Fatty Acids

Fatty acids are the essential building blocks of more complex lipids like triglycerides (fats and oils) and phospholipids found in cell membranes. They are composed of carbon chains (typically 4–28 atoms) with a carboxyl group at one end and are crucial for energy storage, cell structure, neural development, immune response, and reproduction. Fatty acids are classified as saturated (no double bonds; SFA) or unsaturated (one or more double bonds; USFA). Specific fatty acids that are considered essential for general function cannot be synthesized in sufficient quantity by organisms that are at higher trophic levels and must be obtained through the diet. Most physiologically important long-chain fatty acids are produced through *de novo* synthesis by aquatic algae. Primary producers at the base of aquatic food webs have distinct fatty acids signatures that can be used as tracers of food web dynamics. Given their dietary origin and importance as tracers in aquatic food webs, we have included data on fatty acids in GLATAR.

Key citations:

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