissions are caused by fires, many deliberately set to clear land for beef and soy production. But even without fires, hotter temperatures and droughts mean the south-eastern Amazon has become a source of CO2, rather than a sink.

Growing trees and plants have taken up about a quarter of all fossil fuel emissions since 1960, with the Amazon playing a major role as the largest tropical forest. Losing the Amazon's power to capture CO2 is a stark warning that slashing emissions from fossil fuels is more urgent than ever, scientists said.

The research used small planes to measure CO2 levels up to 4,500 m above the forest over the last decade, showing how the whole Amazon is changing. Previous studies indicating the Amazon was becoming a source of CO2 were based on satellite data, which can be hampered by cloud cover, or ground measurements of trees, which can cover only a tiny part of the vast region.

The scientists said the discovery that part of the Amazon was emitting carbon even without fires was particularly worrying. They said it was most likely the result of each year's deforestation and fires making adjacent forests more susceptible the next year. The trees produce much of the region's rain, so fewer trees means more severe droughts and heatwaves and more tree deaths and fires.

(Damian Carrington. www.theguardian.com, 14.07.2021. Adaptado.)

1. (USCS ADAPTADO) A floresta Amazônica representa um terço das florestas tropicais do mundo, desempenhando papel imprescindível na manutenção de serviços ecológicos, tais como, garantir a qualidade do solo, dos estoques de água doce e proteger a biodiversidade. De acordo com o terceiro e o quarto parágrafos do texto podemos afirmar que...

a) até 1960, o cultivo de árvores e plantas conseguia absorver apenas um quarto de todas as emissões de combustíveis fósseis.
b) a Amazônia vem sendo responsável pela absorção de cerca de 25% de todas as emissões de combustíveis fósseis desde 1960.
c) uma pesquisa baseada em dados de satélite fornece informações mais precisas, uma vez que ele é capaz de cobrir grandes regiões.
d) as pesquisas mais recentes têm utilizado dados de satélites para medir os níveis de dióxido de carbono na Amazônia.
e) a Amazônia só foi reconhecida como a maior floresta tropical do mundo no ano de 1960.

Researchers in the US have developed a technological aid: a chest-mounted video camera — linked to a processing unit involving a computer-vision algorithm — and a pair of vibrating wristbands. When the system detects a hazard that the wearer is set to collide with, the wristband on the same side as the hazard vibrates. If the obstacle is straight ahead, both wristbands vibrate. The researchers said the device was not designed to replace canes or guide dogs but rather to provide additional benefits, including helping wearers to avoid hazards above ground level.

Writing in the journal Jama Ophthalmology, the researchers reported that a study of 368 hours of walking video data from 31 blind or partially sighted participants indicates that the approach could be helpful.

After a period of training, each participant used the system for about four weeks, in addition to their cane or guide dog. During this time the system switched unannounced between "active" mode — during which the wristbands vibrated when a hazard was detected — and "silent" mode, where they did not. The researchers then analysed the data to see whether the rate of contacts between the user's body or cane and the objects identified by the system differed between the two scenarios.

When they looked at a random sample of collision warnings for each participant, they found that such contacts were reduced by 37% when the system was in active mode, taking into account factors including participants' level of visual acuity.

(Nicola Davis. www.theguardian.com, 22.07.2021. Adaptado.)

2. **(UNIFIMES)** De acordo com o texto, pesquisadores desenvolveram um dispositivo que

a) avalia, de forma acurada, danos à visão causados pelo uso de telas.
b) substitui gradualmente o uso de bengalas e cão-guia.
c) conduz deficientes visuais ao destino desejado mediante sistema de navegação.
d) auxilia pessoas com deficiência visual a evitar colisões.
e) reduz os riscos de colisão em 37%, mesmo não estando no modo ativo.

HEALTHY HEART IN THE AMAZON

How to maintain a healthy heart is a surprisingly contentious question. Diet and exercise are crucial, everyone agrees – but the ideal specifics and the relationships among them remain mysterious. Some experts recommend avoiding dietary fats; others endorse fat and low carbohydrates. The impact of high levels of inflammation on heart disease is disputed. And almost no one can agree about how much (or what type of) exercise is optimal.

Nevertheless, a study published last month in The Lancet points the way to resolving some of these issues by focusing on the Tsimane, a group of subsistence farmers and hunters living in Bolivia along a tributary of the Amazon River. Anthropologists have learned a lot about the lives of the Tsimane since they began studying them 15 years ago. The men typically spend seven hours or so of every day hunting, fishing or poling their canoes to towns to sell and procure food. The women devote almost as much time to gathering nuts and farming rice, corn and plantains. Men and women cover roughly eight miles each, or 17,000 steps, each day. Their diet is heavy on carbs: 72 percent of their daily calories derive from unprocessed starches, 14 percent from saturated and unsaturated fats and 14 percent from protein. Many Tsimane experience frequent infections and show chronically elevated levels of inflammation.

For the Lancet study, anthropologists teamed with cardiologists who drew blood from 705 Tsimane men and women between the ages of 40 and 94. The researchers also conducted cardiac scans, enabling them to score the presence of atherosclerosis, a disease characterized by plaque buildup inside a person's cardiac arteries. A score of 0 meant essentially no detectable disease; 1 to 99, low levels; and 400 or greater would be high. Eighty-five percent of the volunteers scored 0; only 3 percent exceeded 99. Even among those older than 75, only 8 percent exceeded 99. A single person scored higher than 399. As a group, the Tsimane had scores less than one-fifth those of people in the United States or Europe. They exhibited even less atherosclerosis than Japanese women, previously thought to have the world's healthiest arteries. In general, the Tsimane developed the first signs of atherosclerosis almost 25 years later than their counterparts in the industrialized West.

The implications of these findings are complex, says Hillard Kaplan, an anthropologist at the University of New Mexico in Albuquerque and the study's co-author. They raise questions about the effect of fats and carbohydrates on the heart and also about the cardiac impacts of inflammation, which does not contribute noticeably to atherosclerosis among the Tsimane. But Kaplan says the study indicates how essential it is to be very active physically – the Tsimane were in almost constant motion every day.

(Gretchen Reynolds. www.nytimes.com, 06.04.2017. Adaptado.)

3. **(UNICID SÃO PAULO)** According to the first paragraph, there is a consensus that the most important thing to have a healthy heart is

a) control the levels of inflammation of the heart muscle.
b) avoid the intake of fats.
c) take care of food and exercise.
d) consume only unsaturated fats.
e) eat few carbohydrates.

4. **(UNICID SÃO PAULO)** In the excerpt from the first paragraph "How to maintain a healthy heart is a surprisingly contentious question", the underlined term can be replaced, without change in meaning, by:

a) optimal.
b) mysterious.
c) ideal.
d) disputed.
e) crucial.

5. **(UNICID SÃO PAULO)** According to the second paragraph, the Tsimane

a) live most of the time in Bolivia but occasionally move to Brazil by boat along the Amazon River.
b) are subsistence farmers and hunters who spend around seven hours a day in routine activity.
c) eat exclusively fish and vegetables they gather in the Bolivian rainforest.
d) are frequently infected by tropical diseases such as malaria as well as diseases brought from villages.
e) have been studied by anthropologists and cardiologists for 15 years.

GABARITO

Resposta da questão 1: [B]

"...Growing trees and plants have ***taken up about a quarter of all fossil fuel emissions since 1960,*** with the Amazon playing a major role as the largest tropical forest. Losing the Amazon's power to capture CO2 is a stark warning that slashing emissions from fossil fuels is more urgent than ever, scientists said.

The research used small planes to measure CO2 levels up to 4,500 m above the forest over the last decade, showing how the whole Amazon is changing. Previous studies indicating the Amazon was becoming a source of CO2 were based on satellite data, which can be hampered by cloud cover, or ground measurements of trees, which can cover only a tiny part of the vast region..."

"...O cultivo de árvores e plantas ***absorveu cerca de um quarto de todas as emissões de combustíveis fósseis desde 1960,*** *com a Amazônia desempenhando um papel importante como a maior floresta tropical. Perder o poder da Amazônia de capturar CO2 é um forte aviso de que reduzir as emissões de combustíveis fósseis é mais urgente do que nunca, disseram cientistas.*

A pesquisa usou pequenos aviões para medir os níveis de CO2 até 4.500 m acima da floresta na última década, mostrando como toda a Amazônia está mudando. Estudos anteriores indicando que a Amazônia estava se tornando uma fonte de CO2 foram baseados em dados de satélite, que podem ser prejudicados pela cobertura de nuvens, ou medições de árvores no solo, que podem cobrir apenas uma pequena parte da vasta região..."

Resposta da questão 2: [D]

"Pesquisadores nos EUA desenvolveram uma ajuda tecnológica: uma câmera de vídeo montada no peito – ligada a uma unidade de processamento que envolve um algoritmo de visão computacional – e um par de pulseiras vibratórias. Quando o sistema detecta um perigo com o qual o usuário está configurado para colidir, a pulseira do mesmo lado do perigo vibra. Se o obstáculo estiver em frente, ambas as pulseiras vibram. Os pesquisadores disseram que o dispositivo não foi projetado para substituir bengalas ou cães-guia, mas sim para fornecer benefícios adicionais, incluindo ajudar os usuários a evitar perigos acima do nível do solo."

Resposta da questão 3: [C]

De acordo com o primeiro parágrafo, há um consenso de que o mais importante para ter o coração saudável é cuidar da alimentação e fazer exercícios físicos.

Resposta da questão 4: [D]

No trecho do primeiro parágrafo "How to maintain a healthy heart is a surprisingly contentious question", CONTENTIOUS pode ser substituído, sem alteração de sentido, por DISPUTED.

a) ótimo.
b) misterioso.
c) ideais.
d) contestado.
e) crucial.

Resposta da questão 5: [B]

De acordo com o segundo parágrafo, os Tsimane são agricultores de subsistência e caçadores que passam cerca de sete horas por dia em atividades rotineiras.

Write down

Estamos juntos nessa!

CURSO
FERNANDA PESSOA
ONLINE