

Metabolism Quiz PDF

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What is the primary energy carrier in cells?

- NADH
- ATP
- FADH₂
- ADP

Which metabolic process involves the breakdown of glucose to produce energy?

- Lipolysis
- Glycolysis
- Gluconeogenesis
- Photosynthesis

Which hormone is primarily responsible for lowering blood glucose levels?

- Glucagon
- Thyroxine
- Insulin
- Cortisol

What factors can influence basal metabolic rate? (Select all that apply)

- Gender
- Temperature
- Stress levels
- Blood type

Which processes are involved in energy production in cells? (Select all that apply)

- Glycolysis
- Krebs cycle

- Electron Transport Chain
- Photosynthesis

Which of the following are considered metabolic disorders? (Select all that apply)

- Diabetes
- Hyperthyroidism
- Asthma
- Metabolic syndrome

Explain the role of ATP in cellular metabolism.

Describe how enzymes function as catalysts in metabolic reactions.

What is the main function of enzymes in metabolism?

- Store energy
- Act as catalysts
- Provide structural support
- Transport nutrients

Which organ is primarily responsible for regulating basal metabolic rate?

- Liver
- Pancreas

- Thyroid gland
- Adrenal gland

Which metabolic pathway is responsible for the synthesis of glucose from non-carbohydrate sources?

- Glycolysis
- Lipolysis
- Gluconeogenesis
- Krebs cycle

What is the process called where the body adapts to changes in environment and diet?

- Catabolism
- Anabolism
- Adaptive Thermogenesis
- Homeostasis

Which of the following factors does NOT influence metabolic rate?

- Age
- Muscle mass
- Eye color
- Activity level

Which of the following are types of metabolic pathways? (Select all that apply)

- Catabolism
- Anabolism
- Photosynthesis
- Glycolysis

Which hormones play a critical role in regulating metabolism? (Select all that apply)

- Insulin
- Glucagon
- Thyroxine
- Melatonin

Which of the following are components of the citric acid cycle? (Select all that apply)

- Acetyl-CoA
- NADH
- Pyruvate
- FADH₂

Discuss the impact of exercise on metabolic rate and energy expenditure.

How does the body regulate blood glucose levels through hormonal control?

What is the significance of the Krebs cycle in cellular respiration?

Explain how genetic factors can influence an individual's metabolism.

