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- **Cover image:** The reactions catalysed by enzymes associated with the TCA cycle (Krebs cycle) are commonly thought to operate in a full series of eight steps. However, under appropriate conditions in skeletal muscle and cells of immune system, the 'cycle' may be considered to operate in two separate parts. Firstly, in muscle, reactions of the right hand side of the cycle terminate at 2-oxoglutarate dehydrogenase, and the flux of carbon is shifted to the synthesis of glutamate and glutamine (for release into the bloodstream) via transaminases and glutamine synthetase respectively. Secondly, in immune cells such as lymphocytes, neutrophils and macrophages, glutamine may be converted to 2-oxoglutarate where it is metabolised by reactions of the left hand side of the TCA cycle where carbon may leave the cycle as malate or oxaloacetate, being subsequently converted to pyruvate (and lactate), or aspartate respectively. Image adapted from: Newsholme, E.A., Newsholme, P. and Curi, R. (1987) The role of the citric acid cycle in cells of the immune system and its importance in sepsis, trauma and burns. *Biochem. Soc. Symp.* **54**, 145–162. For further details please see pp. 1845–1857. Image kindly provided by Philip Newsholme.