Learning About Health in the Forest

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Health and safety were important concerns for the American Indian and for the early settlers. Often they had to depend on the forest and fields for their healing “potions.” Their lives and well-being depended upon their knowledge of the plant life of the area and its medicinal properties. Today, many of our modern medicines have plants as their key pharmacological elements. Youth and group leaders can make the principles and practices of modern health care come to life by using the forest as a living laboratory.

Outdoor Activities

Firsthand experience with some of nature’s medicines can be an interesting exercise for youth. Trees, wildflowers, barks, and roots can be used in various ways to provide educational experiences outdoors.

Following are some activities and experiments that may be useful in an outdoor excursion.

• Make aspirin from willow. This can be done either by simply chewing the bark of black or white willow or using a chemistry lab to analyze the extracts. The fresh bark contains salicin, which apparently becomes salicylic acid in the human body and has pain- and fever-relieving properties similar to acetylsalicylic acid (aspirin). Willows also were used to combat malaria before quinine was readily available.

• Tonics and their value make an interesting study of current and historical uses of panaceas. Some of the tonics of old are still available in the forest. The excursion group can collect sassafras root, bark, and wood; then, the group can boil each ingredient and compare the concoctions from the three parts. The root has the best reputation. According to common lore of settlers and Indians, the tonic reportedly gives new pep in the spring and keeps people younger year-around. Sassafras was once a big export item, with Europeans paying a fancy price for a cup of the American potion. Other favorite tonics included tea of boneset (Joe-Pye weed), used for colds, fevers, body pains, and many other ailments. The leaves and summer flowers were among the most widespread cures in the U.S. and were exported to Europe. Another favorite is wintergreen (Gaultheria procumbens) tea from leaves. Oil of wintergreen is methyl salicylate, related to aspirin and used as an external anti-rheumatic application.

• A vitamin hike can lead to understanding how Indians, explorers, and settlers survived scurvy without Florida oranges or fresh vegetables. Rose hips, spruce beer, bulbs, and shoots of wild garlic, persimmon leaves, highbush cranberry, and an aromatic tea of young pine needles were early preventive medicines.

• Honey has been considered a preventive “medicine” for centuries. A honey treatment for bee sting could be demonstrated on the spot should the need arise. This pure, high-energy food contains nutrients which help maintain good health.

• Poisons can also be found in native and ornamental plants. Some common poisons found in the woods are: mayapple roots, if eaten; hemlock tree leaves (not same as hemlock herb which is more poisonous), if eaten; and poison ivy, if touched or
eaten. Black cherry leaves and twigs contain hydrocyanic acid which can be a sedative, cough medicine, or poison, depending on the quantity. Bloodroot provides a rheumatism remedy and dye, but large quantities of the root's protopine alkaloids can be poisonous and cause blisters. Beggars used to apply crushed bloodroot leaves to their arms to promote temporary blisters, which induced the pity and generosity of donors.

• Purity of water and various kinds of contamination can be studied outdoors, as can natural filtration and stagnation. A hike along a creek may reveal many sources of pollution, which can be cataloged. Appropriate remedies can be discussed as a group. Experiments with soil as a filter can be set up outside or brought indoors for further study.

• Antiseptic dressings can be prepared from natural materials. Germ theory and bacteria can be demonstrated in the woods as well as under the microscope. Sweetgum trees (Liquidambar styraciflua) have a gum in the bark which is listed in the U.S. Pharmacopoeia as an antiseptic. By bruising or puncturing the bark, a secretion of the balsam can be produced and applied directly to sores to promote healing. The inner bark of young white oak trees contains much tannic acid in the spring. It makes a strong antiseptic and astringent. The common plantain weed was used by Indians, who heated the leaves and used them as a wet dressing for wounds.

• First-aid training can start with simulation of the snakebite cures, which were common among the Indians. They first made an incision into the bite, then sucked out some of the poison, much as we do now. Then they applied various plants for healing, including purple coneflower, Seneca snakeroot, and Virginia snakeroot. The latter two have long been accepted in the U.S. Pharmacopoeia. The Indians chewed the root, then applied it to the bite area. The Virginia snakeroot was collected in the fall and carried by most woodsmen a century ago. There are now available medical treatments, but the discussion of old first-aid methods can enrich your lectures on modern tactics. A local botanist can help you locate these plants in the woods.

• Sore throat medicine can be made from several common plants. Young, green-white pine needles can be boiled and the "tea" drunk or gargled. The inner bark of slippery elm and the fruit of smooth or staghorn sumacs were also made into teas for gargling. The sumac brew is often called "Indian lemonade" for its light, refreshing taste.

• Your group can practice outdoor safety with zest during visits to woods with practical demonstrations. Lost-boy hunts, rescue, first aid, and movement of "injured" people can be done under field conditions.

• A "survival" hike is fun for an hour at any time. It can run the gamut from human physiology under stress (heat, cold) to nutritional foods from the forest. The latter can start with a meal of greens, hickory nuts, and elderberry in the fall.

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A word of caution: This information is not presented as a recommendation, but rather for its historical and educational value. Caution students against indiscriminate consumption of plant life, as some plants can be very dangerous. Be sure to consult a pharmaceutical specialist for further details. Ask a botanist to help you locate plants before you use them. And, when cutting and digging plants, use care and proceed in an orderly fashion to protect the environment.

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References