

# A&P Key Terms

## 24 Metabolism & Nutrition

Author: OpenStax College

Published 2015

# Create, Share, and Discover Online Quizzes.

QuizOver.com is an intuitive and powerful online quiz creator. [learn more](#)

Join QuizOver.com



## How to Analyze Stocks

By Yasser Ibrahim

1 month ago  
12 Responses

© iStock: Thomson Moter



## Pre Employment English

By Katharina jennifer N

5 months ago  
19 Responses

© iStock: Albin



## Lean Startup Quiz

By Yasser Ibrahim

2 months ago  
16 Responses

© iStock: Gekwotwe Ochiu

Powered by QuizOver.com

The Leading Online Quiz & Exam Creator

Create, Share and Discover Quizzes & Exams

<http://www.quizover.com>

## Disclaimer

All services and content of QuizOver.com are provided under QuizOver.com terms of use on an "as is" basis, without warranty of any kind, either expressed or implied, including, without limitation, warranties that the provided services and content are free of defects, merchantable, fit for a particular purpose or non-infringing.

The entire risk as to the quality and performance of the provided services and content is with you.

In no event shall QuizOver.com be liable for any damages whatsoever arising out of or in connection with the use or performance of the services.

Should any provided services and content prove defective in any respect, you (not the initial developer, author or any other contributor) assume the cost of any necessary servicing, repair or correction.

This disclaimer of warranty constitutes an essential part of these "terms of use".

No use of any services and content of QuizOver.com is authorized hereunder except under this disclaimer.

The detailed and up to date "terms of use" of QuizOver.com can be found under:

<http://www.QuizOver.com/public/termsOfUse.xhtml>



## eBook Content License

Human Body OpenStax College. Anatomy & Physiology, Download for free at <http://cnx.org/contents/14fb4ad7-39a1-4eee-ab6e-3ef2482e3e22@7.25>

### Creative Commons License

Attribution-NonCommercial-NoDerivs 3.0 Unported (CC BY-NC-ND 3.0)

<http://creativecommons.org/licenses/by-nc-nd/3.0/>

You are free to:

Share: copy and redistribute the material in any medium or format

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

**Attribution:** You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

**NonCommercial:** You may not use the material for commercial purposes.

**NoDerivatives:** If you remix, transform, or build upon the material, you may not distribute the modified material.

**No additional restrictions:** You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

## 4. Chapter: A&P Key Terms 24 Metabolism & Nutrition

### 1. A&P Key Terms 24 Metabolism & Nutrition Questions

<a href="#">ATP synthase</a>	protein pore complex that creates ATP
<a href="#">absorptive state</a>	also called the fed state; the metabolic state occurring during the first few hours after ingesting food in which the body is digesting food and absorbing the nutrients
<a href="#">acetyl coenzyme A</a>	(acetyl CoA) starting molecule of the Krebs cycle
<a href="#">anabolic hormones</a>	hormones that stimulate the synthesis of new, larger molecules
<a href="#">anabolic reactions</a>	reactions that build smaller molecules into larger molecules
<a href="#">basal metabolic rate</a>	(BMR) amount of energy expended by the body at rest
<a href="#">beta (<math>\beta</math>)-hydroxybutyrate</a>	primary ketone body produced in the body
<a href="#">beta (<math>\beta</math>)-oxidation</a>	fatty acid oxidation
<a href="#">bile salts</a>	salts that are released from the liver in response to lipid ingestion and surround the insoluble triglycerides to aid in their conversion to monoglycerides and free fatty acids
<a href="#">biosynthesis reactions</a>	reactions that create new molecules, also called anabolic reactions
<a href="#">body mass index</a>	(BMI) relative amount of body weight compared to the overall height; a BMI ranging from 18-24.9 is considered normal weight, 25-29.9 is considered overweight, and greater than 30 is considered obese
<a href="#">calorie</a>	amount of heat required raise 1 g of water by 1 C
<a href="#">catabolic hormones</a>	hormones that stimulate the breakdown of larger molecules
<a href="#">catabolic reactions</a>	reactions that break down larger molecules into their constituent parts
<a href="#">cellular respiration</a>	production of ATP from glucose oxidation via glycolysis, the Krebs cycle, and oxidative phosphorylation
<a href="#">cholecystokinin</a>	(CCK) hormone that stimulates the release of pancreatic lipase and the contraction of the gallbladder to release bile salts
<a href="#">chylomicrons</a>	vesicles containing cholesterol and triglycerides that transport lipids out of the intestinal cells and into the lymphatic and circulatory systems

	and into the lymphatic and circulatory systems
<a href="#">chymotrypsin</a>	pancreatic enzyme that digests protein
<a href="#">chymotrypsinogen</a>	proenzyme that is activated by trypsin into chymotrypsin
<a href="#">citric acid cycle</a>	also called the Krebs cycle or the tricarboxylic acid cycle; converts pyruvate into CO <sub>2</sub> and high-energy FADH <sub>2</sub> , NADH, and ATP molecules
<a href="#">conduction</a>	transfer of heat through physical contact
<a href="#">convection</a>	transfer of heat between the skin and air or water
<a href="#">elastase</a>	pancreatic enzyme that digests protein
<a href="#">electron transport chain</a>	(ETC) ATP production pathway in which electrons are passed through a series of oxidation-reduction reactions that forms water and produces a proton gradient
<a href="#">energy-consuming phase</a>	first phase of glycolysis, in which two molecules of ATP are necessary to start the reaction
<a href="#">energy-yielding phase</a>	second phase of glycolysis, during which energy is produced
<a href="#">enterokinase</a>	enzyme located in the wall of the small intestine that activates trypsin
<a href="#">evaporation</a>	transfer of heat that occurs when water changes from a liquid to a gas
<a href="#">FADH<sub>2</sub></a>	high-energy molecule needed for glycolysis
<a href="#">fatty acid oxidation</a>	breakdown of fatty acids into smaller chain fatty acids and acetyl CoA
<a href="#">flavin adenine dinucleotide</a>	(FAD) coenzyme used to produce FADH <sub>2</sub>
<a href="#">glucokinase</a>	cellular enzyme, found in the liver, which converts glucose into glucose-6-phosphate upon uptake into the cell
<a href="#">gluconeogenesis</a>	process of glucose synthesis from pyruvate or other molecules
<a href="#">glucose-6-phosphate</a>	phosphorylated glucose produced in the first step of glycolysis

<a href="#">glycogen</a>	form that glucose assumes when it is stored
<a href="#">glycolysis</a>	series of metabolic reactions that breaks down glucose into pyruvate and produces ATP
<a href="#">hexokinase</a>	cellular enzyme, found in most tissues, that converts glucose into glucose-6-phosphate upon uptake into the cell
<a href="#">hydroxymethylglutaryl CoA</a>	(HMG CoA) molecule created in the first step of the creation of ketone bodies from acetyl CoA
<a href="#">inactive proenzymes</a>	forms in which proteases are stored and released to prevent the inappropriate digestion of the native proteins of the stomach, pancreas, and small intestine
<a href="#">insulin</a>	hormone secreted by the pancreas that stimulates the uptake of glucose into the cells
<a href="#">Krebs cycle</a>	also called the citric acid cycle or the tricarboxylic acid cycle, converts pyruvate into CO <sub>2</sub> and high-energy FADH <sub>2</sub> , NADH, and ATP molecules
<a href="#">ketone bodies</a>	alternative source of energy when glucose is limited, created when too much acetyl CoA is created during fatty acid oxidation
<a href="#">lipogenesis</a>	synthesis of lipids that occurs in the liver or adipose tissues
<a href="#">lipolysis</a>	breakdown of triglycerides into glycerol and fatty acids
<a href="#">metabolic rate</a>	amount of energy consumed minus the amount of energy expended by the body
<a href="#">metabolism</a>	sum of all catabolic and anabolic reactions that take place in the body
<a href="#">minerals</a>	inorganic compounds required by the body to ensure proper function of the body
<a href="#">monoglyceride molecules</a>	lipid consisting of a single fatty acid chain attached to a glycerol backbone
<a href="#">monosaccharide</a>	smallest, monomeric sugar molecule
<a href="#">NADH</a>	high-energy molecule needed for glycolysis
<a href="#">nicotinamide adenine dinucleotide</a>	(NAD) coenzyme used to produce NADH
<a href="#">oxidation-reduction reaction</a>	(also, redox reaction) pair of reactions in which an



	electron is passed from one molecule to another, oxidizing one and reducing the other
<u>oxidation</u>	loss of an electron
<u>oxidative phosphorylation</u>	process that converts high-energy NADH and FADH <sub>2</sub> into ATP
<u>pancreatic lipases</u>	enzymes released from the pancreas that digest lipids in the diet
<u>pepsin</u>	enzyme that begins to break down proteins in the stomach
<u>polysaccharides</u>	complex carbohydrates made up of many monosaccharides
<u>postabsorptive state</u>	also called the fasting state; the metabolic state occurring after digestion when food is no longer the body's source of energy and it must rely on stored glycogen
<u>proteolysis</u>	process of breaking proteins into smaller peptides
<u>pyruvate</u>	three-carbon end product of glycolysis and starting material that is converted into acetyl CoA that enters the Krebs cycle
<u>radiation</u>	transfer of heat via infrared waves
<u>reduction</u>	gaining of an electron
<u>salivary amylase</u>	digestive enzyme that is found in the saliva and begins the digestion of carbohydrates in the mouth
<u>secretin</u>	hormone released in the small intestine to aid in digestion
<u>sodium bicarbonate</u>	anion released into the small intestine to neutralize the pH of the food from the stomach
<u>terminal electron acceptor</u>	oxygen, the recipient of the free hydrogen at the end of the electron transport chain
<u>thermoneutral</u>	external temperature at which the body does not expend any energy for thermoregulation, about 84 F
<u>thermoregulation</u>	process of regulating the temperature of the body
<u>transamination</u>	transfer of an amine group from one molecule to another as a way to turn nitrogen waste into ammonia

so that it can enter the urea cycle

---

tricarboxylic acid cycle

(TCA) also called the Krebs cycle or the citric acid cycle; converts pyruvate into CO<sub>2</sub> and high-energy FADH<sub>2</sub>, NADH, and ATP molecules

---

triglycerides

lipids, or fats, consisting of three fatty acid chains attached to a glycerol backbone

---

trypsinogen

proenzyme form of trypsin

---

trypsin

pancreatic enzyme that activates chymotrypsin and digests protein

---

urea cycle

process that converts potentially toxic nitrogen waste into urea that can be eliminated through the kidneys

---

vitamins

organic compounds required by the body to perform biochemical reactions like metabolism and bone, cell, and tissue growth

---