

ERRATA

Physics of the Body, Revised 2nd Edition

12-1-20

p. 186, Answer 8.8

This answer was incorrectly printed as 130 mm Hg. It should read 80 mm Hg (as it was in the previous edition of this book). A further explanation follows:

Upright the pressures are as shown in Fig. 8.8a: head = 60 mm Hg, heart = 100 mm Hg, feet = 200 mm Hg. The difference of these pressures with respect to the heart (due to gravity) are head = -40 mm, feet = +100 mm. When standing on your head, the pressure differences are reversed: head = +40 mm, feet = -100 mm. Thus, the pressures when standing on your head are: head = $100 + 40 \text{ mm} = 140 \text{ mm}$, feet = $100 - 100 \text{ mm} = 0 \text{ mm}$. The changes in pressure are then head = $140 - 60 = 80 \text{ mm}$, feet = $0 - 200 = -200 \text{ mm}$. Note that these results are simple minus 2 times the original differences in pressure between the anatomic structure and the heart when standing.

(Thanks to Dr. Dinah Loerke and her physics students at the University of Denver for alerting MPP to this error.)