

The Human Respiratory System

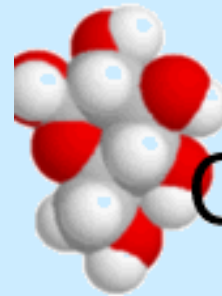
Not to be confused with
CELLULAR respiration

Take a deep breath...

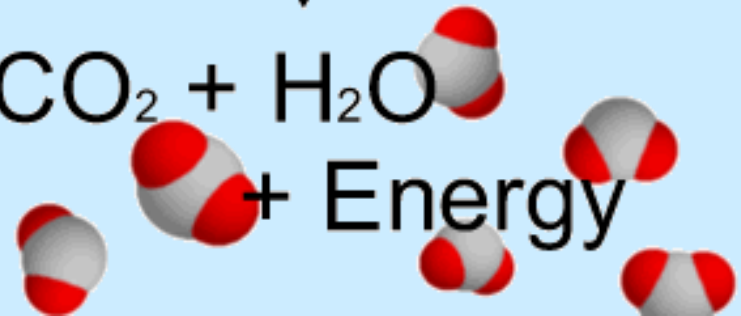
Respiratory systems provide the gas exchange NECESSARY for cellular respiration

O₂ in/ CO₂ out

CELLULAR Respiration



+ Energy



Respiratory Surfaces

- Regions where gases are exchanged with environment
- Thin
- Moist
- Highly vascularized with capillaries
(or associated with a transport system)

Respiratory surface

Examples

Worms



Skin



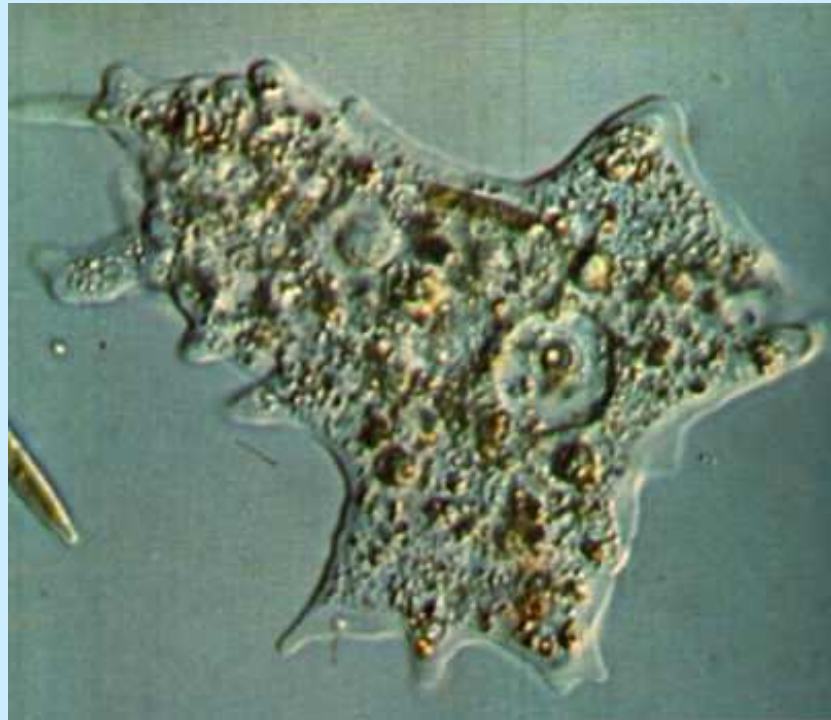
Respiratory surface

Examples

Ameba



Cell
Membrane



Respiratory surface

Examples

fish



gills



Respiratory surface

Examples

Humans



**Alveoli
in
lungs**

Respiratory surface

Examples

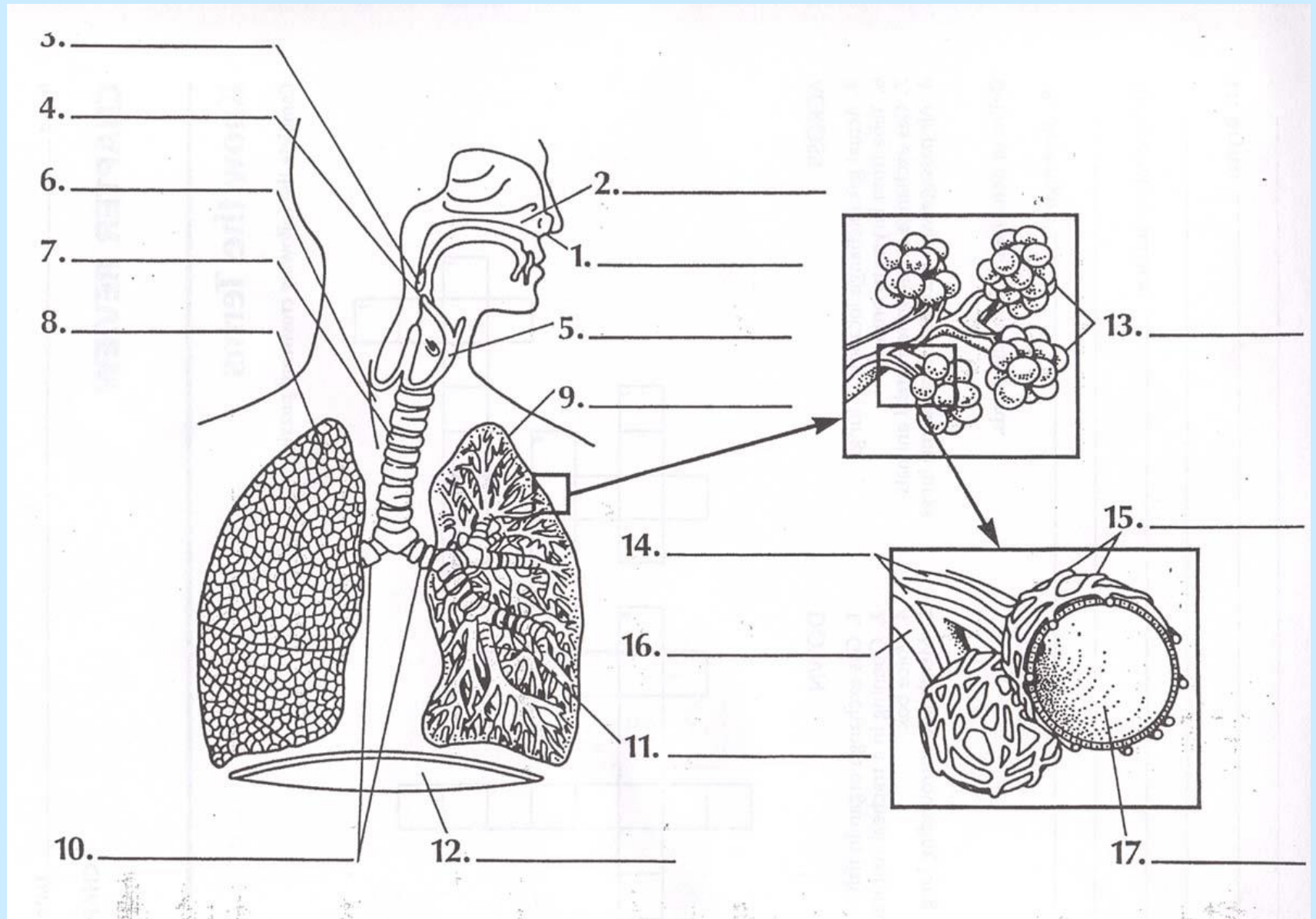
frogs



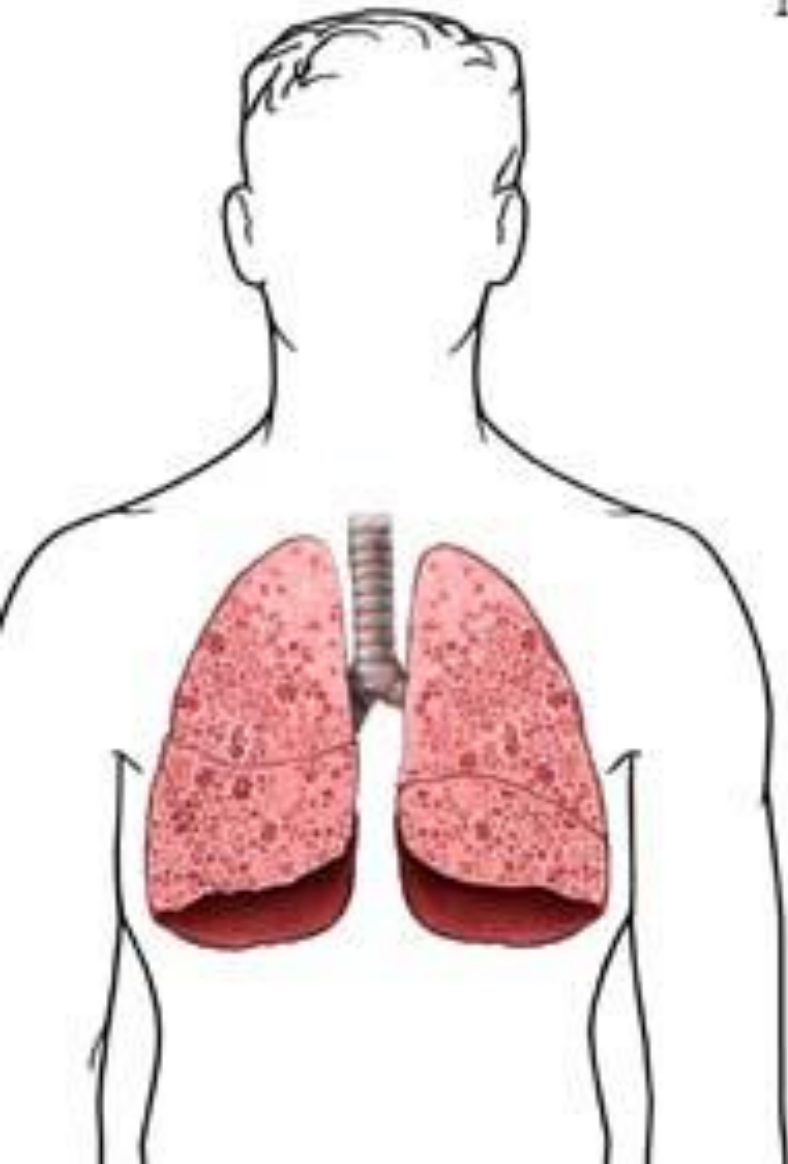
**Skin/
Alveoli**



Take a deep breath



Normal bronchiole
and alveoli



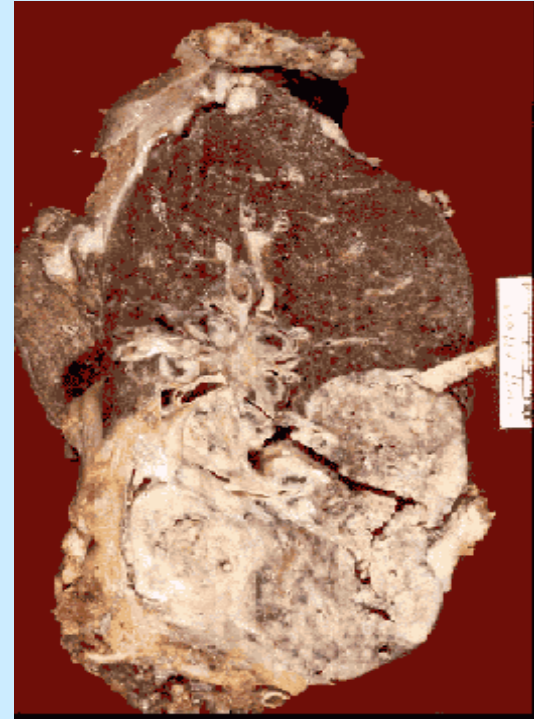
Emphysema



Human Lungs and Smoking



↑
Healthy



↑
Keep smoking

Care for a smoke?

“My lungs will heal once I stop smoking”

