

INKBIOLOGY FLASHCARDS

Nutrition, digestion and health evidence

Unit B10 · 18 cards · fronts and backs

Print double-sided, flipping on the long edge, and each answer lands behind its question. Cut along the card borders.

Definitions in mark-scheme wording, and the misconceptions that lose marks. These cards and each lesson's whole-lesson check run on the website with spaced-repetition scheduling, at inkphysics.co.uk/biology/flashcards.

DEFINITION

Define: Digestion.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

Define: Physical digestion.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

Define: Absorption.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

Define: Endopeptidase.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

Define: Exopeptidase.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

Define: Dipeptidase.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

Define: Co-transport.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

Define: Indirect active transport.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

The mechanical breakdown of food into smaller pieces, increasing the surface area available to digestive enzymes without hydrolysing anything.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

The hydrolysis of large insoluble biological molecules into small soluble molecules that can be absorbed across cell membranes.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

An enzyme that hydrolyses peptide bonds within a polypeptide chain, producing shorter chains and so more ends. Pepsin, trypsin and chymotrypsin.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

The movement of the products of digestion from the lumen of the gut, across the epithelium, into the blood or the lymph.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

An enzyme, bound to the membrane of the ileum epithelium, that hydrolyses a dipeptide into two amino acids.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

An enzyme that hydrolyses the peptide bond at an end of a chain, removing a single amino acid. Carboxypeptidases work from the end carrying the free carboxyl group, aminopeptidases from the amine end.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

Transport that is driven by a gradient which was itself established using ATP elsewhere in the cell. Glucose uptake in the ileum is the standard example.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

The transport of two substances across a membrane through the same carrier protein at the same time, one moving down its concentration gradient and providing the means for the other to move against its own.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

SPOT THE ERROR

Say what is wrong with this claim:

Bile is the enzyme that digests fat.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

Define: Cohort study.

DIET, ENERGY AND HOW TO READ A HEALTH CLAIM

DEFINITION

Define: Case-control study.

DIET, ENERGY AND HOW TO READ A HEALTH CLAIM

DEFINITION

Define: Randomised controlled trial.

DIET, ENERGY AND HOW TO READ A HEALTH CLAIM

DEFINITION

Define: Relative risk.

DIET, ENERGY AND HOW TO READ A HEALTH CLAIM

SPOT THE ERROR

Say what is wrong with this claim:

This study followed half a million people, so the result is reliable, because a sample that large settles the question.

DIET, ENERGY AND HOW TO READ A HEALTH CLAIM

DEFINITION

Define: Atheroma.

CHOLESTEROL, ATHEROMA AND WHAT A RISK FACTOR MEANS

DEFINITION

Define: Thrombosis.

CHOLESTEROL, ATHEROMA AND WHAT A RISK FACTOR MEANS

DEFINITION

A group of people free of the disease is recruited, their exposure is recorded, and they are followed forward in time to see who develops it. Gives incidence and relative risk directly, and gets the time order right by construction.

DIET, ENERGY AND HOW TO READ A HEALTH CLAIM

SPOT THE ERROR

Bile contains no enzymes at all. Bile salts emulsify, breaking large lipid droplets into small ones, which changes no chemistry but multiplies the surface available for it. The enzyme is pancreatic lipase.

DIGESTION AND ABSORPTION: ONE TUBE, FOUR CHEMISTRIES

DEFINITION

Participants are allocated by chance, so the groups are balanced on every variable, including the ones nobody thought to measure.

DIET, ENERGY AND HOW TO READ A HEALTH CLAIM

DEFINITION

People who already have the disease are compared with matched people who do not, and both groups are asked about past exposure. Fast and efficient for rare diseases; yields an odds ratio, not a risk.

DIET, ENERGY AND HOW TO READ A HEALTH CLAIM

SPOT THE ERROR

A large sample buys precision, not accuracy. It narrows the confidence interval and shrinks random error, and it does nothing at all about confounding: half a million people whose vegetable intake tracks their income measures that bundle very precisely.

DIET, ENERGY AND HOW TO READ A HEALTH CLAIM

DEFINITION

The risk in the exposed group divided by the risk in the unexposed group; 1 means no association.

DIET, ENERGY AND HOW TO READ A HEALTH CLAIM

DEFINITION

The formation of a blood clot inside a blood vessel, most often on a ruptured atheroma, which may block the vessel completely.

CHOLESTEROL, ATHEROMA AND WHAT A RISK FACTOR MEANS

DEFINITION

A plaque in the wall of an artery, consisting of lipid, foam cells and cell debris beneath a fibrous cap, which narrows the lumen and stiffens the wall.

CHOLESTEROL, ATHEROMA AND WHAT A RISK FACTOR MEANS

DEFINITION

Define: Aneurysm.

CHOLESTEROL, ATHEROMA AND WHAT A RISK FACTOR MEANS

SPOT THE ERROR

Say what is wrong with this claim:

HDL and LDL are two kinds of cholesterol,
one good and one bad.

CHOLESTEROL, ATHEROMA AND WHAT A RISK FACTOR MEANS

SPOT THE ERROR

There is one cholesterol molecule, and the cholesterol in an HDL particle is chemically identical to the cholesterol in an LDL particle. HDL and LDL are the particles that carry it, differing in density, size, surface proteins and destination.

CHOLESTEROL, ATHEROMA AND WHAT A RISK FACTOR MEANS

DEFINITION

A localised bulge in an artery wall that has been weakened, which may rupture and cause severe internal bleeding.

CHOLESTEROL, ATHEROMA AND WHAT A RISK FACTOR MEANS