Nourishing the Future: Sustainable Food Systems for Nutrition and Dietetic Students

Module 3: Food and Our Climate

Knowledge Check and Answer Key

Questions

Question 1

An international commission has just released a report on diets and climate change that reflects the evidence presented in this module. You are a dietitian and co-author of the report. At a press conference, a journalist asks you, "So should everyone stop eating meat?"

Which of the following responses best reflects the evidence presented in this module?

A. "Yes. Eliminating all meat is the only effective way to reduce food-system greenhouse gas emissions, regardless of cultural or nutritional needs."
B. "Not necessarily. Although meat production—especially from ruminants—has a large climate footprint, sustainable diets can be plant-forward, while still including some meat. Shifting toward fewer, more environmentally responsible animal foods while considering nutrition, cultural preferences, and equity is the overall goal."
C. "No. The carbon footprint of livestock production is overstated, and transportation has a far greater impact on climate. Therefore, choosing locally produced foods matters far more for the climate than what we eat."
D. "No because the grazing of livestock already offsets more than the total amount of methane and nitrous oxide emissions from all agricultural production."

Question 2

Climate change is projected to influence the availability and nutritional quality of our food supply.

Which of the following statements <u>best</u> reflects a nutrition-related impact discussed in this module?

A. Increased temperatures decrease the risk of foodborne illness by limiting the survival of many common foodborne pathogens.
B. Shifts in growing seasons will improve food security by expanding farmland availability in virtually all major agricultural regions.
C. Elevated CO_2 increases crop yields and nutrient density, improving access to protein and minerals in most staple foods.
D. Higher CO_2 levels can reduce protein, iron, and zinc concentrations in staple crops such as rice, wheat, and soy, posing greater risks for populations relying heavily on these foods.

Question 3

Which of the following statements <u>best</u> summarizes the main trade-offs associated with dairy in food systems?

A. Dairy foods have minimal environmental impact because most emissions come from transportation and processing, not production.
B. Dairy is nutritionally limited unless it's fortified, which is why plant-based milks usually offer more protein and vitamins.
C. Dairy foods are good sources of key nutrients but producing them generally creates higher greenhouse gas emissions compared to many other protein and calorie sources.
D. Dairy production has lower emissions than producing fortified plant-based milks, which offsets the nutritional deficiencies of dairy.

Question 4

A dietitian is counseling a client who wants to eat less meat. The client asks what they should focus on adding to their diet to make the shift both healthy and environmentally sustainable.

Which of the following approaches best aligns with evidence-based guidance?

A. Replace meat mainly with legumes and a variety of whole plant foods, including whole grains, vegetables, nuts, and seeds, to ensure good nutrition and lower environmental impacts.
B. Swap meat for cheese pizza and other dairy-based meals because they contain enough calories to replace meat yet have lower carbon footprints.
C. Rely mostly on tree nuts for protein since they have low environmental footprints and don't require much water to grow.
D. Eat more alternative meat products instead since they offer superior nutrition and lower environmental impact of any source of protein, including legumes.

Question 5

A dietitian is developing a new sustainability campaign for a college dining hall. Students love their chicken tenders, so a careful approach is needed to avoid complaints from angry students and parents.

Which of the following approaches is most likely to be effective in encouraging students to adopt more sustainable eating habits?

A. Assuming the main barrier is lack of awareness, rely on educational materials to explain why they should never eat meat.
B. Introduce small, incremental shifts—like improving placement of plant-forward options, offering tasty meatless dishes, and using appealing menu descriptions.
C. Focus campaign messaging on the environmental harms of meat, assuming students will change their diets out of climate guilt.
D. Remove all meat from the dining hall menus immediately and wait to see if students even notice they're eating teriyaki tofu five days a week.

Answer Key

Question 1
Correct Answer: B
See Section B & D

Question 2
Correct Answer: D
See Section C

Question 3
Correct Answer: C
See Section D

Question 4
Correct Answer: A
See Section D

Question 5
Correct Answer: B
See Section E

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