

GMAT阅读资料第8篇 PDF转换可能丢失图片或格式，建议阅读原文

https://www.100test.com/kao_ti2020/126/2021_2022_GMAT_E9_98_85_E8_AF_BB_c89_126444.htm It was once believed that the brain was independent of metabolic processes occurring elsewhere in the body. In recent studies, however, we have discovered that the production and release in brain neurons of the neurotransmitter serotonin (neurotransmitters are compounds that neurons use to transmit signals to other cells) depend directly on the food that the body processes. Our first studies sought to determine whether the increase in serotonin observed in rats given a large injection of the amino acid tryptophan might also occur after rats ate meals that change tryptophan levels in the blood. We found that, immediately after the rats began to eat, parallel elevations occurred in blood tryptophan, brain tryptophan, and brain serotonin levels. These findings suggested that the production and release of serotonin in brain neurons were normally coupled with blood-tryptophan increases. In later studies we found that injecting insulin into a rat's bloodstream also caused parallel elevations in blood and brain tryptophan levels and in serotonin levels. We then decided to see whether the secretion of the animal's own insulin similarly affected serotonin production. We gave the rats a carbohydrate-containing meal that we knew would elicit insulin secretion. As we had hypothesized, the blood tryptophan level and the concentrations of tryptophan and serotonin in the brain increased after the meal.

1. Which of the following titles best

summarizes the contents of the passage? (A) Neurotransmitters: Their Crucial Function in Cellular Communication (B) Diet and Survival: An Old Relationship Reexamined (C) The Blood Supply and the Brain: A Reciprocal Dependence (D) Amino Acids and Neurotransmitters: The Connection Between Serotonin Levels and Tyrosine (E) The Effects of Food Intake on the Production and Release of Serotonin: Some Recent Findings

2. According to the passage, the speed with which tryptophan is provided to the brain cells of a rat varies with the (A) amount of protein present in a meal (B) concentration of serotonin in the brain before a meal (C) concentration of leucine in the blood rather than on the concentration of tyrosine in the blood after a meal (D) concentration of tryptophan in the brain before a meal (E) number of serotonin-containing neurons present in the brain before a meal

3. According to the passage, when the authors began their first studies, they were aware that (A) they would eventually need to design experiments that involved feeding rats high concentrations of protein (B) tryptophan levels in the blood were difficult to monitor with accuracy (C) serotonin levels increased after rats were fed meals rich in tryptophan (D) there were many neurotransmitters whose production was dependent on metabolic processes elsewhere in the body. (E) serotonin levels increased after rats were injected with a large amount of tryptophan

4. According to the passage, one reason that the authors gave rats carbohydrates was to (A) depress the rats tryptophan levels (B) prevent the rats from contracting diseases (C) cause the rats to produce insulin (D) demonstrate that insulin is the

most important substance secreted by the body (E) compare the effect of carbohydrates with the effect of proteins 100Test 下载频道 开通，各类考试题目直接下载。详细请访问 www.100test.com