

Acylglycerols, also known as triglycerides, are the main constituents of dietary fats and oils. Metabolism in adipose tissue: When energy intake exceeds energy expenditure, adipose tissue takes up free fatty acids and re-esterifies them into triglycerides for storage as fat droplets. Hormone-sensitive lipase (HSL) is activated, releasing free fatty acids from adipose tissue, which can be utilized by other tissues for energy production. Ketogenesis: In the liver, when there is a high concentration of free fatty acids, excess acetyl-CoA is converted into ketone bodies, such as acetoacetate and β -hydroxybutyrate. β -oxidation: Free fatty acids taken up by muscle and other tissues undergo β -oxidation, a process that occurs in the mitochondria, to generate acetyl-CoA. It's important to note that the metabolism of acylglycerols is tightly regulated by various hormones, enzymes, and metabolic pathways to maintain energy balance and meet the body's energy demands. These triglycerides are either stored in the liver as fat droplets or packaged into very-low-density lipoproteins (VLDL) for export to other tissues. Absorption: Free fatty acids and monoglycerides are absorbed by the intestinal cells and reassembled into triglycerides. Lipoprotein lipase (LPL) action: In peripheral tissues, such as adipose tissue and muscle, lipoprotein lipase (LPL) is activated. The metabolism of acylglycerols involves several steps that occur in various tissues and organs in the body. 2.3.4.5.6.7.8.9.10