Physics of the Human Body, 1st Edition Errata

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Errata for the First Edition (these and others are corrected and have been added to the second addition)

Errata for the third printing, Dec. 2008 (and earlier printings). (Substantive corrections have an *.) (Additional errata for the first two printings are below.)

1*. Chapter 2, page 56, second paragraph: To be consistent with Fig. 2.17, the angle should be called &phi and not &theta (two times).
2. Chapter 2, page 66, last paragraph: Vertebra (plural) should be vertebrae (five times).
3. Chapter 2, page 67, Fig. 2.33: There should be a period after "curves" and no period after "From [65]".
4. Chapter 2, page 68, line 2: There should not be a comma after "cord".
5. Chapter 2, page 69: Paragraph 1 (first full paragraph), line 2: No comma before "called". Paragraph 2, line 3: Should be "above" the sacrum. Paragraph 2, line 7: There should be no space between "half" and "way". Three lines from the bottom: Should be "leads" instead of "lead".
6. Chapter 2, page 72: Paragraph 1, line 2: Should be "muscles" instead of "muscle". Paragraph 2, line 3: Should be "vertebral" instead of "vertebra". Two lies from the bottom: Should be a comma after "Also".
7. Chapter 2, page 86, Fig. 2.51 caption: There should be no period after "[86]".
8. Chapter 2, page 86, Problem 2.15, second to last line: Should be "makes" instead of "make".
9. Chapter 3, page 97, Table 3.3. The two consecutive rows starting with "extensor digitorum" and "longus" both refer to the "extensor digitorum longus" muscle.
10*. Chapter 3, page 111, last line. It should say that that z_{CM} "begins to rise" instead of "is rising".
11*. Chapter 3, page 112, line 2. It should say that that z_{CM} "begins to fall" instead of "is falling".
12*. Chapter 3, page 144: The arm length L in the middle of Eq. (3.81) should also appear on the right side of the equation, and be L sqrt(&pi&alpha).
13*. Chapter 4, page 223, Fig. 4.34: The extents from the neutral axis L and L' should be relabeled to avoid confusion with the length of the beam, which is L.
14. Chapter 5, page 276, Fig. 5.3: Label in part (b) should be "Multipinnate."
15*. Chapter 6, page 371, 2 lines after Eq. 6.63: The wind speed should be called "w", as in Eq. 6.63, and not "v".
16*. Chapter 7, page 424, Fig. 7.16: To be consistent with three lines from the bottom of page 423 and the continuing discussion, the radius of the curved tube should be denoted as "R" (and not "r") and the turning radius of the tube should be denoted as a "script R" (and not "R").
17*. Chapter 7, page 427, Eq. 7.54: The "2" in the square root should be a "4" and the "2" in the denominator of the exponential should be a "4." (Closely related Eq. 7.55 is correct as is.)
18*. Chapter 7, page 427, Eq. 7.57: n(x,t) should be n(r,t).

19*. Chapter 7, page 428, Eq. 7.58: The "6" should be a "2." (In going from one to three dimensions, the mean square displacement does increase from $2D_{diff}t$ to $6D_{diff}t$.)
20*. Chapter 8, page 445, Fig. 8.2: The label should read "Inferior vena cava" (and not Interior vena cava).
21*. Chapter 8, page 469, Eq. 8.29: The first "P(0)-P(L)" is correct; the second one should have a plus sign: "P(0)+P(L)".
22*. Chapter 11, page 639, Fig. 11.11: The end of the equation under the optic axis should read "n_2/P_{12}" (and not n_2P_{12}).
23*. Chapter 11, page 644, Fig. 11.14b: The equation at the bottom of the figure should read "$1/(y-D)+1/(D-x)=1/f_1$" [as in Eq. (11.24)] [and not $1/(y-D)+1/(D-x)=f_1$].
24*. Chapter 11, page 652, line 1: 1.337 should be replaced by 1.377 (two times).
25*. Chapter 11, page 652, Eq. 11.46: D^4 should be replaced by D^6.
26*. Solutions to Selected Problems, page 810, Solution to Problem 6.36: (a) 70 kg; (b) This is somewhat larger than the body mass of 60 kg; (c) 700 cycles/day, 0.5 cycles/min. Also note that this solution should follow that for Prob. 6.31.

Errata for the first two printings (corrected in the third printing, Dec. 2008).
1. Chapter 1, page 3, line 1: This should read … which are posterior to the nose.
2. Chapter 1, page 14, Fig. 1.13: In part (b): "Elevation" is also a good label and in part (d) "Depression" is also a good label.
3. Chapter 1, page 26, Section 1.5, line 3: This should read … the rotation of bones about joints.
4. Chapter 2, page 41, Fig. 2.4: (b) The arrow next to M+W should be pointing up and M+W should be replaced by W-M. (c) M+W should be replaced by M-W. To be consistent with the weight force pushing down, the left most arrow should point down. To be consistent with the vertical normal force from the fulcrum, the M arrow should point down and the W arrow should point up.
5. Chapter 2, page 47, Fig. 2.9: In part (c) the distances shown from the forearm and weight should extend all the way to the pivot fulcrum.
6. Chapter 2, page 86, Problem 2.15, line 5: This should read … the force exerted by the scapula …
7. Chapter 3, page 120, Eq. 3.34: In the first integral λ is replaced by $\lambda_{u,leg}$ and in the second integral λ is replaced by $\lambda_{l,leg}$.
8. Chapter 3, page 134, Fig. 3.36: (a) The vertical arrow should extend to the height of the center of mass dot (and not to the dotted line).
9. Chapter 3. page 147, Figure 3.46: In the lower figure, the vertical axis label “Torque” is misspelled.
10. Chapter 3, page 154, Figure 3.55: Labeling is missing in the angular momentum vertical axis.
11. Chapter 3, page 163, third line after eq. 3.108: This should read … compared to 7,800 for a perfectly inelastic collision.
12. Chapter 3, page 177, Problem 3.31b, line 3: This should read …increases his body mass by 5 kg.
13. Chapter 4, page 232 top, Fig. 4.46: The x-axis label should be Strain (%).
14. Chapter 4, page 237, Fig. 4.56c: Note that the force across the dashpot and top spring is F_a and that across the lower spring is F_b, and so this is similar to that in part b.
15. Chapter 4, page 245, line 7: In the subscripts before ...bone, change the 5 to a 3 and the 6 to a 4.

16. Chapter 4, page 268, Problem 4.35c, third line: This should read …from T=0 to T = many ……
17. Chapter 5, page 278, Fig. 5.5b: The starting points of the muscle fibers on either side on the left and right should be the same positions as in (a) and they should have the same separations, and with fiber contraction the points of attachment of fibers on the tendon get closer, as shown. Also, the lower end of the tendon should end just below the bottom fibers, as it does in (a).
18. Chapter 5, page 286, Fig. 5.14a: The subscript for the tension generator should be G1, so it should be T_{G1}.
19. Chapter 5, page 296, Fig. 5.23: The vertical scale should range from 0 to 100 (or in the vertical scale label "%" should be replaced by "fraction").
20. Chapter 5, page 302, Table 5.9: (a) The caption should include: with forces normalized per unit area. (b) In labels for columns 2 and 4, P_0 should be changed to T_{max}. (c) In label for column 3, v_0 should be changed to v_{max}.
21. Chapter 5, page 309, Fig. 5.37: "Distance per ATP" should replace "Distance/ATP."
22. Chapter 5, page 312, Problem 5.9, last line: T_{01} should be T_{G1}, and T_{02} should be T_{G2}.
23. Chapter 6, page 353 top, Table 6.27: Second line should read: ... sweeping floor .
24. Chapter 7, page 411: Four lines from the bottom, in the parenthesis after "viscous force", remove ρ.
25. Chapter 7, page 412, Eq. 7.11: In the denominator after the first equal sign, remove ρ.
26. Chapter 8, page 459, Fig. 8.16: The maximum capillary area should be 4000 cm^2 (instead of 600 cm^2) and the minimum capillary flow speed should be 0.22 mm/s (instead of 1 mm/s).
27. Chapter 8, page 466, Fig. 8.23b: It would be better to have an upward pointing arrow at the top of the unfolded vessel showing the direction of the stress at the upper surface.
28. Chapter 8, page 474, paragraph 2, line 6: It would be better to replace 0.02 cm/s by 0.022 cm/s and 0.2 mm/s by 0.22 mm/s.
29. Chapter 8, page 481, Fig. 8.34: The top two curves should be labeled "Systolic pressure" and the bottom two curves should be labeled "Diastolic pressure".
30. Chapter 8, page 485, Fig. 8.40b: Note that the pressure axis does not start at 0 mmHg.
31. Chapter 8, page 486, paragraph 2, line 3: Should read: ... scale linearly with time, and assuming no back pressure ...
32. Chapter 8, page 510, Fig. 8.59: In (a) and (b) the units of pressure for the vertical axis should be mmHg.
33. Chapter 8, page 515, Fig. 8.63: The y axis units should be cmH_2O-min/L.
34. Chapter 9, page 531, Fig. 9.6a: The pressure to the right of the plug should be labeled as P_2.
35. Chapter 9, page 533, line right after Eq. 9.6: This should read ...the much larger...
36. Chapter 9, page 539, Fig. 9.14: The y axis units should be cmH_2O-s/L
37. Chapter 10, page 593, Fig. 10.28. The top "window" is the oval window and the bottom one is the round window.
38. Chapter 11, page 644, Fig. 11.14b: There should be only one space between the and eye in Perfect image for the eye….
39. Chapter 11, page 668, Fig. 11.28: The caption should twice refer to the eye lens, and not the eye.
40. Appendix C, page 797: The period at the end of Eq. C.44 should be removed.
41. Index, page 851: "LSK cornea surgery" should read "LASIK cornea surgery".
42. Index, page 855: "ST4 muscle fibers" should read "Slow twitch (ST) muscle fibers".