Sucrase: hydrolyses the single glycosidic bond in the sucrose molecules = produces glucose and fructose.

Lactase: hydrolyses the single glycosidic bond in the lactose molecule. = produces glucose and galactose.

Lipid Digestion:

Lipids are hydrolysed by enzymes called lipases = enzymes produced in the pancreas that hydrolyse the ester bond found in triglycerides to form fatty acids and monoglycerides.

A monoglyceride is a **glycerol molecule with a single fatty acid molecule attached**.

Lipids (fats and oils) are firstly split up into tiny droplets called **micelles by bile salts which are produced by the liver**. This is called **emulsification and increases the surface area of the lipids so that the action of lipases in speeded up.**

Protein Digestion:

Proteins are large, complex molecules that are hydrolysed by a group of enzymes called peptidases (proteases) there are different types:

Endopeptidases: hydrolyse the peptide bonds between amino acids in the central region of a protein molecule forming a series of peptide molecules.

Exopeptidases: hydrolyse the peptide bonds on the terminal amino acids of the peptide molecules formed by endopeptidases. = progressively release dipeptides and single amino acids.

Dipeptidases: hydrolyse the bond between the two amino acids of a dipeptide. Dipeptidases are membrane-bound, being apart of the cell-surface membrane of the epithelial cells lining the ileum.

Lactose Intolerance:

As milk forms a less significant part of an adults diet, **the production of lactase diminishes as children get older. This reduction can be so great that some adults produce little or no lactase at all.**

If you produce **no lactase you cannot hydrolyse the lactose you consume.** When the undigested lactose reaches the large intestines, microorganisms hydrolyse it. This produces a large volume of gas that can result in diarrhoea because the soluble molecules lower the water potential of the material in the colon.