

## Environmental Medicine - Class 2 - Air

1. You spend most of your day inside your home or school. Why does this matter for air quality?

- A. Outdoor air is always more important than indoor air
- B. Indoor air is your main exposure because you spend most time there
- C. Air only matters when you are outside
- D. Indoor air has no pollutants

**(Answer: B)**

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2. A student says, “Air is just oxygen.” What is the BEST response?

- A. Air is only oxygen and nothing else
- B. Air is mostly water vapor
- C. Air is a mixture of gases, particles, and chemicals
- D. Air is only carbon dioxide

**(Answer: C)**

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3. A bedroom door is closed overnight in a tightly sealed home. By morning, the person feels tired and has a headache. What is the MOST likely cause?

- A. Too much oxygen built up
- B. Not enough nitrogen
- C. Too much humidity
- D. Carbon dioxide built up due to poor airflow

**(Answer: D)**

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4. Which activity is MOST likely to increase particles in the air quickly?

- A. Cooking on a stove at high heat
- B. Sitting quietly and reading
- C. Sleeping with the lights off
- D. Drinking water

**(Answer: A)**

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5. A home has very dry air (low humidity) during winter. What is MOST likely to happen?

- A. Air becomes cleaner automatically
- B. Germs may stay in the air longer
- C. Mold grows faster
- D. Oxygen levels drop

**(Answer: B)**

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6. Which statement about HEPA filters is TRUE?
- A. They remove all gases and chemicals
  - B. They only work outdoors
  - C. They remove small particles like dust and pollen
  - D. They increase pollution in the air

**(Answer: C)**

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7. A room smells strongly like new furniture. What is the MOST likely source?
- A. Carbon dioxide
  - B. Volatile chemicals (VOCs) released from materials
  - C. Oxygen buildup
  - D. Water vapor

**(Answer: B)**

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8. A crowded classroom has poor ventilation. What is MOST likely to happen over time?
- A. Air becomes fresher
  - B. CO<sub>2</sub> levels decrease
  - C. Oxygen increases
  - D. Air becomes stale and harder to focus

**(Answer: D)**

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9. Which situation BEST shows that humans affect indoor air?
- A. A tree releasing oxygen outside
  - B. A fan moving air around
  - C. People breathing and releasing gases into a room
  - D. Rain falling outside

**(Answer: C)**

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10. Why is moderate humidity (around 40–60%) helpful?
- A. It completely removes all pollutants
  - B. It prevents all air movement
  - C. It makes air colder
  - D. It helps reduce how long germs stay in the air

**(Answer: D)**

### Home Activity Key

#### Activity 1 – Spot the Higher Risk Scenario

**Instructions:**

For each pair, circle which situation has the higher air quality risk.

1. Bedroom door closed overnight vs bedroom door open with airflow
2. Cooking on a gas stove with no fan vs cooking with a vent hood on
3. Home at 45% vs Home with humidity at 20%
4. New furniture in a sealed room vs older furniture in a ventilated room
5. Classroom with active ventilation vs Crowded classroom with windows closed
6. Running a HEPA filter only vs HEPA + carbon filter
7. Occasional use in a large ventilated space vs Burning candles daily in a small room
8. Home with a clean HVAC filter vs home with a clogged filter

#### Activity 2 – Match the Situation to the Best Air Strategy

**Instructions:**

Match each situation with the BEST action.

SITUATION	ACTION
CO2 levels rise overnight in a bedroom	Use a HEPA filter
Strong chemical smell from new carpet	Replace HVAC filter
Frequent cooking smoke in the kitchen	Combine HEPA + carbon filtration
Dry air causing irritation in winter	Increase ventilation (open windows/crack door)
Musty smell in a basement	Reduce occupancy / increase airflow
Allergy symptoms indoors despite clean-looking space	Use a range hood or kitchen ventilation
Headaches in a crowded room	Add carbon filtration
Air feels "stale" even though the home looks clean	Address moisture source and improve drainage
Visible dust buildup around vents	Maintain humidity between 40-60%
Pet dander present in the home	Clean ducts / surfaces