

2026(令和8)年度 大学院入学試験

博士後期課程Ⅱ期

人間生活学研究科 食物栄養学専攻

英語試験問題(栄養科学分野)

(注意事項)

1. 筆記用具は、HB の濃さの鉛筆、またはシャープペンシルを使用してください。
2. 解答は、解答用紙に記述してください。
3. 解答用紙は、2枚配付します。足りなくなった場合は挙手してください。
4. 受験番号・氏名は、すべての解答用紙に記入してください。
5. 試験時間は60分です。

Read the following passage and make a list of the roles that dietary fiber plays in health

(less than 200 English words or 400 Japanese letters).

以下の英文を読み、食物繊維の健康上の役割を書け。(英語 200 語以内、もしくは日本語 400 字以内)

Dietary fiber provides numerous benefits for both digestive health and overall well-being. One of the primary functions of fiber is to promote regular bowel movements and prevent constipation. It adds bulk to the stool, making it easier to pass through the intestines. By facilitating regularity, fiber helps prevent digestive issues such as hemorrhoids and diverticulosis. In addition to its impact on digestion, fiber also plays a significant role in regulating blood sugar levels.

Soluble fiber, found in foods such as oats, legumes, and fruits, forms a gel-like substance in the digestive tract. This gel slows down the absorption of glucose into the bloodstream, preventing rapid spikes in blood sugar levels. Consequently, a diet rich in fiber can reduce the risk of developing type 2 diabetes and help manage blood sugar levels in individuals with diabetes.

Furthermore, fiber aids in weight management. High-fiber foods tend to be more filling and satisfying, leading to a reduced calorie intake. Additionally, fiber-rich foods require more chewing, which promotes a slower eating pace and allows for better recognition of satiety cues. By promoting feelings of fullness, fiber can help control appetite and prevent overeating.

Beyond its impact on digestion and weight management, fiber also plays a significant role in maintaining heart health. Dietary fiber helps lower cholesterol levels by binding to cholesterol in the digestive system and preventing its absorption into the bloodstream. By reducing LDL cholesterol levels, fiber helps protect against cardiovascular diseases such as heart attacks and strokes.

Lastly, fiber acts as a prebiotic, providing nourishment for beneficial gut bacteria. These bacteria play a crucial role in maintaining a healthy gut microbiome, which is essential for proper digestion, nutrient absorption, and immune function. By promoting the growth of beneficial bacteria, fiber supports a balanced gut microbiota and contributes to overall gut health.

解答

解答例

英文解答例)

How dietary fiber contributes to health:

- 1) Dietary fiber increases stool bulk and promotes bowel movements, preventing digestive problems like hemorrhoids and diverticulosis.
- 2) Soluble dietary fiber forms a gel-like substance in the digestive tract, enveloping glucose and slowing its absorption, preventing blood sugar spikes and reducing the risk of developing type 2 diabetes.
- 3) Body weight control. Dietary fiber is not absorbed, increasing intestinal volume and increasing chewing, which slows eating and makes you feel fuller, reducing calorie intake.
- 4) By binding to cholesterol in the digestive system and preventing its absorption, fiber can help lower cholesterol levels and prevent cardiovascular diseases like heart attack and stroke.
- 5) Fiber nourishes the beneficial bacteria in the gut. These bacteria play a key role in maintaining a healthy gut flora, which is essential for proper digestion, nutrient absorption, and immune function.

日本語解答例)

食物繊維が健康に貢献する点:

- 1) 食物繊維は便の量を増やし、便通を促進することで、痔や憩室症などの消化器系の問題を予防する。
- 2) 水溶性食物繊維は、消化管内でゲル状の物質を形成し、ブドウ糖を包み込んで吸収を遅らせ、血糖値の急上昇を防ぎ、2型糖尿病の発症リスクを低減する。
- 3) 食物繊維は吸収されず腸内容量を増やすために、また噛む回数が増えるため食べるペースが遅くなることにより満腹感を与えカロリー摂取量を低減し、肥満を予防する。
- 4) 消化器系でコレステロールに結合し吸収を防ぐことで、コレステロール値を下げ、心臓発作や脳卒中などの心血管疾患を予防するのに役立つ。
- 5) 食物繊維は腸内の善玉菌に栄養を与える。これらの細菌は、適切な消化、栄養素の吸収、免疫機能に不可欠な、健康な腸内細菌叢の維持に重要な役割を果たす。