

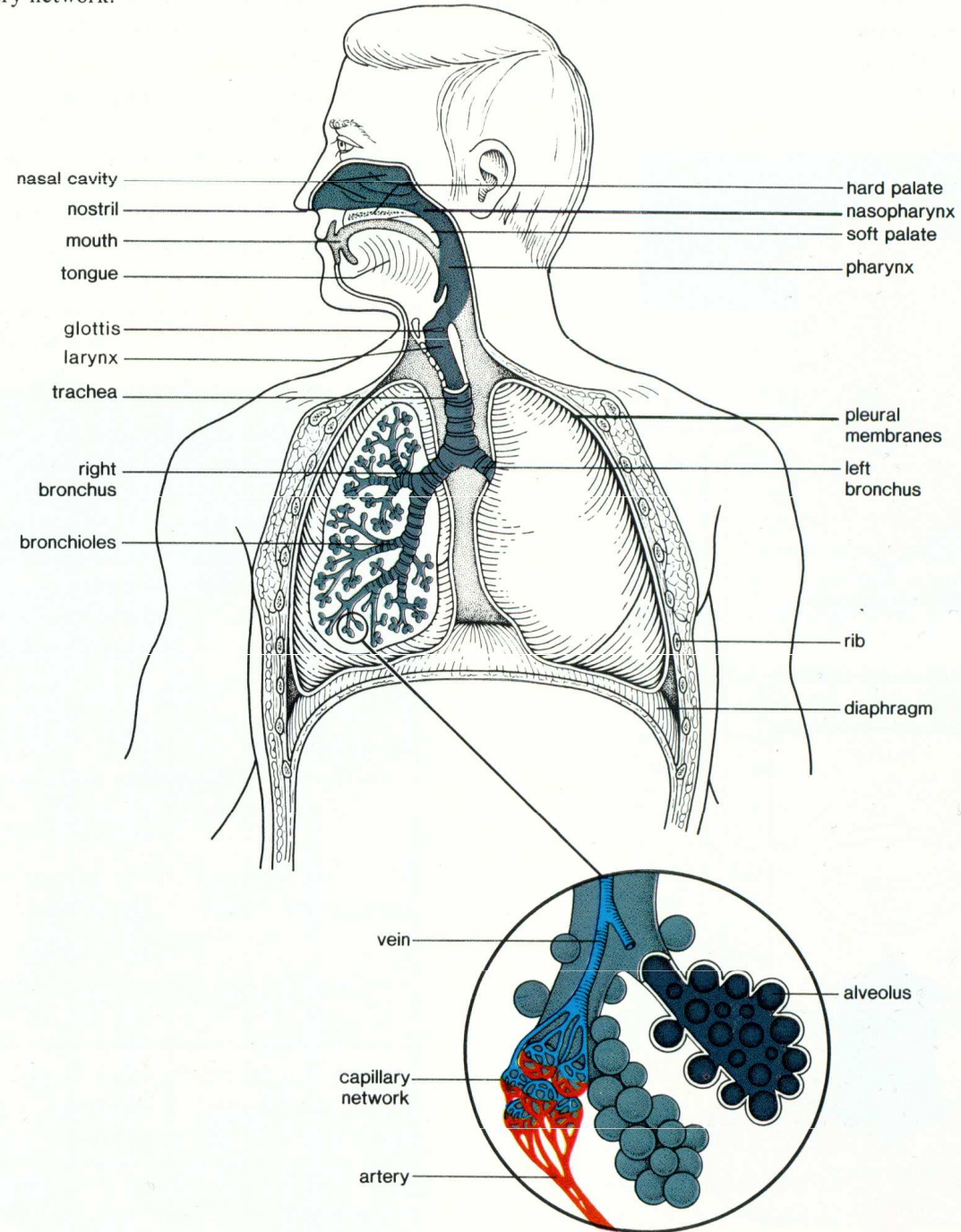
- **horní cesty dýchací**

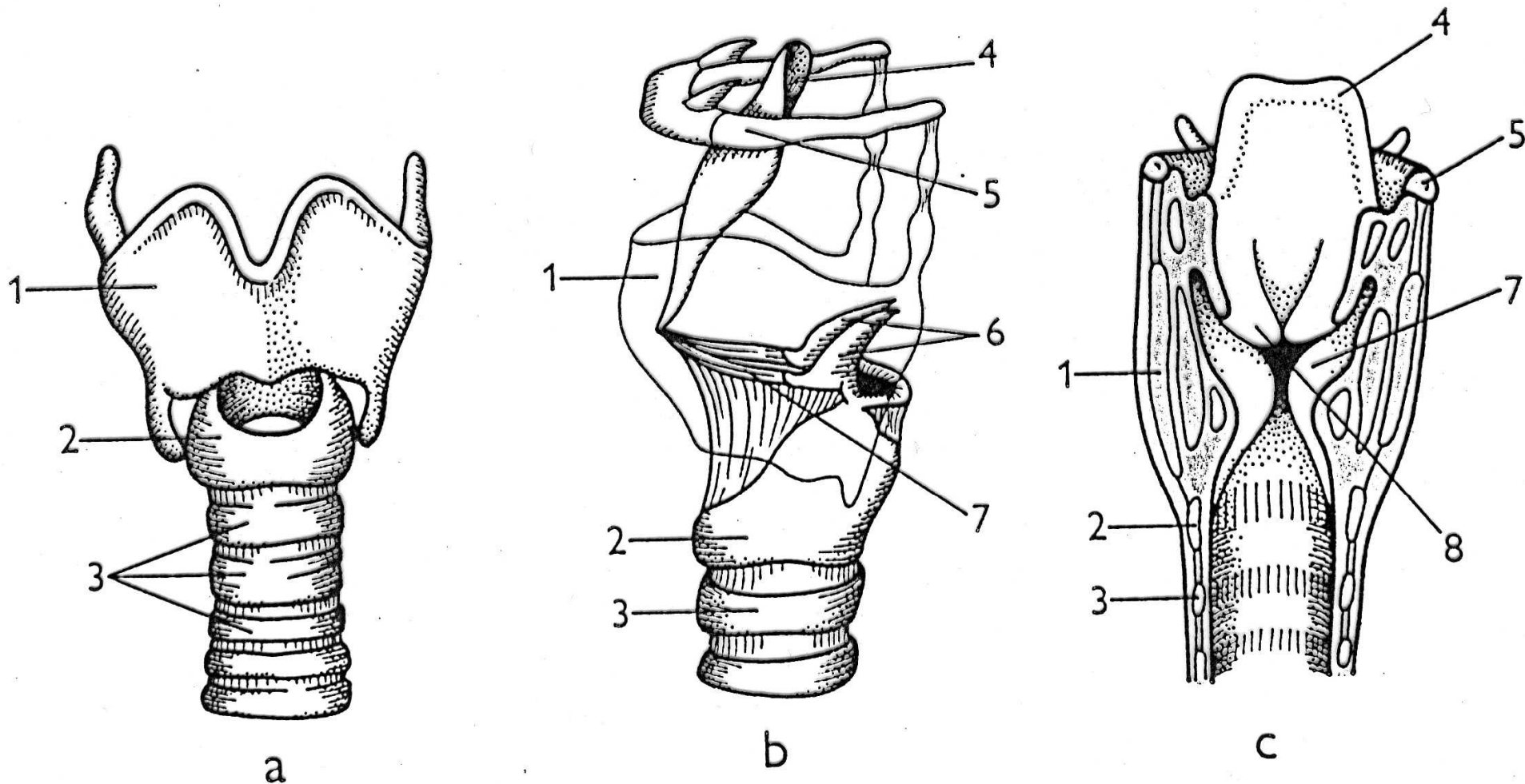
nos – nasus externus, dutina nosní – cavum naší, hltan – pharynx

- **dolní cesty dýchací**

hrtan – larynx, průdušnice – trachea, průdušky - bronchi

FIGURE 8.3 Diagram of human respiratory tract, with the internal structure of one lung revealed and an enlargement of a section of this lung. Gas exchange occurs in the alveoli, which are surrounded by a capillary network.





Obr. 72: Hrtan

a – zředu, b – ze strany, c – řez hrtanem

1 – chrupavka řitná, 2 – chrupavka prstencová,
 3 – chrupavky prřduřnice, 4 – přiklopka hrtanová,
 5 – jazylka, 6 – chrupavky hlasivkově, 7 – pravě řasy hlasově, 8 – nepravě řasy hlasově

FIGURE 8.5 Vocal cords lie at the edge of the glottis. When air is expelled from the larynx, the cords vibrate, producing the voice. (*a.* closed position; *b.* open position.)

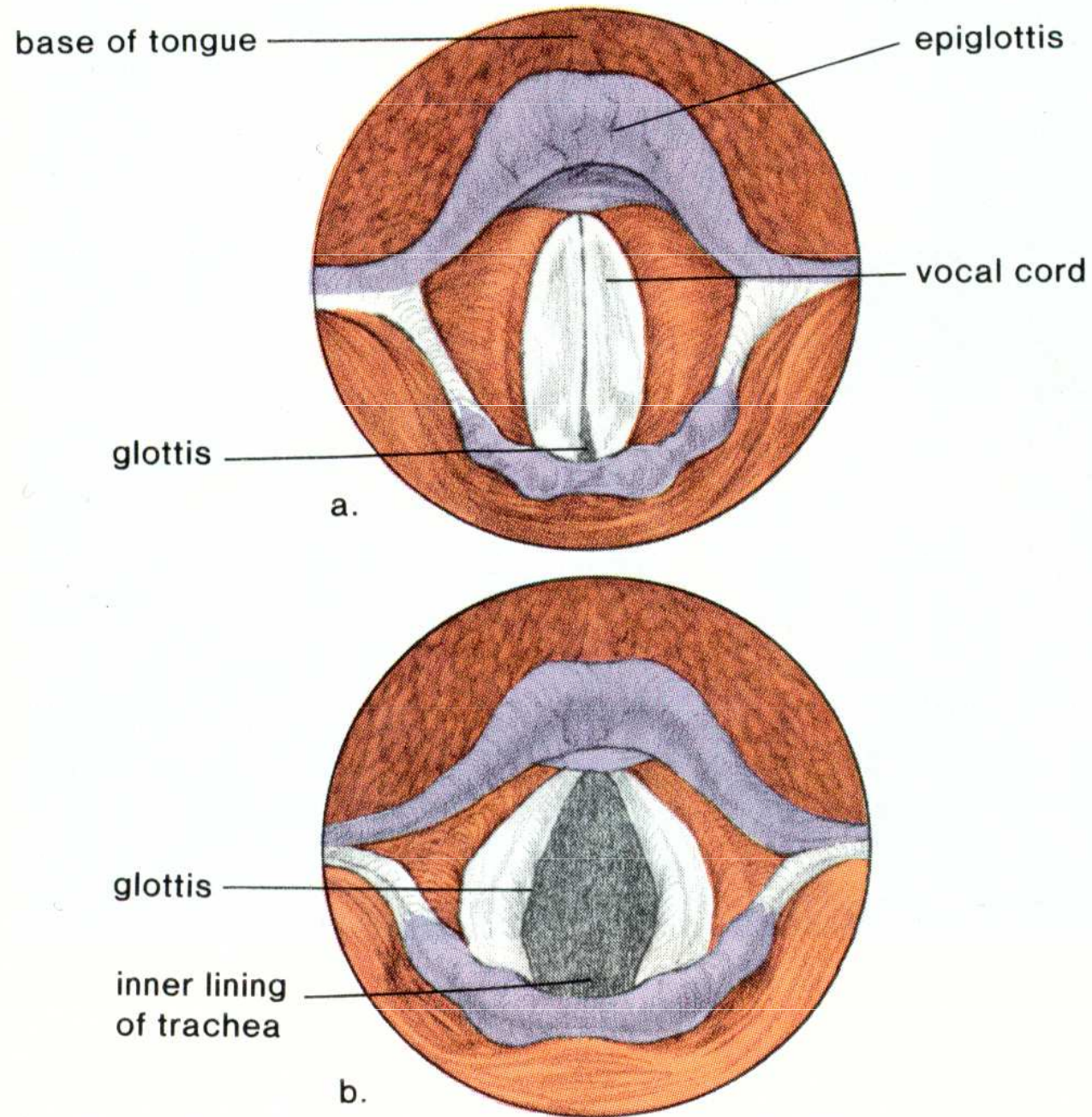
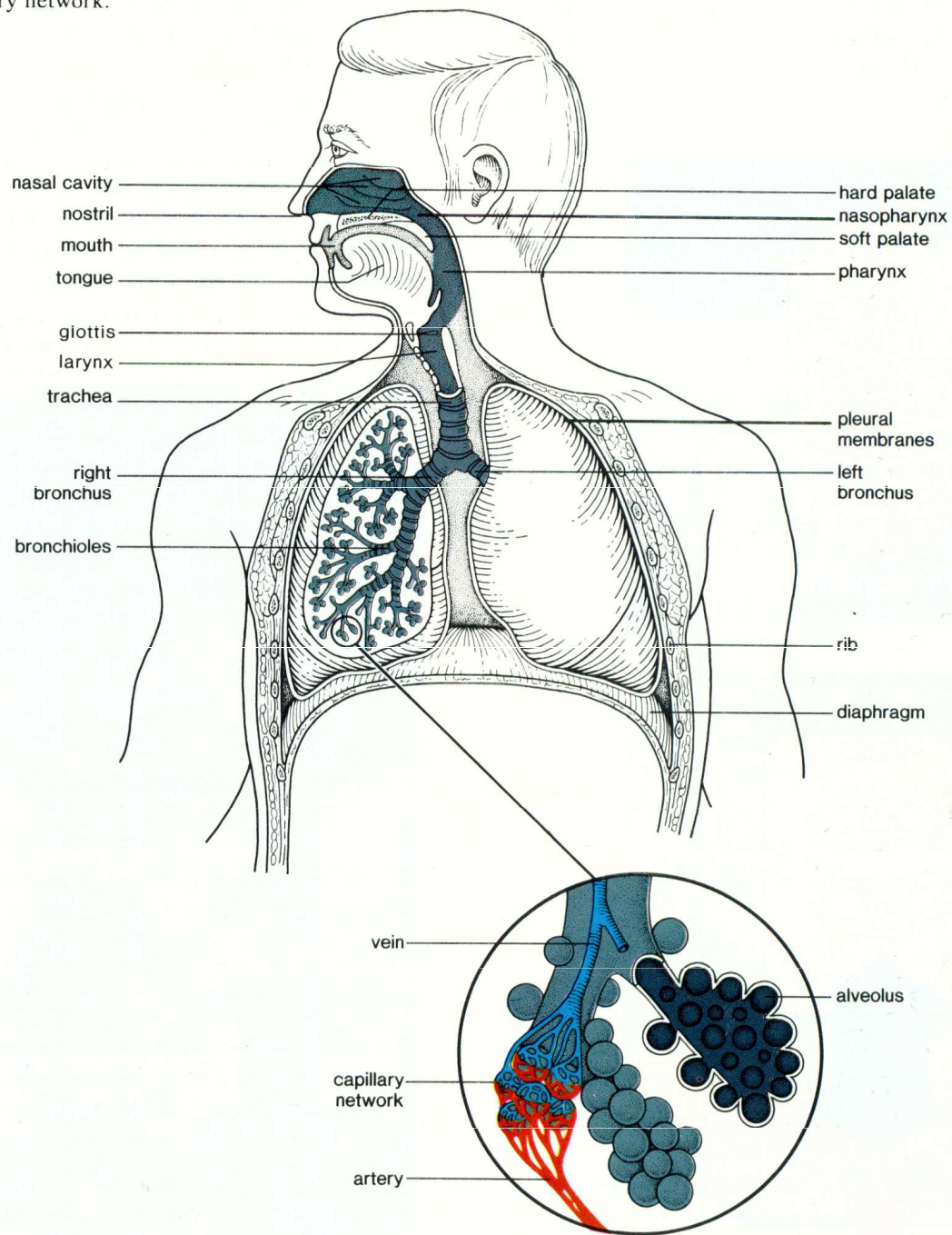
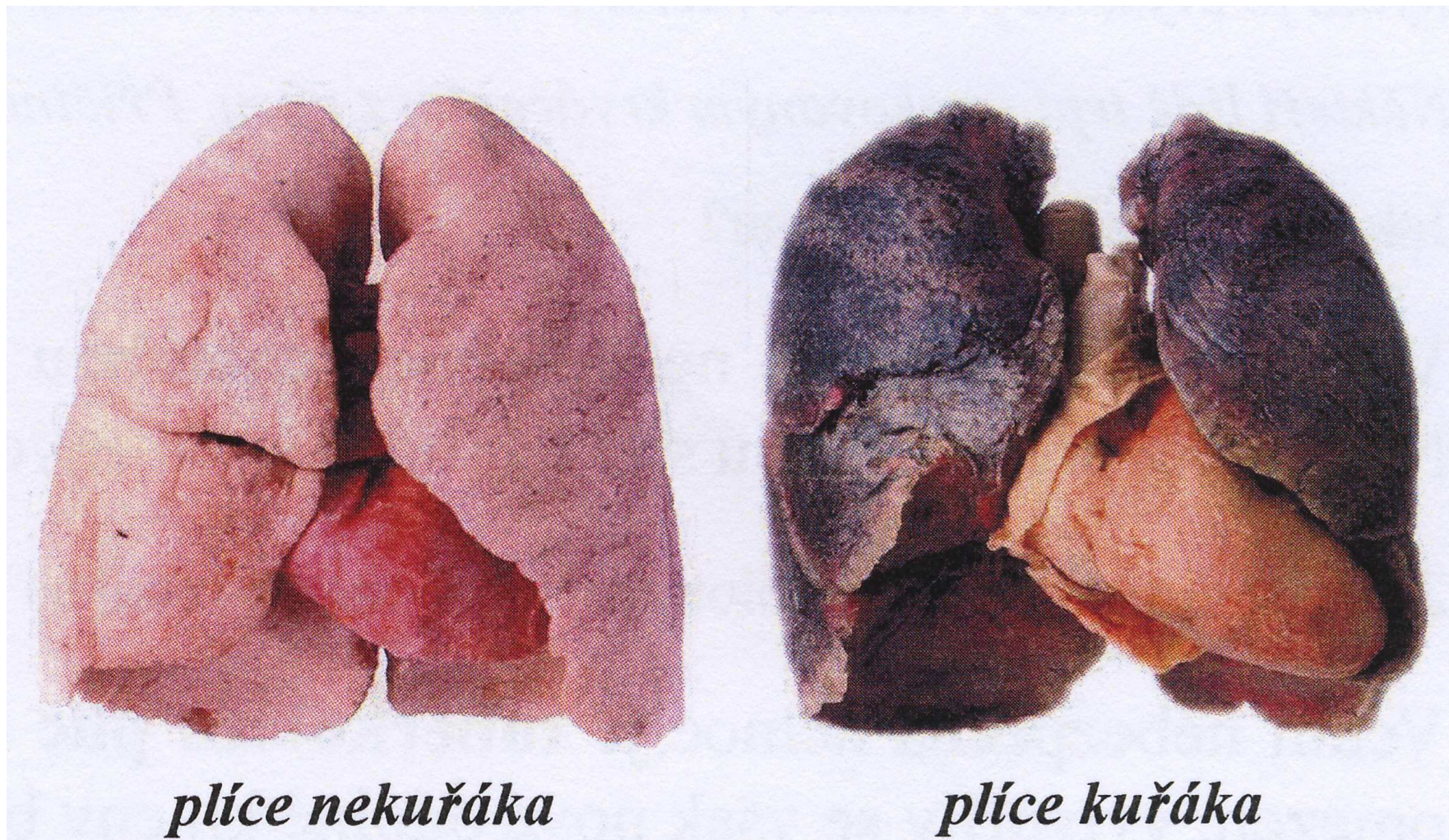


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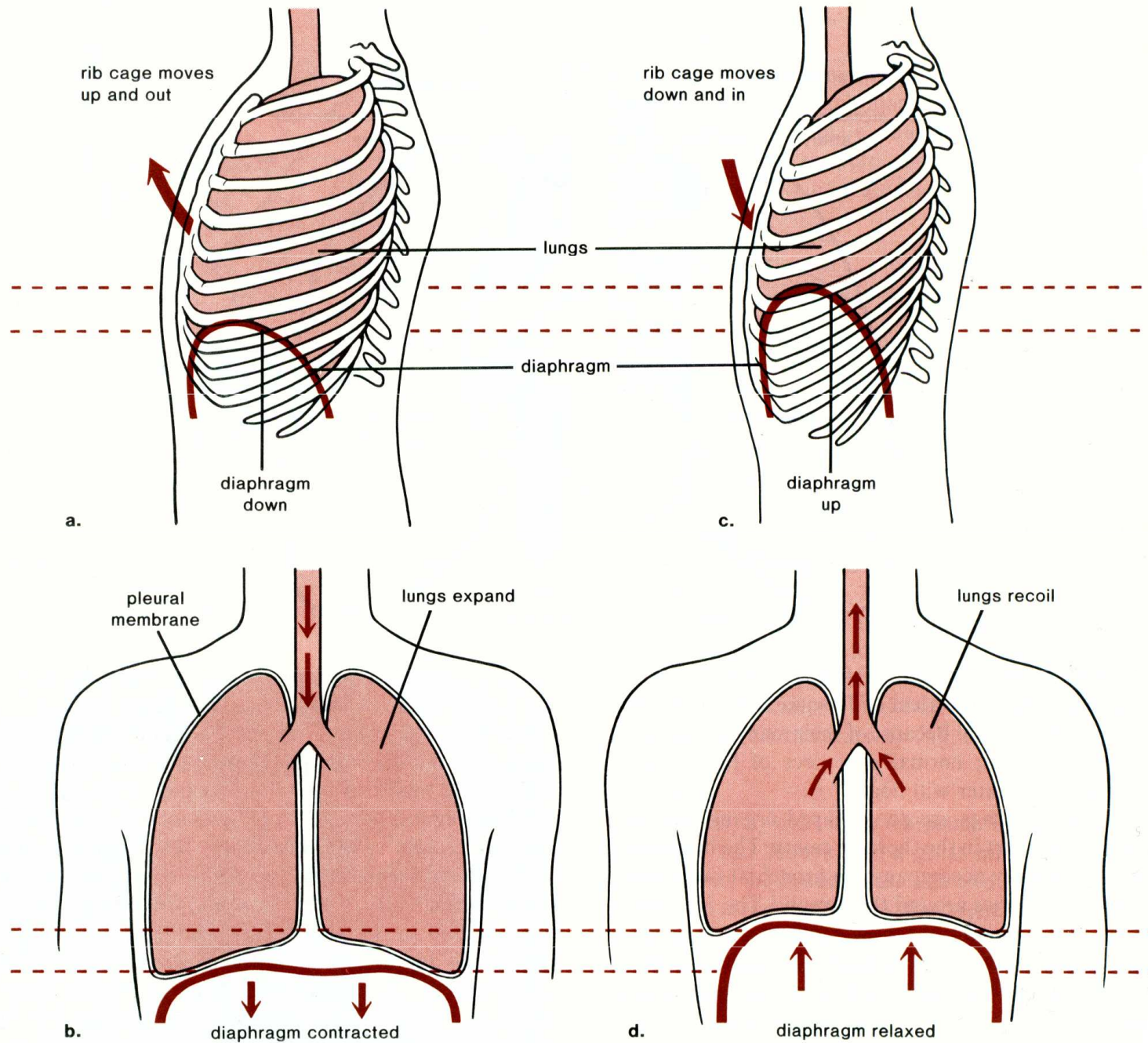


plíce nekuřáka

plíce kuřáka

FIGURE 8.9 Inspiration versus expiration. *a.* When the rib cage lifts up and outward and the diaphragm lowers, the lungs expand so that *(b)* air is drawn in. This sequence of events is only

possible because the pressure within the intrapleural space, containing a thin film of water, is less than atmosphere pressure. *c.* When the rib cage lowers and the diaphragm rises *(d)*, the lungs recoil so that air is forced out.



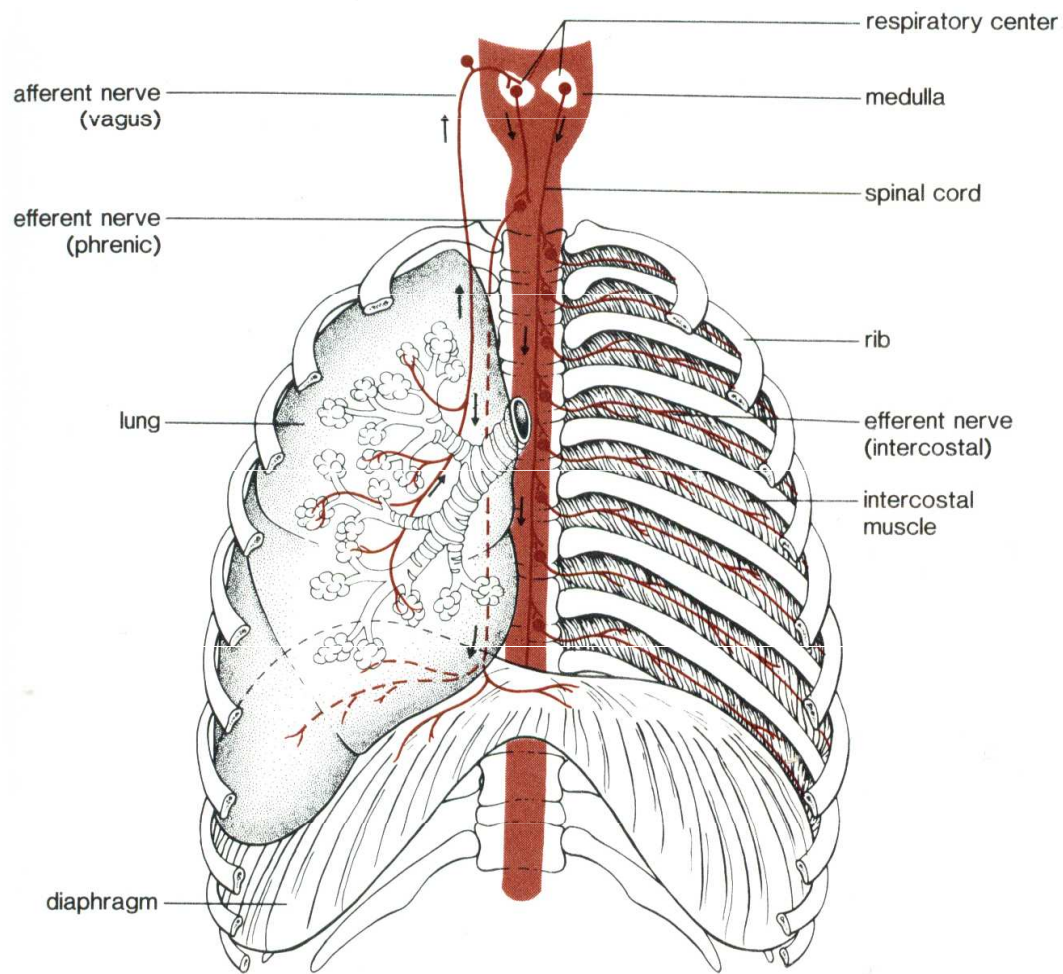


FIGURE 8.10 Nervous control of breathing. During inspiration, the respiratory center stimulates the rib (intercostal) muscles and the diaphragm to contract by way of the efferent (phrenic) nerve. Nerve impulses from the expanded lungs by way of the afferent (vagus) nerve then inhibit the respiratory center. Lack of stimulation causes the rib muscles and diaphragm to relax and expiration follows.

FIGURE 8.11 Distribution of air in lungs. The air between *A* and *B* does not immediately reach the alveoli; therefore, this is called dead space. The air below *C* represents the amount of residual air that has not left the lungs. Only the air between *B* and *C* brings with it additional oxygen for respiration.

