Medical Biochemistry

University Medicine · Vocabulary in context

Word	Example
medical biochemistry	**Medical biochemistry** studies the chemistry of the body.
primary structure /ˈpraɪməri ˈstrʌktʃə/	The order of amino acids in a chain is its **primary structure**.
secondary structure /ˈsekəndəri ˈstrʌktʃə/	A coil or a folded sheet is the **secondary structure** of a protein.
tertiary structure /ˈtɜːʃəri ˈstrʌktʃə/	The **tertiary structure** is the final 3D shape of one folded chain. 3D
quaternary structure /kwəˈtɜːnəri ˈstrʌktʃə/	Haemoglobin has **quaternary structure** because it is made of four chains.
haemoglobin /ˌhiːməˈgləʊbɪn/	**Haemoglobin** in red blood cells carries oxygen.
sigmoid	A **sigmoid** curve is shaped like an S. S
cooperativity	**Cooperativity** means each oxygen that binds makes the next one bind more easily.
Michaelis-Menten kinetics	**Michaelis-Menten kinetics** show that enzyme speed levels off as substrate rises.
Km	**Km** is the substrate level at which the enzyme works at half its top speed.
competitive inhibition	**Competitive inhibition** blocks the active site, so more substrate is needed.

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glycolysis /glaɪˈkɒləsɪs/	In **glycolysis**, glucose is split into two pyruvate molecules in the cytoplasm.
PFK-1	**PFK-1** is the key control step of glycolysis.
lactate dehydrogenase	**Lactate dehydrogenase** turns pyruvate into lactate when oxygen is low.
TCA cycle	The **TCA cycle** is another name for the Krebs cycle.
electron transport chain /ɪˈlektrɒn ˈtrænspɔːt tʃeɪn/	The **electron transport chain** passes electrons along proteins in the inner membrane.
ATP synthase /ˌeɪ tiː ˈpiː ˈsɪnθeɪs/	**ATP synthase** makes ATP as hydrogen ions flow through it. ATP
glycogen /ˈglaɪkədʒn/	The liver stores **glycogen**.
gluconeogenesis	In **gluconeogenesis**, the liver makes new glucose from amino acids or fat.
glucagon /ˈgluːkægən/	**Glucagon** raises the level of sugar in the blood.
insulin /ˈɪnsjuːlɪn/	**Insulin** lowers the level of sugar in the blood.
beta-oxidation	**Beta-oxidation** breaks fatty acids into two-carbon pieces.
lipoprotein	A **lipoprotein** carries fat in the blood.
ketone bodies	When you fast, the liver makes **ketone bodies** as fuel for the brain.

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glutamate /ˈgluːtəmeɪt/	**Glutamate** collects amino groups in the body.
transamination	**Transamination** moves an amino group from one molecule to another.
urea cycle	The **urea cycle** turns waste nitrogen into urea.
glutamine	**Glutamine** carries nitrogen between organs.
• **alanine**	**Alanine** carries nitrogen from muscle to the liver.
fed state	In the **fed state**, after a meal, the body stores fuel.
fasting state	In the **fasting state**, the body uses its stored fuel.

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