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# HERBCLIP

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Walker, Ann. Of Hearts and Herbs. *The European Journal of Herbal Medicine*, Vol. 3, No. 2, Fall 1997, pp. 20-24.

Atherosclerosis (excessive build-up of cholesterol plaques in major arteries) is the underlying cause of coronary heart disease and stroke. These two conditions combined cause 39 percent of male deaths and approximately 10 to 15 percent of female deaths in the U.K., where this article was originally published. There is growing strong scientific evidence that several herbs effectively combat atherosclerosis, due to their antioxidant, blood thinning, and circulation enhancing properties.

This author asserts that most herbs contain several active constituents which contribute to their therapeutic effects; for example, yarrow (*Achillea millefolium*) contains at least 20 active constituents, with more continuing to be revealed through sophisticated analytical techniques. This explains the challenge in determining how they "work" therapeutically, and how they differ from synthetic drugs; "prescribing even a single herb," she says, "could be described as polypharmacy."

Flavonoids ("a diverse group of complex phenolic substances...found throughout the plant kingdom") usually have strong antioxidant properties; "Many [herbs] show antioxidant activity," says the author. These include *Ginkgo biloba*, hawthorn (*Crataegus laevigata*), lime blossom (*Tilia x vulgaris*) and garlic (*Allium sativum*), among others.

The 'antioxidant hypothesis,' a relatively new development in the study of atherosclerosis, holds that blood-circulating low-density lipoprotein (LDL), or "bad" cholesterol, very susceptible to oxidation by free radicals, becomes oxidized LDL. This substance is taken up by macrophages in arterial walls; these "engorge to become fatty foam cells, and eventually disintegrate to atheromatous deposits," the state of atherosclerosis. The author adds that research shows up to 400 mg of vitamin E daily prevents LDL oxidation, but adds that support of the body's antioxidant enzymes require the trace minerals and flavonoids found in plants, as well as vitamins. A recent study in Holland found that the higher the dietary intake of onion, apple and black tea flavonoids in elderly men, the lower their risk for coronary heart disease.

A table summarizes several herbs benefiting the cardiovascular system and their key constituents and actions. Cramp bark (*Viburnum opulus*) contains valerenic acid and treats hypertension; garlic contains various sulphur compounds including alliin, giving anti-thrombotic and hypotensive effects; ginkgo contains antioxidant flavonoids and circulation-enhancing and blood thinning ginkgolides; globe artichoke (*Cynara scolymus*) contains cholesterol-lowering sesquiterpene lactones; hawthorn contains vasodilating flavonoids, useful for angina; lily of the valley (*Convallaria majalis*) contains digoxin-like glycosides, useful for heart failure and arrhythmia; lime blossom (*Tilia x vulgaris*) has antispasmodic and hypotensive effects; and yarrow contains hypotensive sesquiterpene lactones.

Some herbs, in particular ginkgo, garlic and hawthorn, have been well-studied in the treatment of cardiovascular diseases. Although some studies are of poor quality, there are a growing number of well-conducted trials to support many herbs' cardio-therapeutic value. —*Betsy Levy*

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