

The mechanism of breathing

Inspiration – active

1. The external intercostal muscles contract, pulling the ribs upwards and outwards.
2. The diaphragm contracts – flattening.
3. The liver piston moves downwards.
4. Causes an increase in volume of the thorax.
5. Pressure in the thorax is lower than the atmospheric pressure.
6. Air is drawn into the lungs along a pressure gradient, increasing the volume of the lungs.

Expiration - passive

1. The external intercostal muscles relax, the ribs move downwards and inwards.
2. The diaphragm relaxes – returns to dome shape.
3. The liver piston moves upwards.
4. Causes a decrease in volume of the thorax.
5. Pressure in the thorax is higher than the atmospheric pressure.
6. Air is forced out of the lungs along a pressure gradient, decreasing the volume of the lungs.

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