

# Herbal medicine

Herbal medicines are extracted from plants, or parts of plants that are thought to have healing properties. They are also referred to as herbal remedies, botanical medicines, or phytomedicines.

Herbal preparations have been the basis of medical treatment for hundreds of years and are still widely used in the 21st century. They could be regarded as the original biologic approach to medicine.

Herbal medicines can be applied to the treatment of a variety of ailments, including both acute and chronic conditions. Herbal therapies are generally perceived as an alternative medicine because the practice of herbalism is not strictly based on scientific evidence. Herbal medicine is mainly used as a complementary therapy.

However, the use of herbal medicine can interact with other medicines and can also have side effects. For example, *Echinacea purpurea* might change how the body breaks down some medications, and taking *Echinacea purpurea* at the same time as other medications (including some antibiotics) might increase or increase the effects and side effects.

A large proportion of the population in the developing world still rely on traditional herbal remedies as their primary health care – the key reason being a lack of the required infrastructure for modern medicine.



From left to right: *Echinacea purpurea*, St. John's wort, and *Ginkgo bilboa*.

Ingredients for herbal medicines can be extracted from plants in several different ways: using alcohol to produce extracts called tinctures, vinegars to produce acetic acid extracts, hot water (for tisanes), long-term boiling (which is typically required for tough roots or barks to produce decoctions), or the soaking of plants in cold water (macerates). The properties of herbal medicines are likely to vary across batches and manufacturers because there is no standardisation of extraction techniques.

In the European Union (EU), herbal medicines are regulated under the European Directive on Traditional Herbal Medicinal Products (European Directive 2004/24/EC). Under this legislation, a company manufacturing herbal medicine is required to demonstrate that the product has been used for at least 15 years within the EU and 30 years outside the EU, and authorisation of herbal products is based on key eligibility criteria. The national regulator has the responsibility for monitoring the safety of and granting a marketing authorisation for herbal medicinal products.

## Article references

1. Benzie, I.F.F., & Wachtel-Galor, S. (2011). Herbal medicine: An introduction to its history, usage, regulation, current trends, and research needs. In *Herbal medicine: Bimolecular and clinical aspects* (2nd

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