American College of Healthcare Sciences

The Herbs We Study

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What Makes Herbs Work?

The following substances are the more common medicinal constituents found in herb plants:
Alkaloids

Alkaloids are naturally occurring and potent substances. They can be poisonous when taken in excessive doses.

They generally occur in all parts of the plant but their concentration varies and appears to be greatest just at the beginning of the flowering period.
Alkaloids

Generally, alkaloids are unsuitable for use in the home but are widely used by the pharmaceutical industry. They include morphine from the opium poppy *Papaver somniferum*, colchicine from the autumn crocus *Colchicum autumnale*, and atropine from deadly nightshade from *Atropa belladona*. 
Alkaloids

Coffee, tea, and cocoa contain the alkaloids caffeine and theobromide. It is important not to overdose on these substances, as they are both powerful alkaloids. Smaller quantities of alkaloids in herbs can act as a catalyst to the healing process.
Glycosides are very common in plants and can have a strong effect on animal tissue. Some are poisonous. All glycosides have one factor in common – when mixed with water they can be separated into a sugar and a non-sugar.
Several Types of Glycosides, Including:

- Cardiac glycosides have a beneficial influence on the heart: foxglove *Digitalis purpurea* and lily of the valley *Convallaria majalis*

- Anthraquinone glycosides are mildly poisonous in large doses and have a laxative action in small doses: turkey rhubarb *Rheum palmatum* and madder root *Rubium tinctorum*
Saponins

- Natural compounds. Very similar to glycosides, but they dissolve in water and produce a soapy lather

- Increase the body’s ability to absorb calcium and silicon

- Frequently used in herbal tea mixtures
Examples Of Saponins

- Vegetables, which aid digestion. Some of these include: asparagus, spinach, green beans, and oats

- Herbs such as: horse chestnut *Aesculus hippocastanum*, licorice root, common lawn, daisy *Bellis perennis*, goldenrod *Solidago virguarea*, chickweed