

**Maximal fat oxidation and metabolic fitness.**

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Regular physical activity and training enhances both metabolic and aerobic fitness, but changes in metabolic fitness are not necessarily linked to changes in aerobic fitness. The concept of metabolic flexibility provides a mechanistic approach to understanding metabolic fitness. The capacity for fat transport, storage and oxidation and in particular the maximal fat oxidation capacity has been linked to metabolic fitness and metabolic flexibility. Current evidence and methodological issues will be discussed.