Enhancement of rat liver catalase activity dietary cholesterol

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The effects of a fat-supplemented diet and clofibrate (ethylchlorophenoxyisobutirate) upon serum lipids and liver catalase activity were studied in male rats. A butter-supplemented diet produced a striking increase of serum triglycerides but did not affect the liver catalase activity. Cholesterol (1%, w/w), added to the butter supplemented diet markedly increased liver catalase activity. This diet produced a hypercholesterolemic state higher than that induced by a butter-supplemented diet only, although the hypertriglyceridemic effect was less pronounced. Clofibrate given a butter-supplemented diet produced a marked increase of liver catalase activity (about four-fold). When clofibrate is administered with the cholesterol-supplemented diet, the increment observed in the liver catalase activity was the same as that induced with the cholesterol supplemented diet alone. Clofibrate, in either lipid-rich diet, failed to induce a hypocholesterolemic response, although a clear hypotriglicerid