

Ethnobotany. Lecture 26

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Outline

- 1 Complementary and alternative medicine (CAM)
 - Introduction



Complementary and alternative medicine (CAM)

Introduction



CAMs

- Whole medical systems such as homeopathy, naturopathy, TCM, and Ayurveda
- Mind-body medicine such as meditation, prayer, mental healing, art therapy, music therapy, and dance therapy
- Biologically based practices such as dietary supplements, herbal supplements, and other scientifically unproven therapies such as shark cartilage
- Manipulative and Body-Based Practices such as spinal manipulation (both chiropractic and osteopathic) and massage
- Energy therapies such as qi gong, reiki, therapeutic touch, and electromagnetic therapy



Alternative approaches used plants

- Medical herbalism
- Homeopathy
- Antroposophical medicine
- Aromatherapy
- Flower remedy therapy
- Naturopathy
- Orhtomolecular medicine



Medical herbalism

- Based on pre-scientific traditions of European cultures
- Holistic approach, similar to Eastern practices



Conditions treated

- Normally, chronic conditions which are not treated well in common medicine
- Eczema, arthritis, depression, migraine, PMS and others



Differences from rational phytotherapy

- Typically, combination of 4–6 herbs (assumes synergy)
- Most of remedies are taken as tinctures
- There is a flow of information between phytotherapy and herbalism



Homeopathy

- Samuel Hahnemann (Germany, 1755–1843) founded homeopathy
- “Likes cures like”
- Always minimal dose and extremely high dilutions!
- One remedy at a time



Samuel Hahnemann (1755–1843)



Modern homeopathy

- They believe in stimulating of body's own “vital force”
- “Vital force” is strongly individual



Remedies

- Highly diluted (and poisonous when undiluted)
- 65% originates from plants



Evidence

- Despite of hundreds of trial, results are still controversial
- Some experiments on “water memory” provided the support for dilution theory, but scientific value of these experiments is also dubious



“Nature” publication of Benveniste group (1988)



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Scientific Paper

Nature **333**, 816-818 (30 June 1988) | doi:10.1038/333816a0; Received 24 August 1987

Human basophil degranulation triggered by very dilute antiserum against IgE

E. Davenas, F. Beauvais, J. Amara*, M. Oberbaum, B. Robinson[†],
A. Miadonnai[‡], A. Tedeschi[‡], B. Pomeranz[§], P. Fortner[§], P.
Belon, J. Sainte-Laudy, B. Poitevin & J. Benveniste^{||}

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Anthroposophical medicine

- Rudolf Steiner (Germany, 1861–1925) founded anthroposophy and related medicine approach
- Three functional systems: sense-nervous, reproductive-metabolic and rhythmic
- Popular in Germany, Austria and other continental Western European countries



Rudolf Steiner (1861–1925)



Conditions treated

- The approach is therapeutic, but sometimes used for supportive treatments of serious diseases like cancers
- Several German hospitals practice anthroposophical medicine



Antroposophic medicines

- Normally are combinations of plant components (often diluted) and minerals
- Mistletoe from different trees is a source of common drug “Isador”
- Plants should be specifically grown in accordance to anthroposophic “biodynamic farming”



Mistletoe, *Viscum album*, Santalaceae



Aromatherapy

- Rene-Maurice Gattefosse (French perfumer, 1881–1950) is a founder of aromatherapy
- Main idea is that essential oils could be used to provide general well-being
- Aromas are prescribed holistically, in terms of “energy” etc.



Conditions treated

- All conditions which require relaxation
- Skin diseases, different chronic disorders etc.

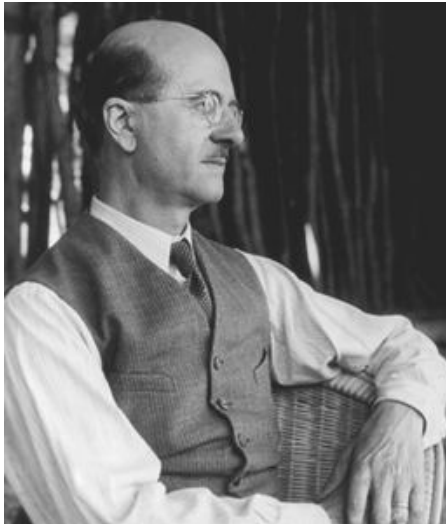


Aromatherapy medicines: essential oils

- Used in combinations
- Mostly by massage, but also by baths, inhalations, compresses and other external ways



Rene-Maurice Gattefosse (1881–1950)



Efficacy

- Sometimes work in relation with conventional phytotherapy
- However, most of uses were not proved scientifically



Flower remedy therapy

- Edward Bach (UK, 1886–1936) invented the idea of flower remedies
- Every remedy is a flower extract which is supposed to heal specific condition



Edward Bach (1886–1936)



Remedies

- Whole flowers which are dried and/or boiled to prepare tincture or water essence
- Single species are used in majority of cases



Efficacy

- Nothing has been proved scientifically
- Requires future research

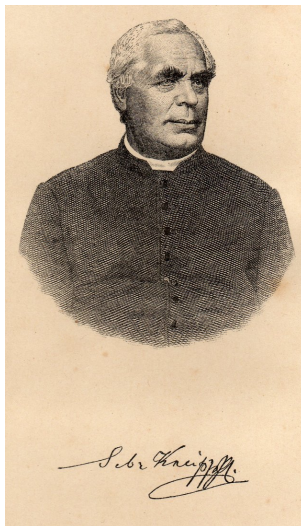


Naturopathy

- Founded by Sebastian Kneipp in 1850s
- Combination of “natural”, “organic” methods of medicine including herbalism
- Similarly to other practices, individualistic and holistic
- Includes, for example, hydrotherapy (Vincenz Priessnitz, ca. 1820) and cryotherapy



Sebastian Kneipp (1821–1897)



Orhtomolecular medicine

- Founded by Linus Pauling in 1960s
- In particular, it is a belief that over-large doses of some supplements (like vitamin C) may treat diseases



CAM in USA

- There are multiple accredited schools of CAM
- National Center for Complementary and Alternative Medicine focuses on research and integration of CAM techniques and practices



NCAM Web site

NATIONAL INSTITUTES OF HEALTH

NCCAM National Center for Complementary and Alternative Medicine

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[What Is CAM?](#) [Be Informed](#) [Topics A-Z](#) [Herbs](#) [Clinical Trials](#) [For Health Professionals](#) [En Español](#)

Health ►

Topics A-Z ➤

Research-based info
from acupuncture to
zinc.

What is CAM? ➤

This overview defines complementary and alternative medicine, introduces safety issues, and more.

Be Informed ➤

Learn how to find out
what's safe and



Chronic Pain and CAM

If you are considering a CAM therapy for chronic pain, this information can help



Research Results ►



Mindfulness Meditation Is Associated With Structural

Changes in the Brain (Jan 2011)

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- [Beware of Fraudulent 'Dietary Supplements'](#) (FDA)
- [Tea Tree Oil—Uses, Side Effects, Research](#)
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Summary

- Alternative medicine approaches are also widely using different herbal remedies. However, efficiency for most of these methods has not been scientifically proved



For Further Reading



A. Shipunov.

Ethnobotany [Electronic resource].

2011—onwards.

Mode of access:

http://ashipunov.info/shipunov/school/biol_310



M. Heinrich and others.

Fundamentals of pharmacognosy and phytotherapy (selected chapters). [Electronic resource].

Churchill Livingstone, 2004.

Mode of access: http://ashipunov.info/shipunov/school/biol_310/heinrich2004_fund_pharm_part.djvu

Pages 184–196.

