

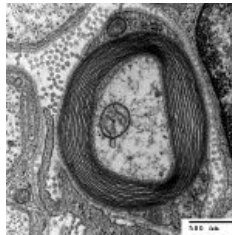
The importance of lipids for the body

Lipids are the most reduced and therefore **the most energy-rich nutrient**. They are thus used as an important energy substrate. However, some tissues, such as the brain, cannot normally use them in metabolism. Because of their hydrophobicity, which makes them not water-binding, unlike carbohydrates, they are the most efficient energy storage medium.

Fats make up approximately 15% of the total weight in men, with a higher proportion of around 20-25% in women. For an average weight male, this equates to approximately 10.5 kg of TAG, the oxidation of which can yield around 400,000 kJ.

Other functions

- Structural functions – forms, for example, an essential component of all cell membranes.
- Mechanical and protective function - **subcutaneous fat and fat around organs insulates thermally and physically, myelin sheaths of neurons insulate electrically.**



- Significant solvents of certain substances (fat-soluble vitamins) and are the **starting substance for the synthesis** of many substances important for the body – eicosanoids, steroid hormones, bile acids etc.