

<<美国医师执照考试>>

图书基本信息

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作者：威儿科克斯 编

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### 内容概要

《美国医师执照考试:High-Yield生物化学(第3版)(英文)》内容高度概括,重点突出,有利于读者快速掌握学科的核心知识。编排新颖,既有基础知识要点的介绍,又有以疾病为核心的综合归纳,并体现了相关学科的横向联系。语言规范、地道,既有利于读者快速掌握专业词汇,又有利于医学英语思维的培养。

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作者简介

作者：（美国）威儿科克斯（R.Bruce Wilcox）

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## 章节摘录

版权页：插图： Carbohydrate Digestion and Absorption A. Dietary carbohydrate is digested in the mouth and intestine and absorbed from the small intestine. B. Disaccharides (e.g., sucrose, lactose), oligosaccharides (e.g., dextrans), and polysaccharides (e.g., starch) are cleaved into monosaccharides (e.g., glucose, fructose).

1. Starch, the storage form of carbohydrate in plants, is hydrolyzed to maltose, maltotriose, and  $\alpha$ -limit dextrans by the enzyme  $\alpha$ -amylase in saliva and pancreatic juice. 2. Disaccharides and oligosaccharides are hydrolyzed to monosaccharides by enzymes on the surface of epithelial cells in the small intestine. C. MONOSACCHARIDES are absorbed directly by carrier-mediated transport. These sugars (primarily glucose) travel via the portal vein to the liver for: 1. Oxidation to  $\text{CO}_2$  and  $\text{H}_2\text{O}$  for energy 2. Storage as glycogen 3. Conversion to triglyceride (fat) 4. Release into the general circulation (as glucose)

Glycogen Metabolism Glycogen, the storage form of carbohydrate in the human body, is found chiefly in the liver and muscle (Figure 5-1). A. GLYCOGENESIS (glycogen synthesis) 1. Uridine diphosphate-glucose (UDP-glucose) is the activated substrate. 2. The enzyme glycogen synthase adds glucosyl units to the nonreducing ends of existing chains in  $\alpha$ -1,4 linkages. 3. The branching enzyme (amylo (1 4) to (1 6) transglycosylase) moves pieces that contain about seven glucose residues from the nonreducing ends of the chains to the interior and creates branches with  $\alpha$ -1,6 linkages.

B. GLYCOGENOLYSIS (glycogen breakdown) 1. The enzyme phosphorylase releases units of glucose 1-phosphate from the nonreducing ends one at a time. 2. The enzyme phosphoglucomutase converts the glucose 1-phosphate to glucose & phosphate. 3. A bifunctional debranching enzyme (4:4-transferase and amylo-1,6-glucosidase) releases glucose residues from the  $\alpha$ -1,6 bonds at the branch points.

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《美国医师执照考试:High-Yield生物化学(第3版)(英文)》是参加美国医师执照考试的必备辅导用书,也可作为我国医学院校从事双语教学的教材和参考用书,对教师进行英语授课,学生学习、参加考试具有重要的参考价值。

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