



Fig. 2: Proposed mechanisms for the role of lycopene in preventing chronic diseases. Dietary lycopene may increase the lycopene status in the body and, acting as an antioxidant, may trap reactive oxygen species, increase the overall antioxidant potential or reduce the oxidative damage to lipid (lipoproteins, membrane lipids), proteins (important enzymes) and DNA (genetic material), thereby lowering oxidative stress. This reduced oxidative stress may lead to reduced risk for cancer and cardiovascular disease. Alternatively, the increased lycopene status in the body may regulate gene functions, improve intercell communication, modulate hormone and immune response, or regulate metabolism, thus lowering the risk for chronic disease. These mechanisms may also be interrelated and may operate simultaneously to provide health benefits.

[\[Return to text\]](#)