

Integration of Metabolism

CHEM 420 – Principles of Biochemistry
Instructor – Anthony S. Serianni

Chapter 27: Voet/Voet, *Biochemistry*, 2011
Fall 2015

December 7 & 9

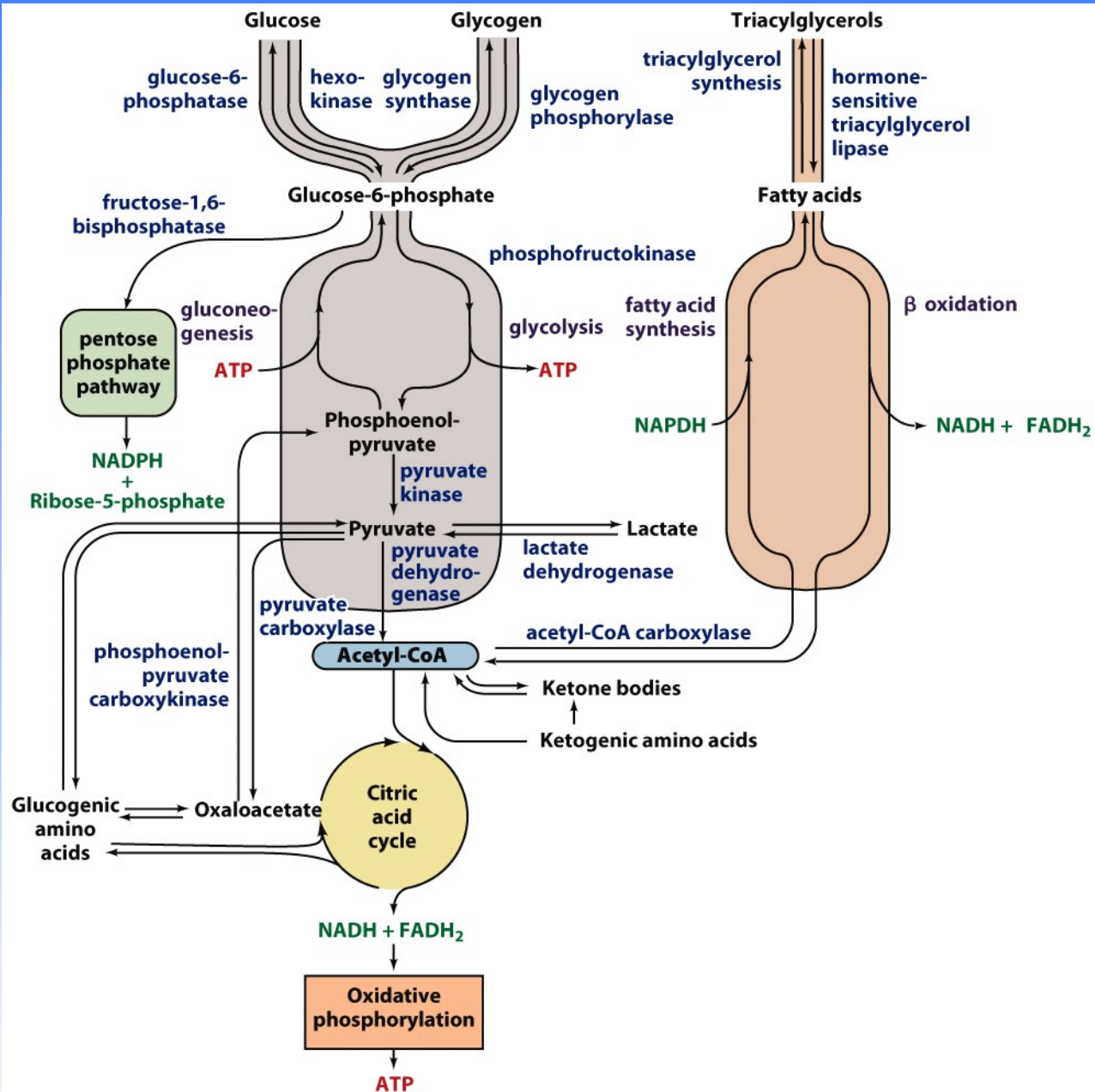


Figure 27-1

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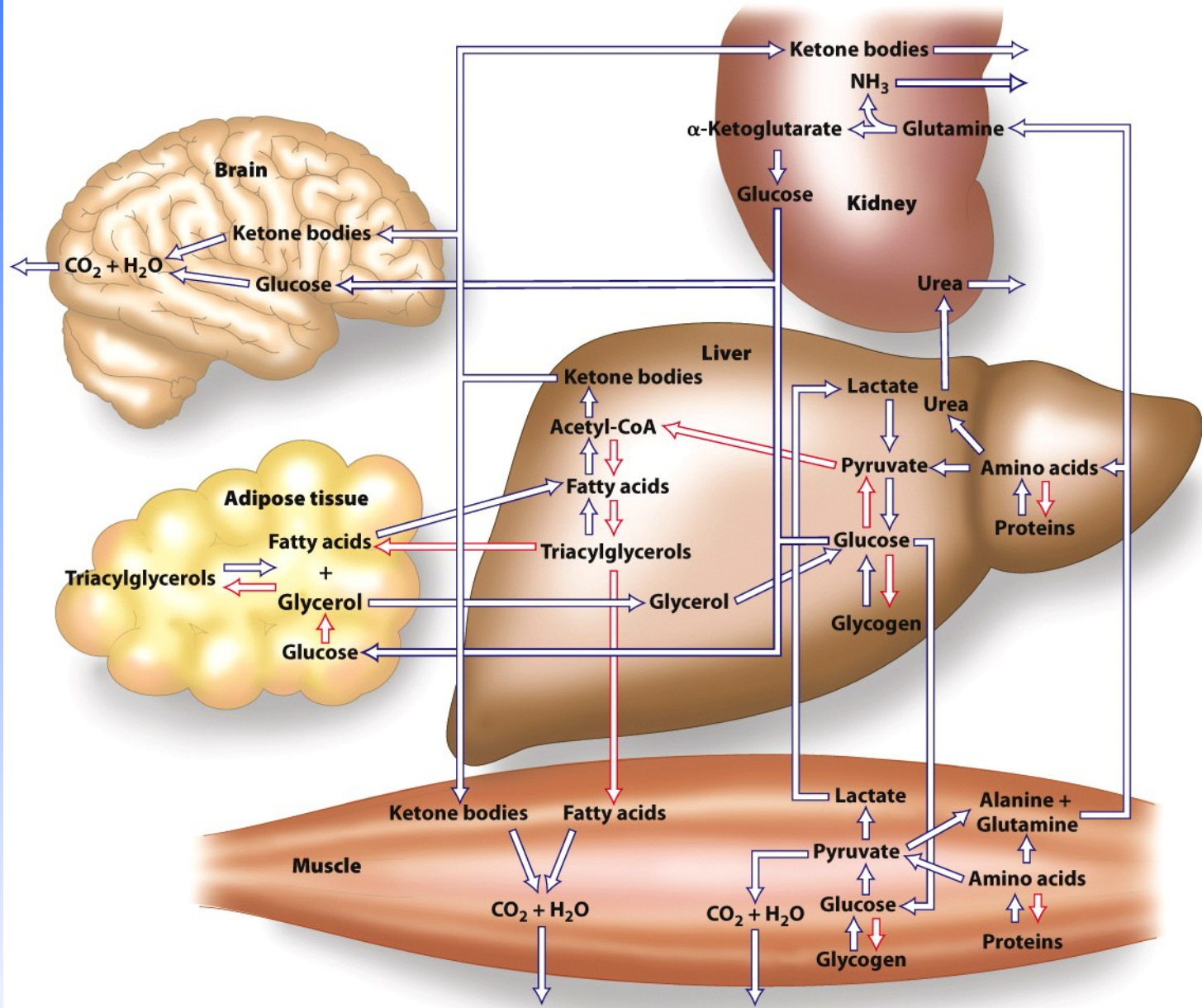


Figure 27-2
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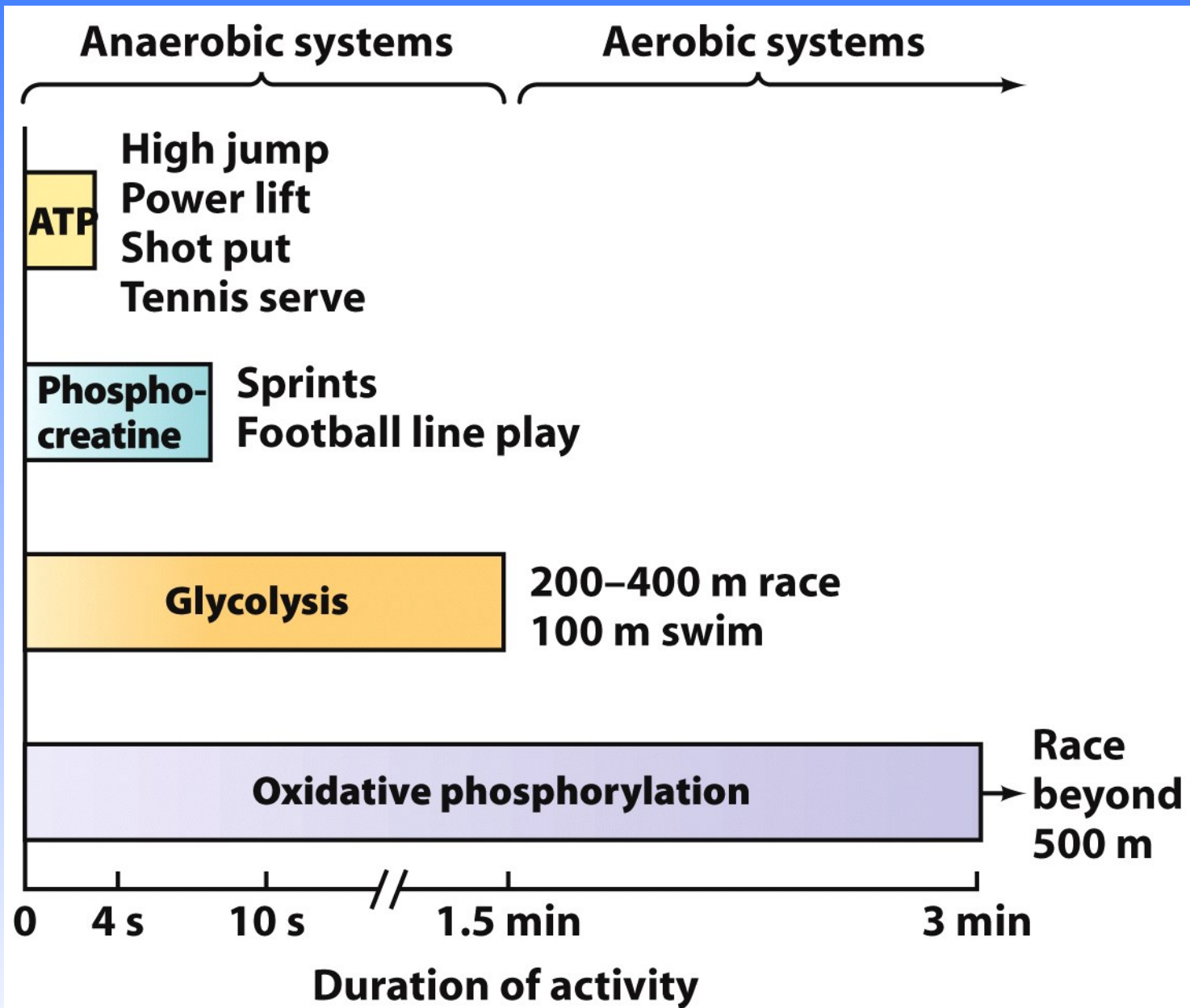


Figure 27-3
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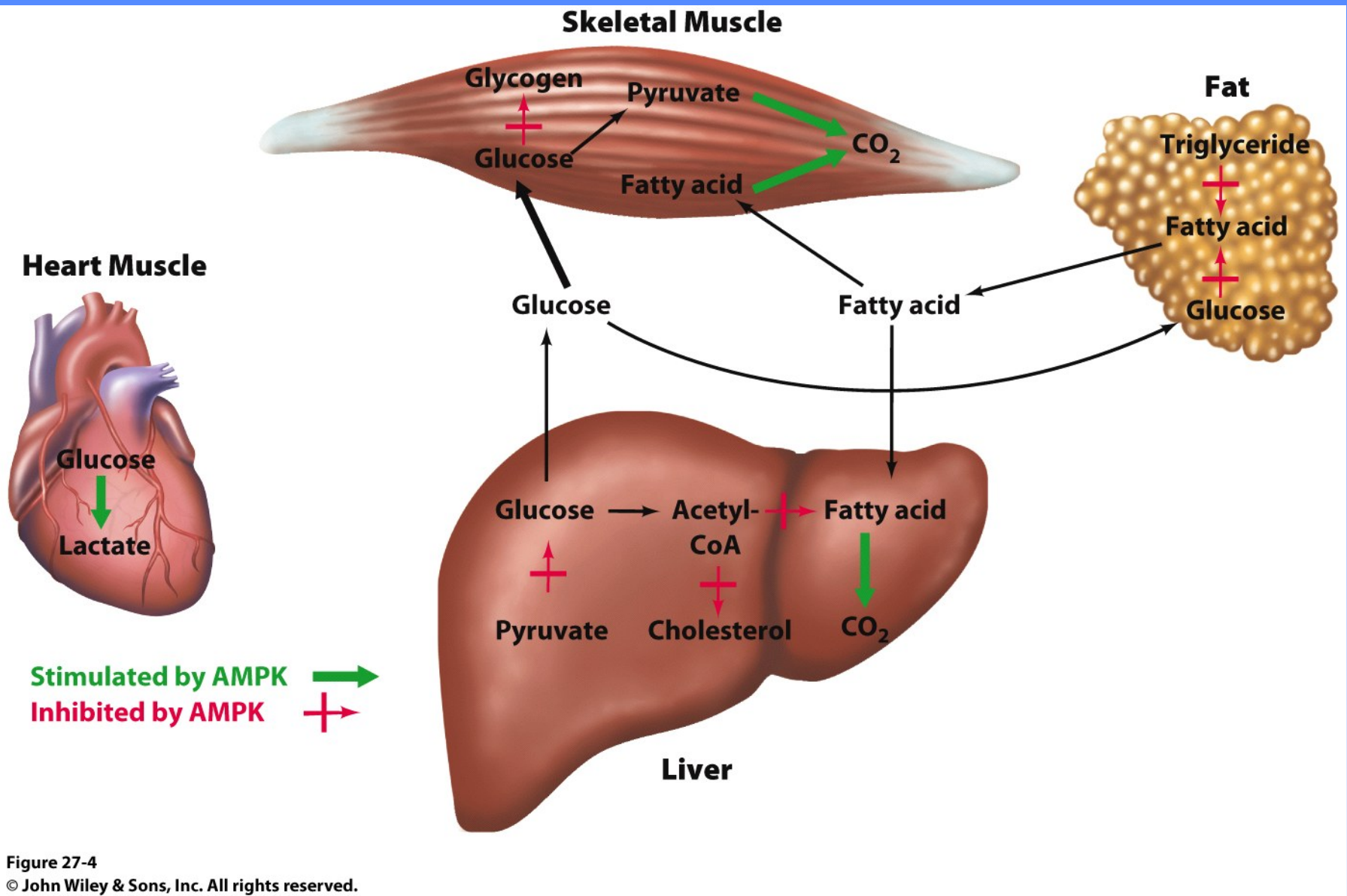
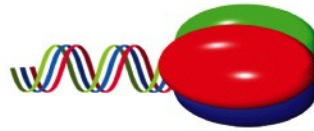
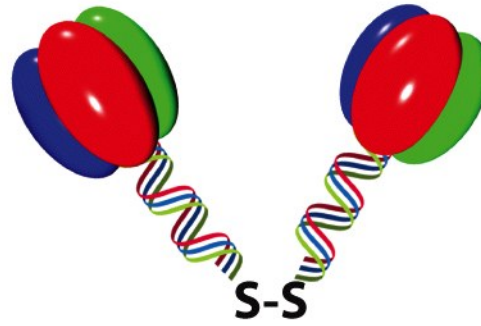


Figure 27-4
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LMW



MMW



HMW

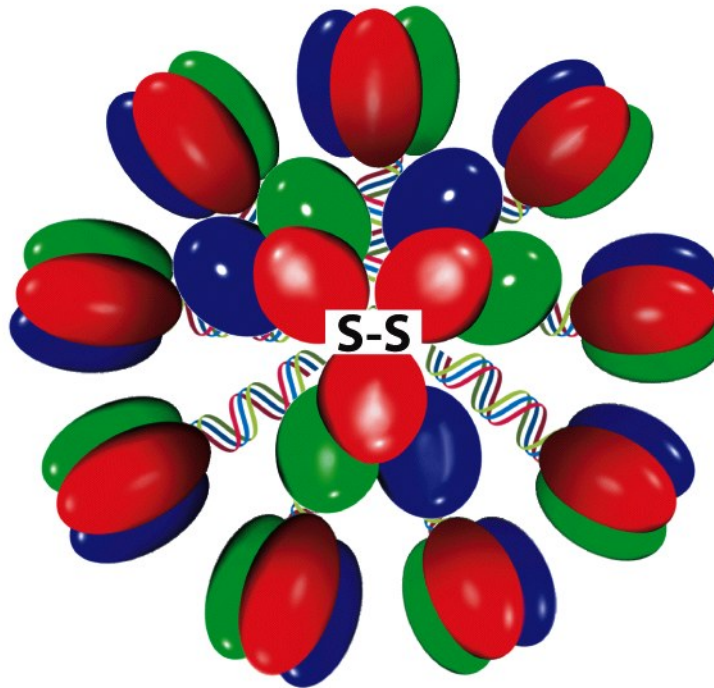


Figure 27-5
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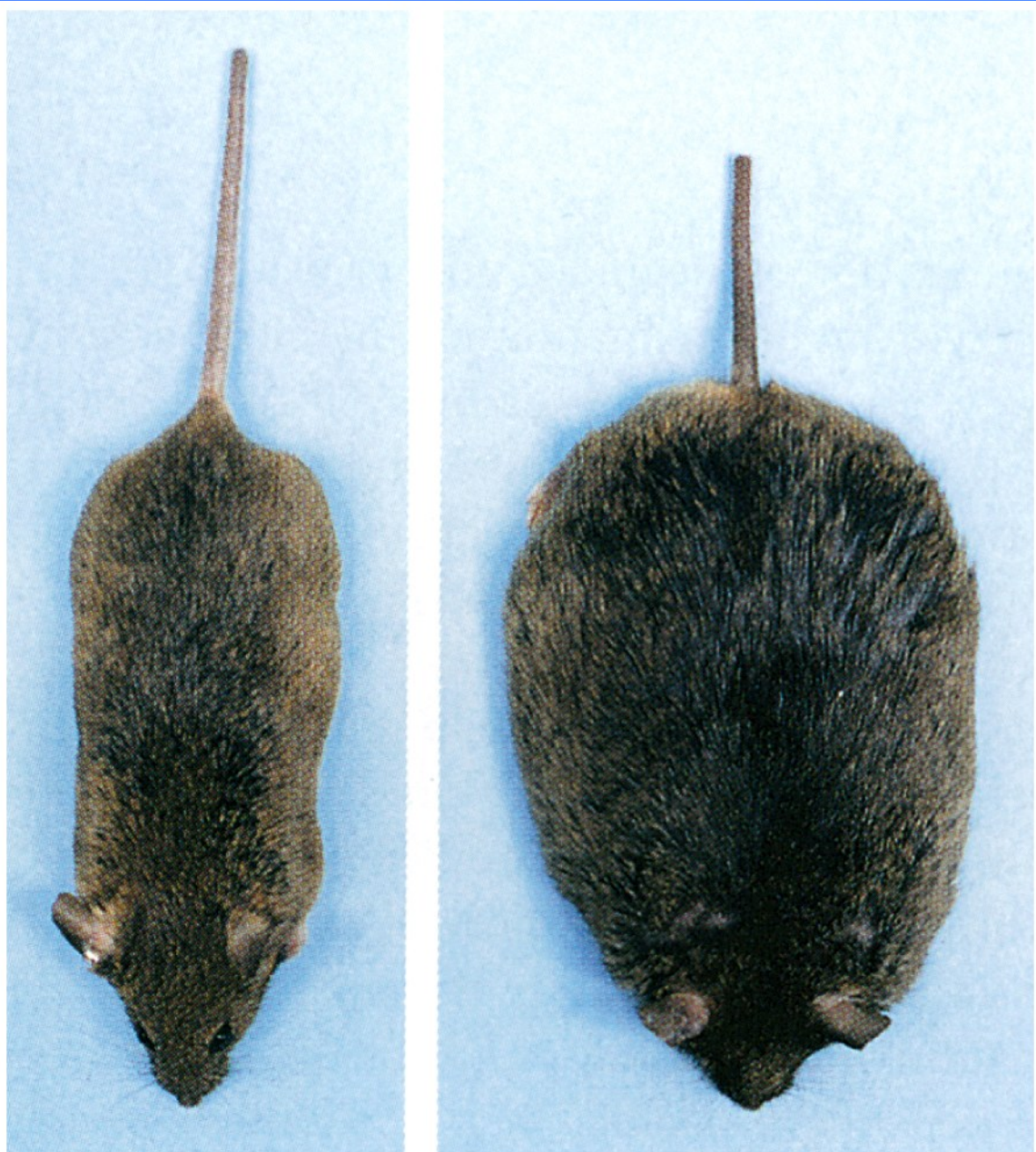


Figure 27-6
Courtesy of Richard D. Palmiter, University of Washington

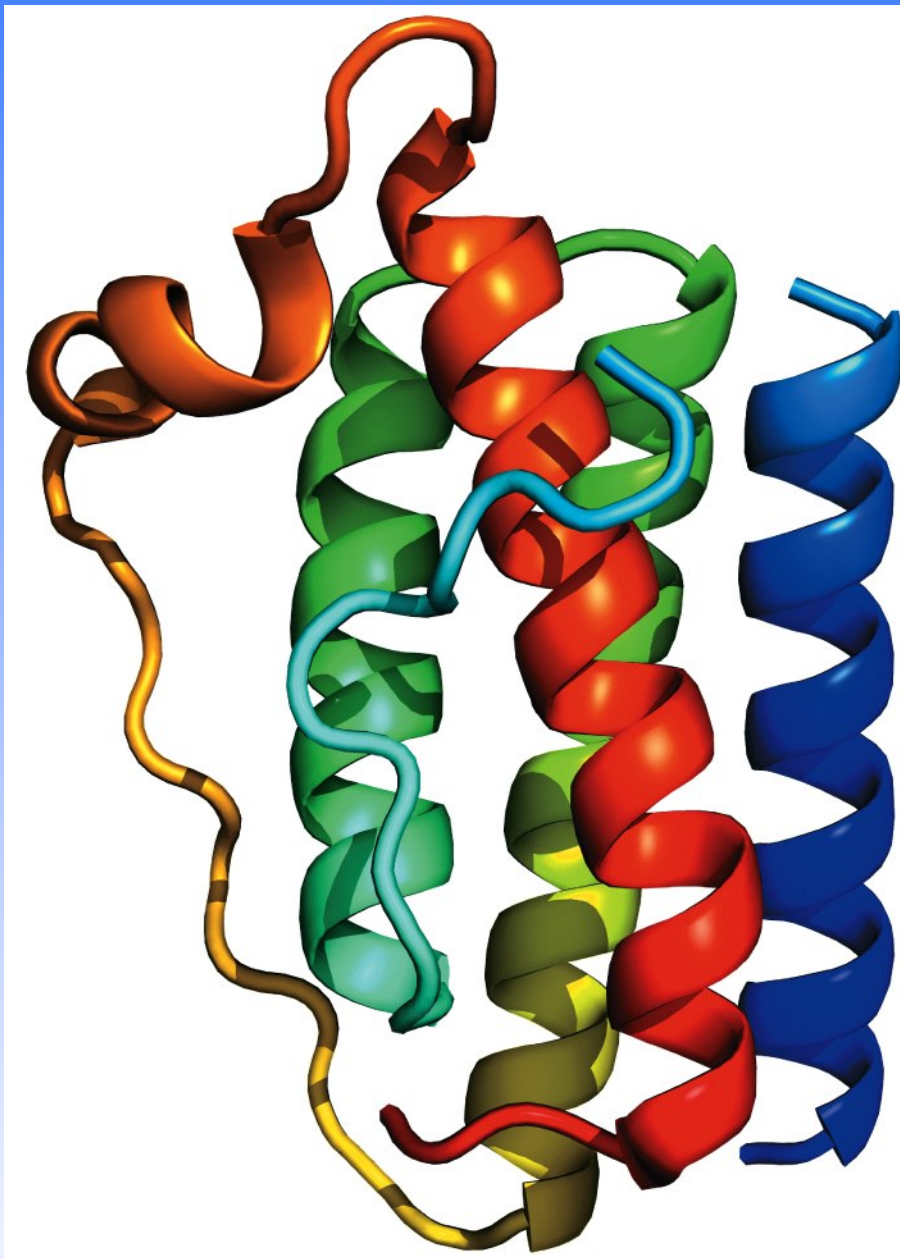


Figure 27-7
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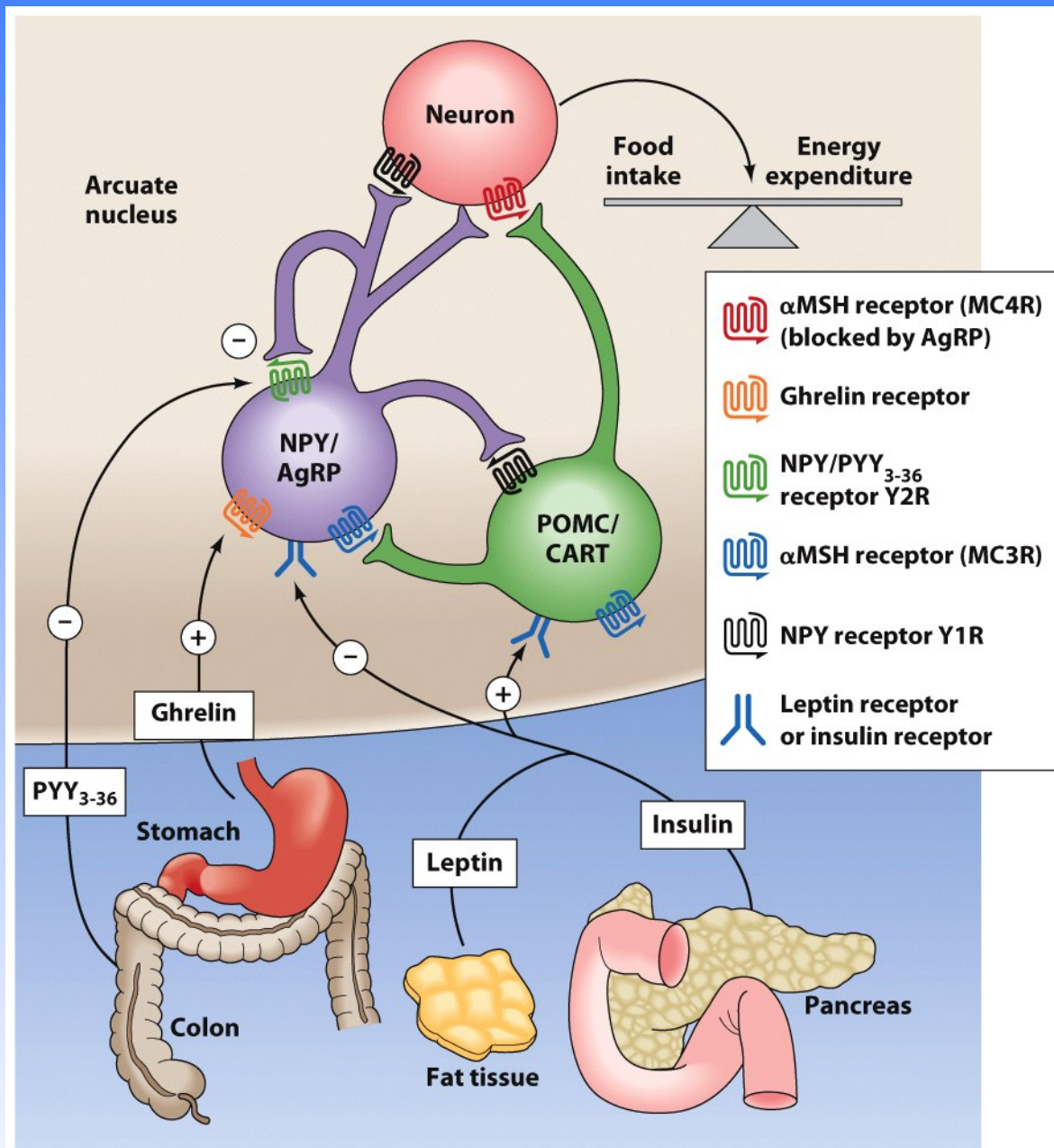


Figure 27-8
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Table 27-1 Fuel Reserves for a Normal 70-kg Man

Fuel	Mass (kg)	Calories^a
<i>Tissues</i>		
Fat (adipose triacylglycerols)	15	141,000
Protein (mainly muscle)	6	24,000
Glycogen (muscle)	0.150	600
Glycogen (liver)	0.075	300
<i>Circulating fuels</i>		
Glucose (extracellular fluid)	0.020	80
Free fatty acids (plasma)	0.0003	3
Triacylglycerols (plasma)	0.003	30
<i>Total</i>		166,000

^aOne (dieter's) Calorie = 1 kcal = 4.184 kJ.

Source: Cahill, G.F., Jr., *New Engl. J. Med.* 282, 669 (1970).

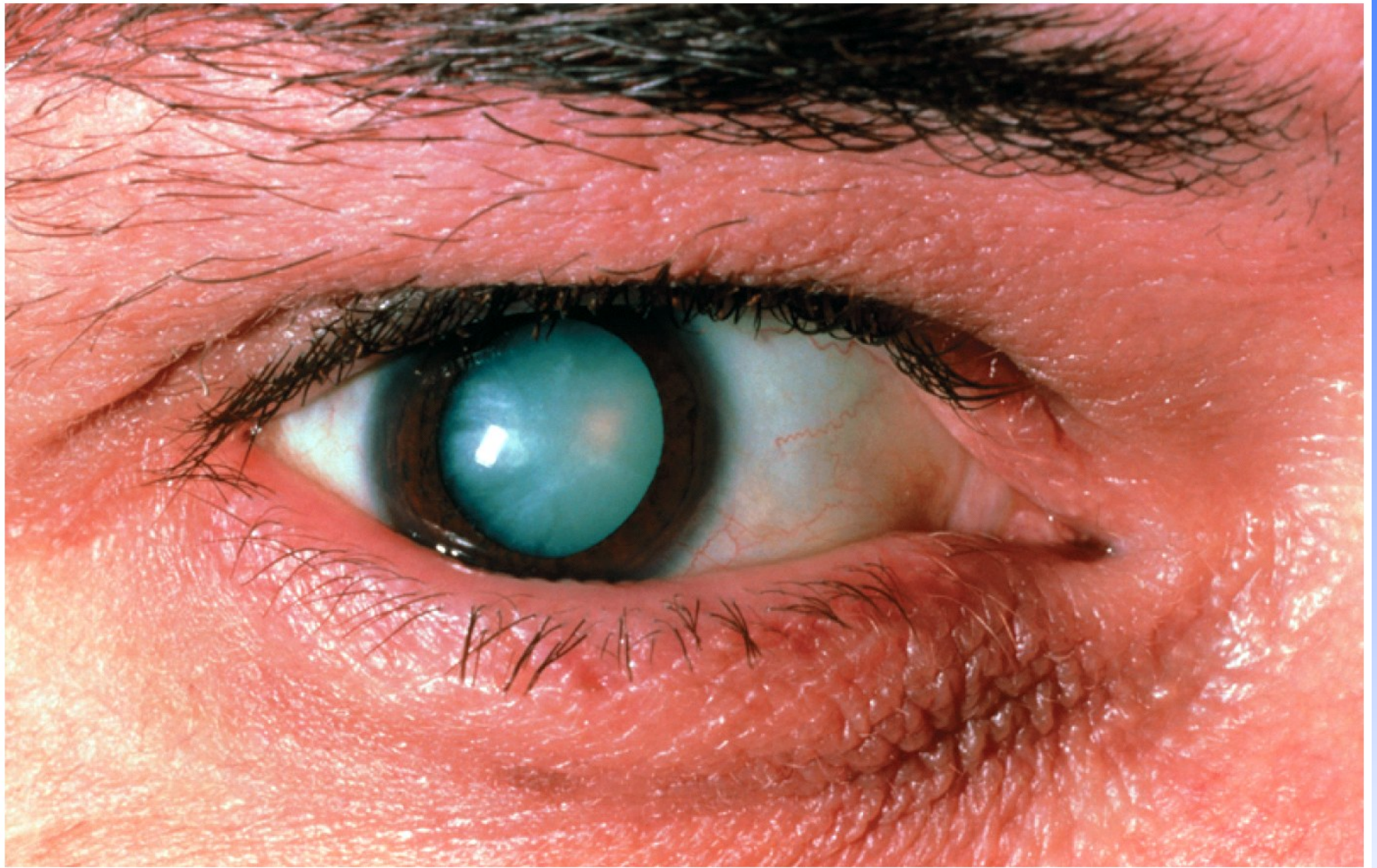


Figure 27-9
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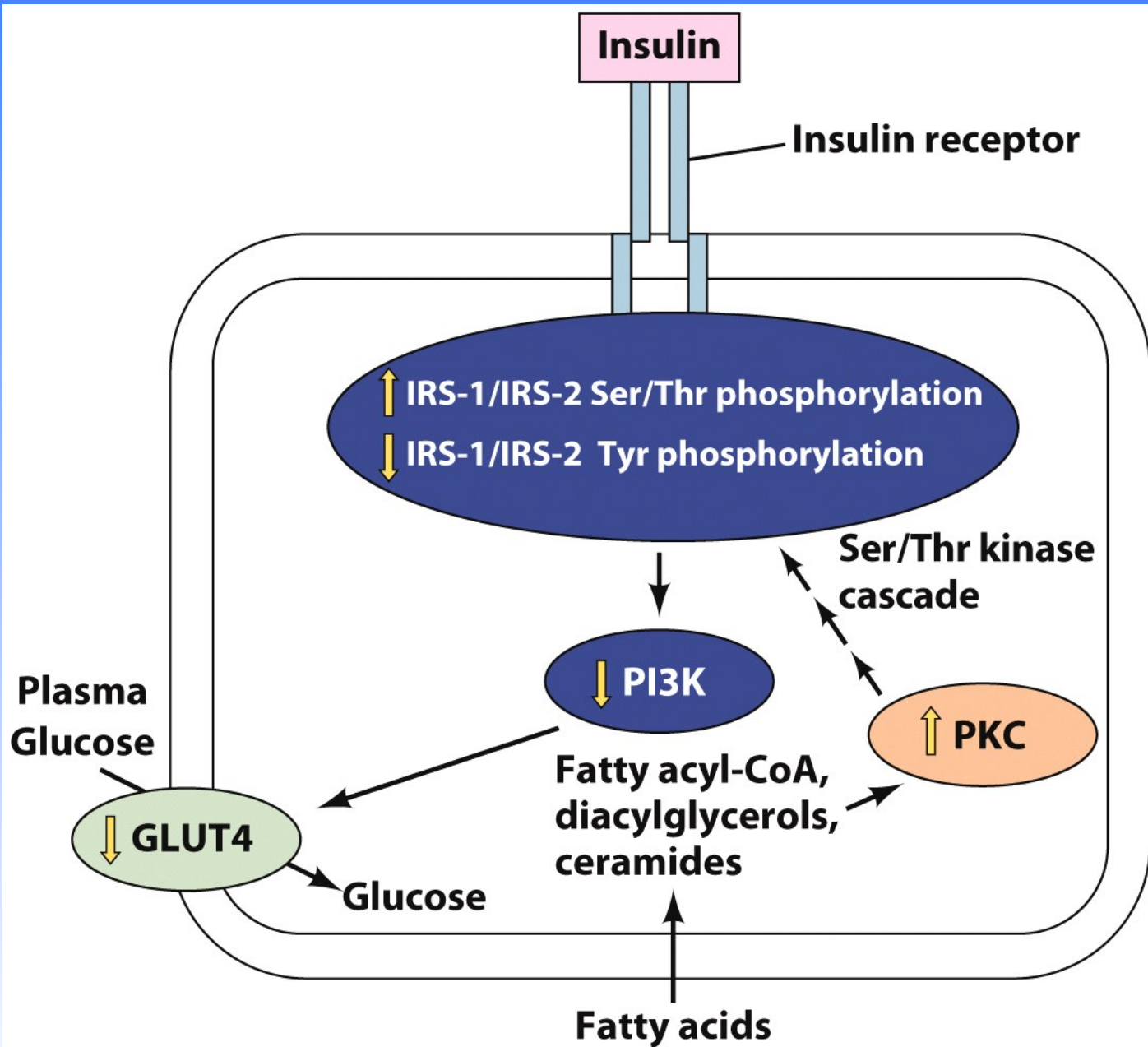


Figure 27-10
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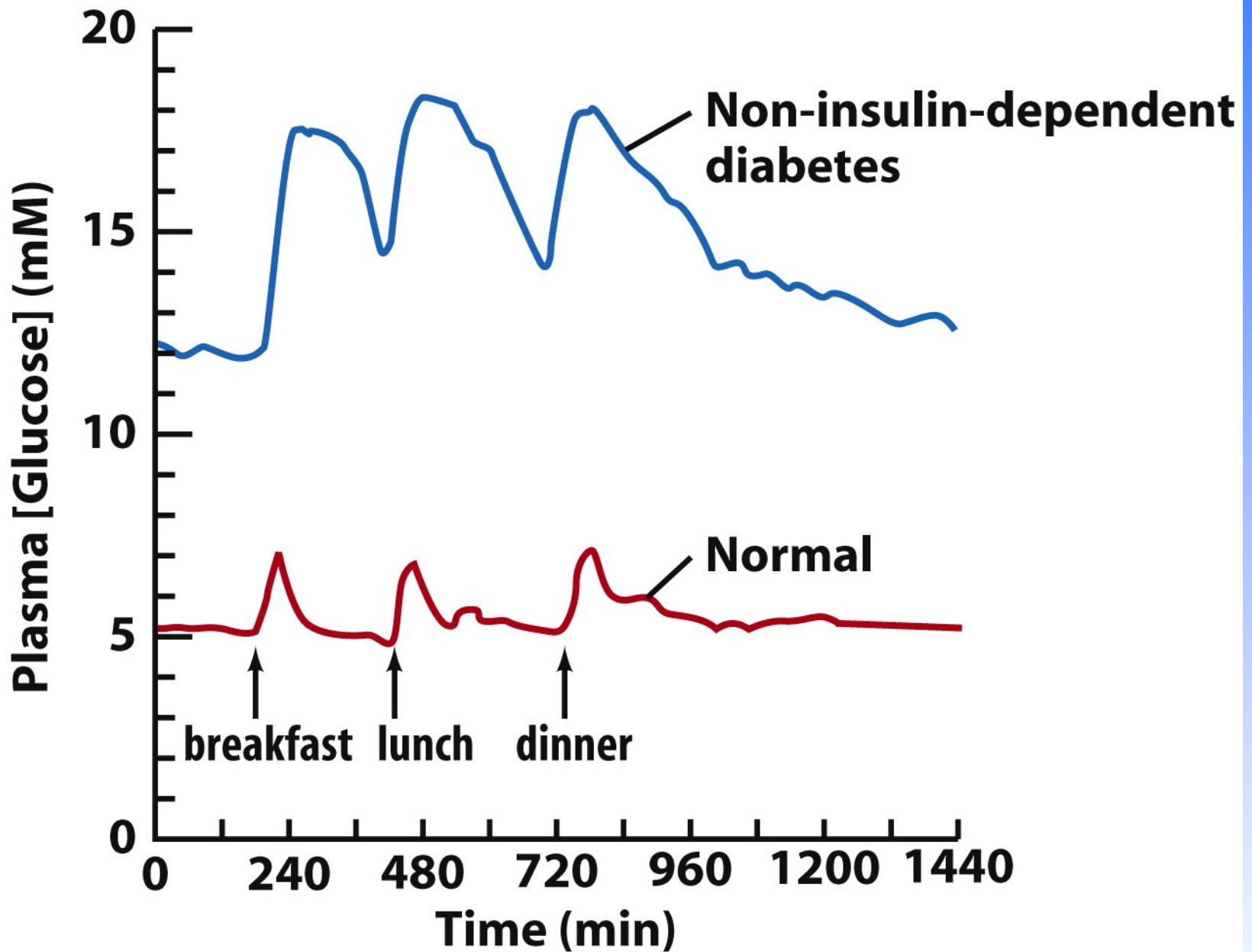
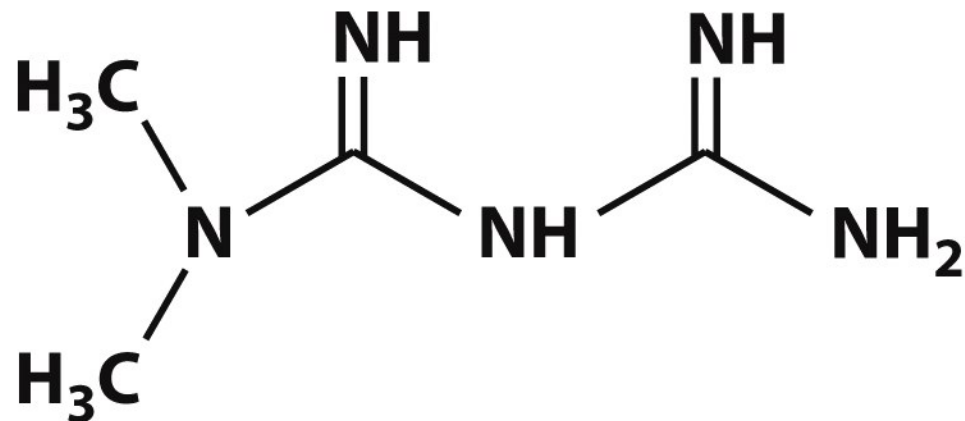
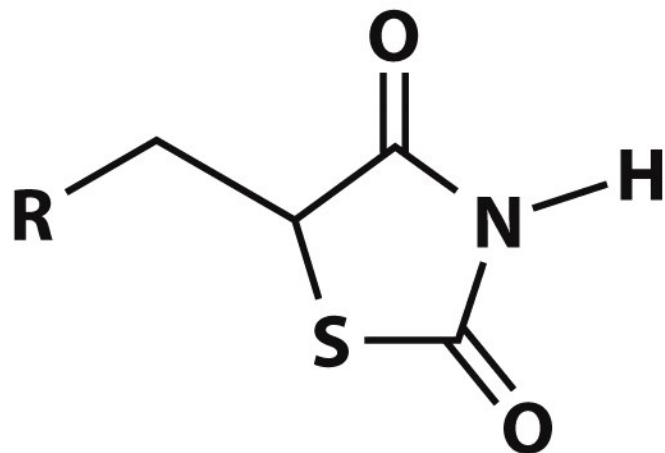


Figure 27-11

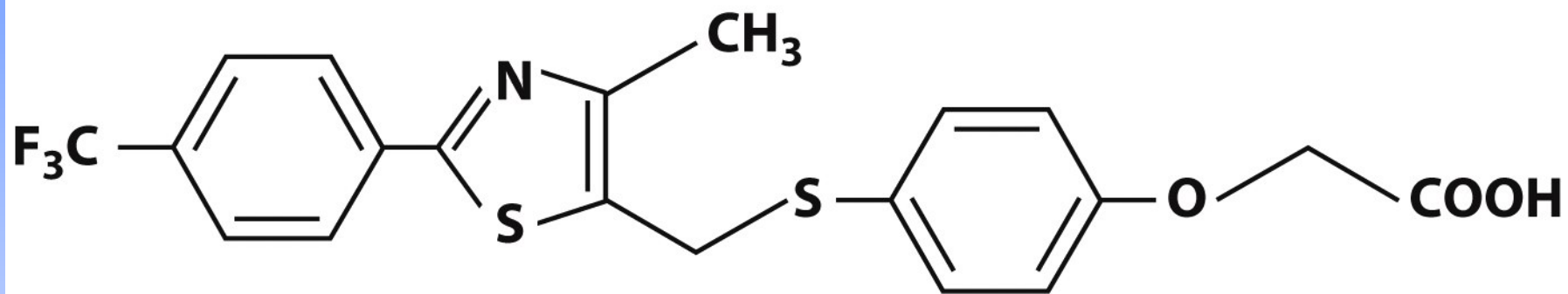
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Metformin



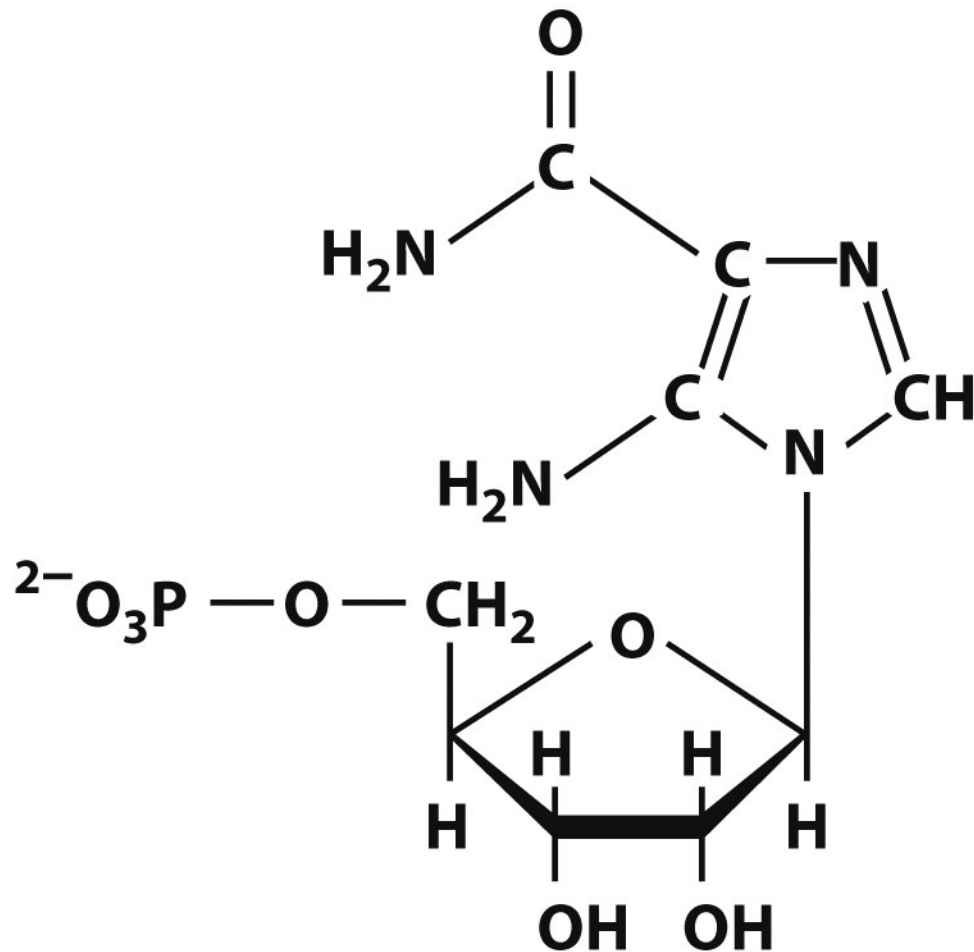
A thiazolidinedione (TZD)



GW1516

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5-Aminoimidazole-4-carboxamide ribotide (AICAR)