

Plant Medicines

Throughout history, humans have used plants to treat all kinds of illnesses. Today, about 40 percent of our prescription medicines come from plant extracts or synthesized plant compounds. Plant-based medicines are everywhere, including the shelves of our local drugstores.



Chemistry and Plants

Percy Julian practiced natural products chemistry, which is the process of separating chemicals from plants, figuring out their molecular structure, and making them in the laboratory.



Throat Lozenges, Muscle Creams, and Cold and Nasal Medicines

Derived from: Mint (*mentha*)

Parts used: Leaves

Active ingredient: Menthol. Menthol is now made synthetically or from peppermint or other mint oils.

Use: Relieves itching, relaxes muscle soreness, opens congested sinuses and upper respiratory tract

Mint can be grown easily in a garden. The leaves can be used for tea, salads, and as an herb in foods.

Aspirin

Derived from: Willow (*salix*)

Part of plant used: Bark

Active ingredient: Salicin, a compound that breaks down to become salicylic acid (aspirin). Salicylic acid (aspirin) is now synthesized.

Use: Alleviates pain, reduces fever and inflammation (swelling), prevents heart attacks

More than 80 million aspirin tablets are used each year in North America.

Quinine (Malaria Drug)

Derived from: Cinchona tree (*cinchona pubescens*)

Part used: Bark

Active ingredient: Quinine. Quinine and quinidine are both extracts from cinchona bark. Both are still used against malaria parasites.

Use: Treatment for malaria

10,000 tons of cinchona bark is harvested annually to make drugs to treat malaria.