

RESPIRATION



Presentation by
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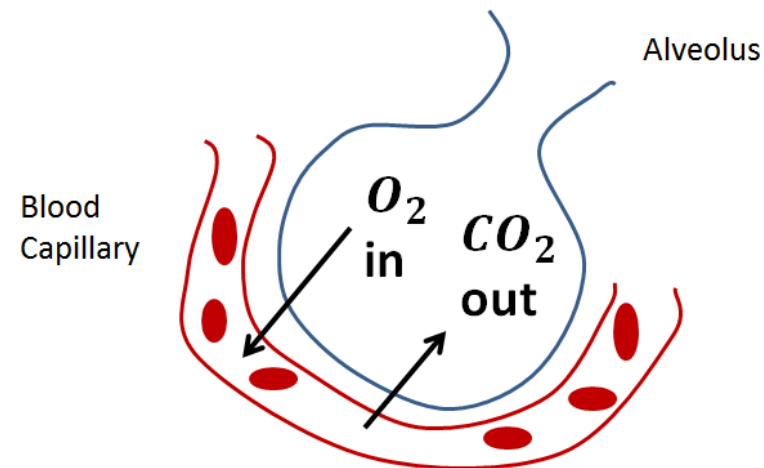
Introduction:

- ▶ Energy necessary for the various activities of life is generated through a series of chemical reaction.



Definition:

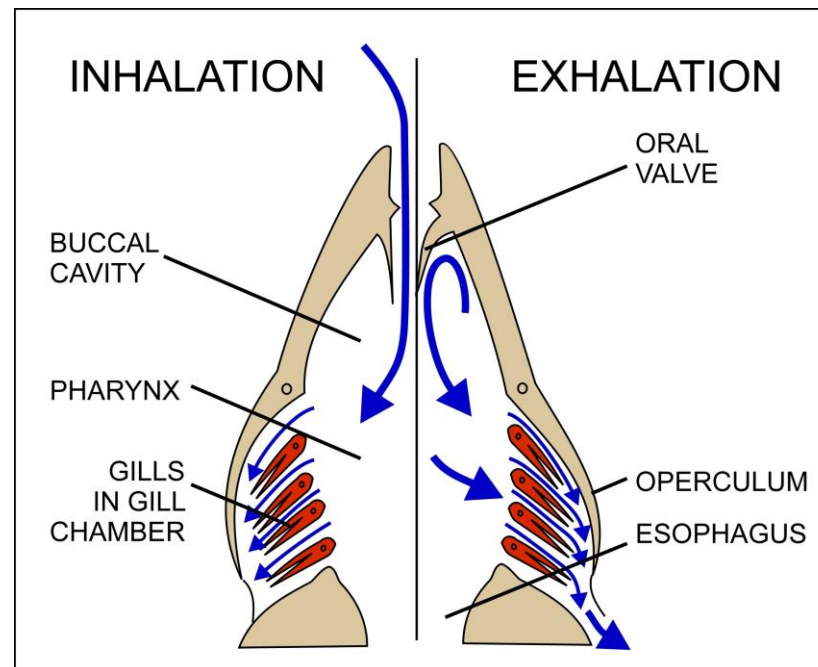
- ▶ Breathing is a Latin word.
- ▶ Respiration is exchange of gases between an organism and its environment.
- ▶ This exchange of gases occurs at the cellular level.



Types of respiration:

In fish:

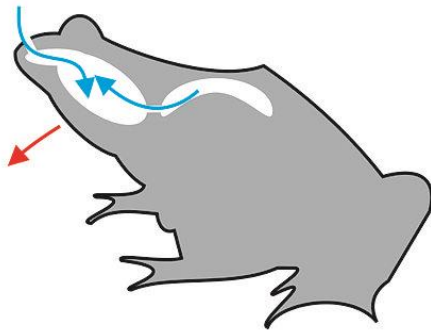
- Gills breathing-
- example- Bony fish, Cartilagenous fish



In Amphibians: Frogs

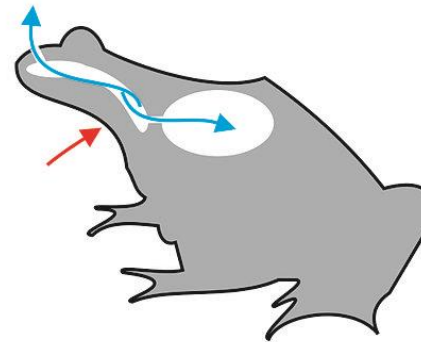
1. By skin- 25% Respiration
2. By Buccal cavity- 5%
3. By Buccopharyngeal- 5%
4. By lungs- 65%

Inspiration



Buccal cavity expands
Air is drawn into buccal cavity
from outside and lungs

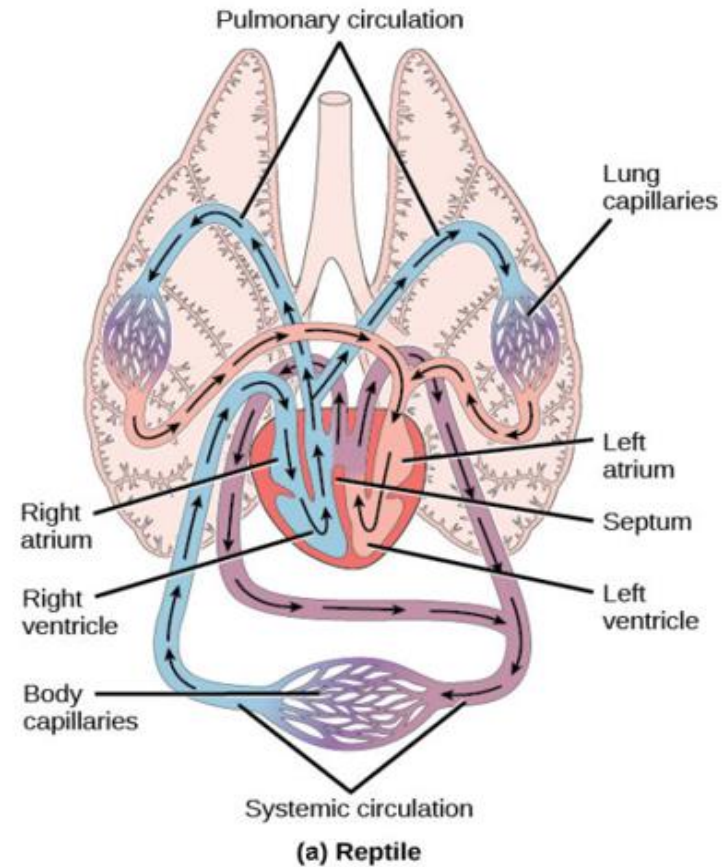
Expiration



Buccal cavity contracts
Air is forced out of nostrils
Air is forced into lungs
(some mixing)

In Reptiles

- ▶ Ex - Turtle, crocodiles



In Aves: Birds

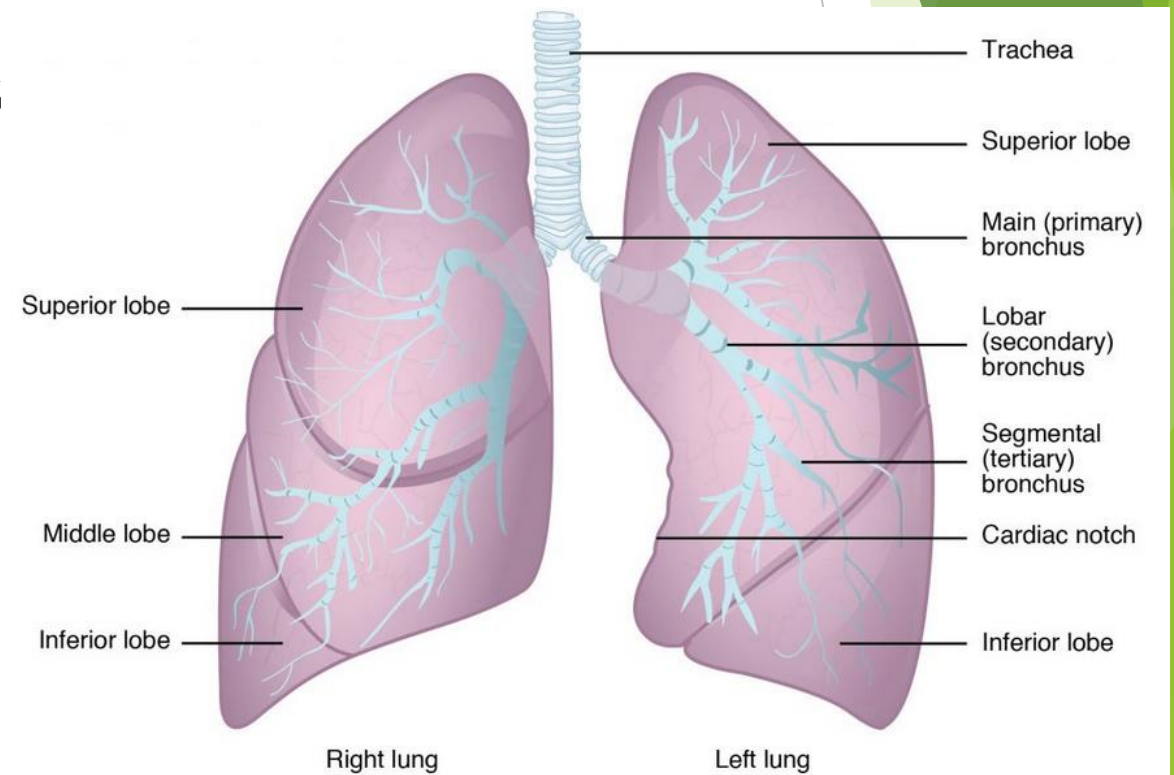
- ▶ Ex- Columba livia

In Mammals: By lungs

► Ex- Rabbit, Humans

Regulation and control of breathing

1. Nervous control (Medulla oblongata)
2. Hormonal control



Factors that affect respiration

- ▶ Gas effect: O₂, CO₂, H₂
- ▶ Temperature effect
- ▶ Height effect
- ▶ Exercise effect

