NORMAL FAT TISSUE METABOLISM

White adipose tissue in lean individuals contains some 10–15 percent macrophages 1. The fat cells contain smaller reservoirs of fat globules than those in obese individuals and secrete factors such as adiponectin and omega-3 fatty acids, which inhibit the activation of inflammatory pathways in macrophages 2. Eosinophils secrete IL-4 3, which activates and maintains resident macrophages in an anti-inflammatory M2 state 4. As a result, macrophages secrete the anti-inflammatory cytokine IL-10, which acts on the fat and muscle tissue to enhance insulin sensitivity—the ability of tissues to take up excess glucose from the blood—essential for maintaining normal glucose levels 5.

1. Fat tissue contains 10–15% macrophages
2. Fat globule
3. Adiponectin and omega-3 fatty acids block inflammatory pathways.
4. IL-10
5. Enhances insulin sensitivity

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