Spirulina prevents atherosclerosis by reducing hypercholesterolemia in rabbits fed a high-cholesterol diet.

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Abstract
The anti-atherogenic effects of spirulina (Spirulina platensis) were investigated in the New Zealand White (NZW) rabbit model. The animal had hypercholesterolemia induced by being fed a high cholesterol diet (HCD) containing 0.5% cholesterol for 4 wk, and then fed a HCD supplemented with 1 or 5% spirulina (SP1 or SP5) for an additional 8 wk. Spirulina supplementation lowered intimal surface of the aorta by 32.2 to 48.3%, compared to HCD. Serum triglyceride (TG) and total cholesterol (TC) significantly were reduced in SP groups. After 8 wk, serum low density lipoprotein cholesterol (LDL-C) remarkably decreased by 26.4% in SP1 and 41.2% in SP5, compared to HCD. On the other hand, high density lipoprotein cholesterol (HDL-C) was markedly increased in SP1 and SP5 compared with that in the HCD group from 2 to 8 wk. These results suggest that spirulina intake can cause the reduction of hypercholesterolemic atherosclerosis, associated with a decrease in levels of serum TC, TG and LDL-C, and an elevation of HDL-C level. Spirulina may, therefore, be beneficial in preventing atherosclerosis and reducing risk factors for cardiovascular diseases.