



How Does Natural Healing Work?

Disease Development

Birth



```
graph TD; A[Birth] --> B[Symptom free (???)]; B --> C[Pathology]; C --> D[Death]
```

The diagram illustrates the progression of disease development through four stages, each in a colored box with a downward arrow connecting them. The stages are: Birth (purple box), Symptom free (???) (dark blue box), Pathology (medium blue box), and Death (light blue box). The boxes are arranged in a descending staircase pattern from top-left to bottom-right.

Symptom free (???)

Pathology

Death



What is natural?

Nothing synthetic
(human-made)

Definition of Naturopathic Medicine

Naturopathic medicine is a distinct primary health care profession, emphasizing prevention, treatment, and optimal health through the use of therapeutic methods and substances that encourage individuals' inherent self-healing process. The practice of naturopathic medicine includes modern and traditional, scientific, and empirical methods.

The 6 Foundation Principles

The Healing Power of Nature (Vis Medicatrix Naturae): Natural medicine recognizes an inherent self-healing process in people that is ordered and intelligent. Natural healing practitioners act to identify and remove obstacles to healing and recovery, and to facilitate and augment this inherent self-healing process.

Identify and Treat the Causes (Tolle Causam): The natural healing practitioner seeks to identify and remove the underlying causes of illness rather than to merely eliminate or suppress symptoms.

First Do No Harm (Primum Non Nocere): Natural healing practitioners follow three guidelines to avoid harming the patient:

- Utilize methods and medicinal substances which minimize the risk of harmful side effects, using the least force necessary to diagnose and treat;
- Avoid when possible the harmful suppression of symptoms; and
- Acknowledge, respect, and work with individuals' self-healing process.

Doctor as Teacher (Docere): Natural healing practitioners educate their patients and encourage self-responsibility for health. They also recognize and employ the therapeutic potential of the doctor-patient relationship.

Treat the Whole Person: Natural healing practitioners treat each patient by taking into account individual physical, mental, emotional, genetic, environmental, social, and other factors. Since total health also includes spiritual health, natural healing practitioners encourage individuals to pursue their personal spiritual development.

Prevention: Natural healing practitioners emphasize the prevention of disease by assessing risk factors, heredity and susceptibility to disease, and by making appropriate interventions in partnership with their patients to prevent illness.

Natural healing treatment ladder

1. Applies to every client & all treatments
2. Begin with most basic, most important step & see slow, eventual, permanent progress
3. Begin at another level & there will be minor progress, but not long-term success
4. Begin with least "invasive" first step on the ladder and and move up toward more invasive as needed

Therapeutic Sequence

1. Re-establish the basis for health

Remove obstacles to cure by enhancing good health and lifestyle practices

2. Stimulate the general natural healing power of the body and mind

All systems (Western, Ayurveda, Chinese, etc.) have methods.

Botanical, homeopathic, nutritional, hydrotherapy, acupuncture, psychological, spiritual

3. Tonify weakened systems

Any or all modalities

Strengthen immune system, decrease toxicity, balance inflammatory and metabolic functions, balance regulatory systems, promote regeneration, harmonize life force

4. Correct structural integrity

Exercise, manipulation, massage, etc.

5. Use specific natural therapeutic substances, modalities or interventions for actual current disease

6. Use drugs for pathology

7. Use Surgery, suppressive drugs, radiation and chemotherapy

Invasive

Changes body's processes

external influence

More invasive the treatment, more it directs
(forces) the processes of body

Less invasive the treatment, more it gives
body building blocks or power to heal itself

Noninvasive

Diet

- Often the most wrong for the longest time

Lifestyle

- Exercise
- Sleep Hygiene
- Daily Habits
- Stress management techniques
- Multivitamin mineral supplement
- Essential Fatty Acids (EFAs)
- Detoxify the indoor environment (home)

Natural healing starts with non-invasive treatment/techniques

Traditional systems emphasize
(Good in theory)

Diet

Other non-invasive techniques

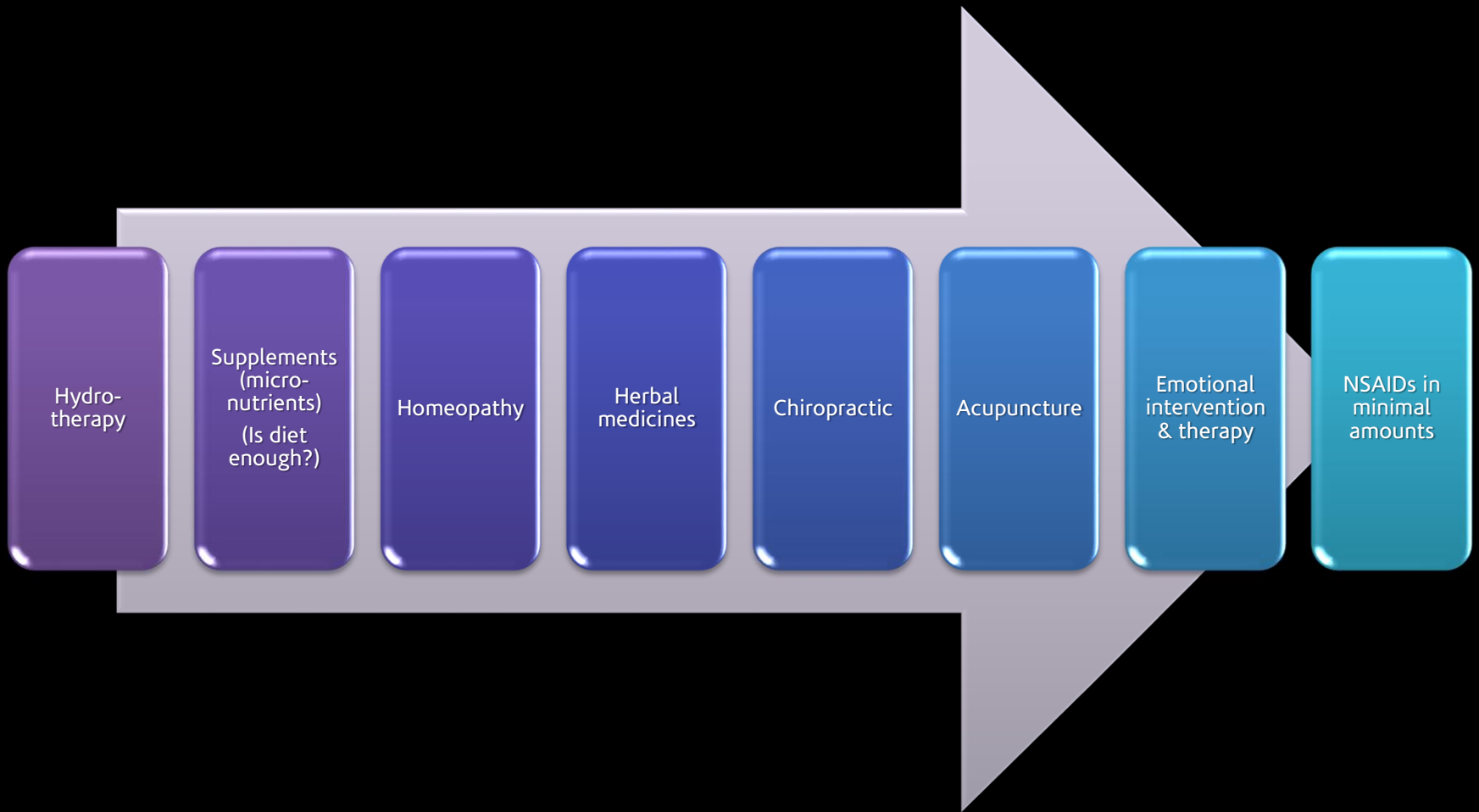
Natural healing starts with non-invasive treatment/techniques

Non-invasive treatments will lead to ↓majority of client's problems, help almost all clients

Potential for harm is near zero

Other steps much less effective for long-term until non-invasive steps applied

Less Invasive



Moderately Invasive

Severely restrictive diets (<1000 cals)

Symptom-suppressing homeopathy,
chiropractic, acupuncture

Megadoses micronutrients or herbs
(Nutrient pharmacology)

OTC medications with some exceptions
(i.e., Tylenol)

Most Invasive

Maybe necessary, life-saving, still invasive

OTC Medications

(with exceptions, i.e., low dose aspirin)

Prescription Medications

(with exceptions, i.e., opiates)

Surgery (removal/replacement body part)

Basic Principles of Health



Hydration





Diet

Basic Principles of Health

Reducing oxidative stress

Lifestyle

Reducing toxic exposure from environment

Mental and emotional health

Fundamental functions

A glass pitcher is being filled with orange juice from a juicer. The juice is a vibrant orange color and is being poured from a metal spout. In the background, there is a woven basket filled with various fruits, including red and green apples and lemons. The scene is set on a dark, marbled countertop.

Detoxification
Building

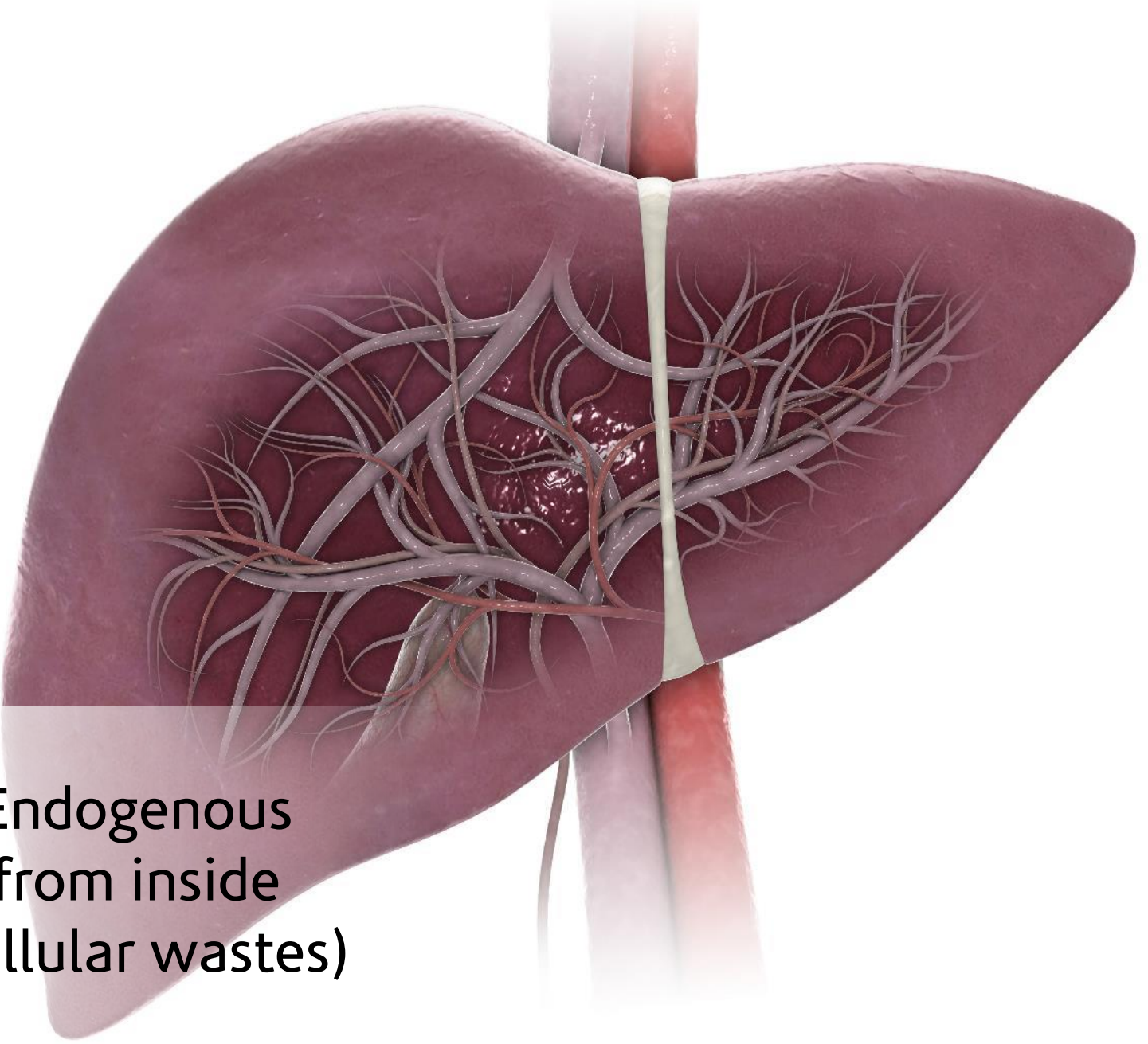
Detoxification

The background of the slide is a photograph of an industrial facility. Two tall, dark smokestacks are prominent in the foreground, both emitting thick, white plumes of smoke that rise into the sky. The sky is filled with large, billowing clouds. In the lower right, the silhouette of an industrial building with a complex roofline and a tall lattice tower is visible. The overall scene suggests industrial activity and air pollution.

Remove undesirable
substances from tissues



Exogenous
from outside
(Pesticides)



Endogenous
from inside
(cellular wastes)

This anatomical illustration shows a liver with its internal network of blood vessels and bile ducts. The liver is depicted in a reddish-brown color, with a complex web of lighter-colored vessels and ducts branching throughout its surface. A central vertical structure, likely the gallbladder or a major bile duct, is visible running down the center of the liver. The overall appearance is that of a detailed medical diagram.



Joseph Pizzorno, ND
Founder and first
president,
Bastyr University



"Toxicity is the
new normal"



<http://drpizzorno.com/>

"I have become convinced that the toxic load in modern civilization is now probably even more important than nutritional deficiencies in terms of causing diseases in our patients."

Pizzorno

Furthermore, the effect of exposure on **multiple substances simultaneously**, which is the norm, is essentially **unknown**.

For example, a recent study by the Agency for Toxic Substances and Disease Registry (ATSDR) found that when examining the components of 15 combinations and how they may interact, they predicted that **41% of them would have additive** effects, **20% would have synergistic** effects, but for **24% they did not have even the minimum information** necessary to make a prediction.

It has been estimated that at current funding levels, it would take **1,000 years** to adequately document the health effects of the chemicals commonly encountered in commerce and industry

Endotoxins from bowel flora have been associated with depression, chronic fatigue, inflammatory bowel disease, and atherosclerosis, effects partly influenced both by bacterial species as well as intestinal permeability

An example of enzyme poisoning is the displacement of **zinc with lead**), leading to a variety of **behavioral and neurological abnormalities**

The toxic metal **arsenic**, has been shown to disrupt a number of hormonal pathways. It disrupts the **thyroid hormone** and retinoic acid receptors

Elevated urinary levels of arsenic to be associated with the prevalence of **Type II diabetes**, likely by influencing genes associated with insulin sensitivity

"People in the top 10% of toxic exposure have a 20-fold increase risk for diabetes. These chemicals are insulin receptor site poisons. So, insulin receptors can't respond because they are being poisoned by those persistent organic pollutants."

"This detoxification capability is also greatly impacted by diet as [it is] dependent on the availability of key nutrients that are often deficient in the diet."

"As we have evolved as a species, we had about 100-150 g of fiber in our diet every day," he says. "Now in Western civilizations we have about 10-15 g of fiber every day."

Detoxification Organs



Large Intestine



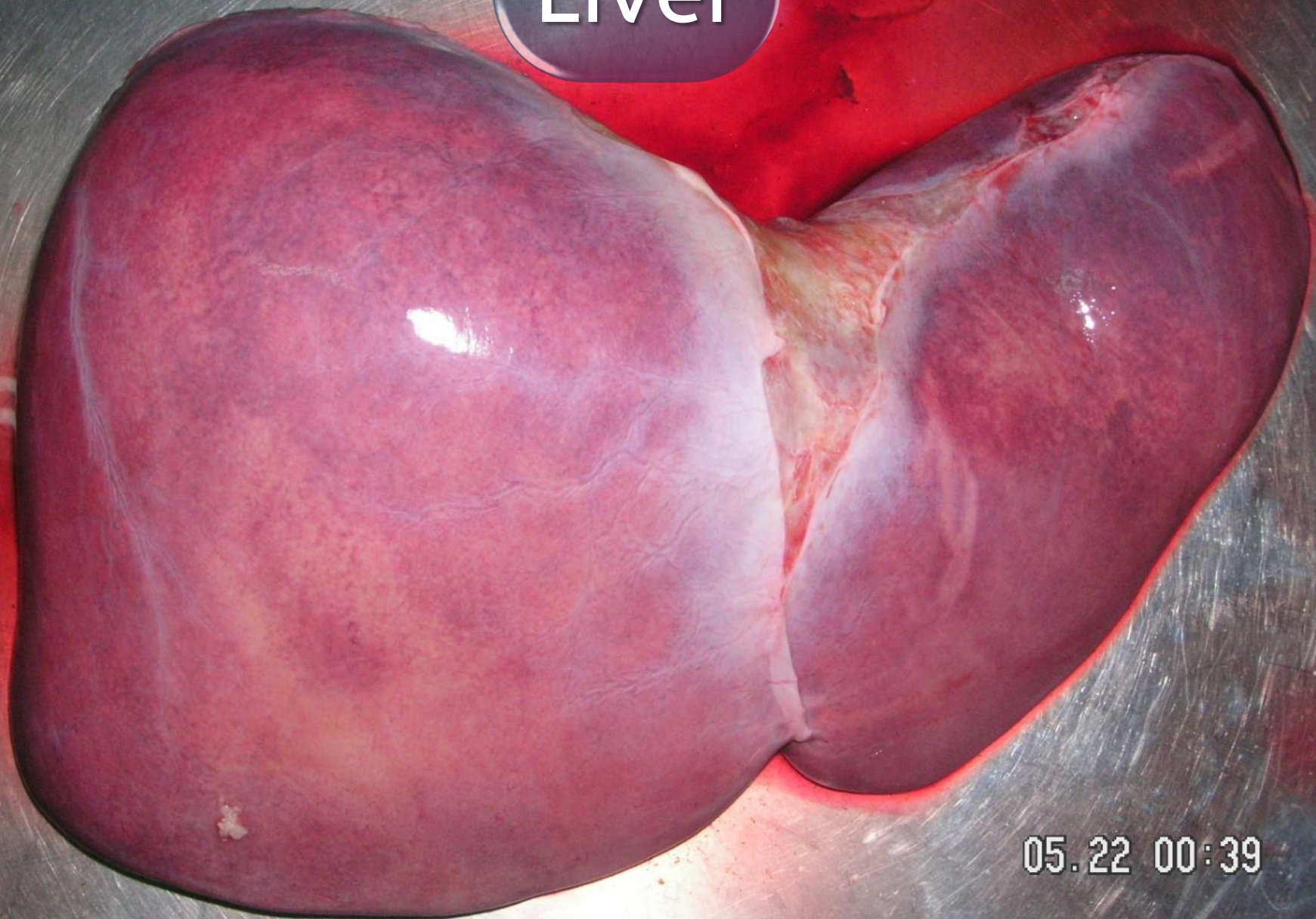
Kidney



A microscopic view of numerous red blood cells, which are biconcave discs, floating in a fluid medium. The cells are a vibrant red color and have a textured surface. A dark blue, pill-shaped overlay is positioned in the upper center of the image, containing the word "Blood" in white, bold, sans-serif font.

Blood

Liver



05.22 00:39

Modalities & Methods



Nutrition





Bodywork

Acupuncture



Modality	Comments
Homeopathy	Obscure for most people, adherence good
Acupuncture	Good for some conditions, not appropriate by itself for chronic degenerative conditions
Hydrotherapy	Mild Slow results
Psychotherapy	Effective, may be slow
Lifestyle changes	Effective long-term
Colonics	Effective for crisis

Herbalism





Herbs work better
than you ever knew

A top-down view of a collection of glass jars filled with various dried herbs and spices, arranged on a bamboo surface. In the bottom left, a dark stone mortar and pestle holds a green herb. A wooden spoon rests in one of the jars. The jars contain a variety of plant materials, including dark seeds, green leaves, orange flowers, and purple blossoms. A semi-transparent dark rectangle with rounded corners is centered over the image, containing the text "Dynamic Dramatic Effective" in white.

Dynamic
Dramatic
Effective



Our culture

Lots of herbs...



But not much
herbalism

A young woman with her hair in a bun, wearing a white tank top and a mustard-colored skirt, stands next to an older woman. The older woman, also with her hair in a bun, wears a colorful floral dress and holds a straw hat. They are both looking down at a plant in a field of tall green grass. A dark, rounded rectangular box is at the top of the image containing the text 'All over the world...'.

All over the world...

Grandma handles
90% of
health issues



Professionals treat
what Grandma
cannot handle

Herbs are not...



Drugs



Drugs



One isolated chemical
Overwhelms one pathway
Side effects

Drugs

A row of orange prescription bottles in a pharmacy. The bottles are lined up on a shelf, with some in the foreground and others blurred in the background. The focus is on the labels of the bottles, which contain various text including phone numbers, dates, and medical instructions. The word 'Drugs' is written in a dark, rounded box at the top center of the image.

Usually synthetic



Herbs




Thousands of chemicals
Broad action



Active constituents
are natural



Most herbs are not just
drug delivery systems



Key Issues:

- Right herb for the condition
- Right herb for the individual
- Right quality
- Right preparation
- Right potency and dose

A wooden mortar and pestle containing dried herbs and a wooden bowl filled with capsules, set against a burlap background. The text "Right herb for the condition" is overlaid in the center.

Right herb for the condition

Physical or mental effect of the herb





Effectors

Boneset
Flu



Normalizers

Hawthorn berry

By herbal property or action

A collection of various dried herbs and spices arranged on a dark blue surface. The herbs include fennel seeds, cardamom pods, bay leaves, and red chili peppers. The background features a colorful, patterned fabric on the left side.

"Antibacterial"
"Carminative"

By body system

A still life composition featuring various herbs, a wooden spoon with pills, and a glass bottle, symbolizing natural and pharmaceutical medicine. In the background, a brass balance scale is visible. The scene is set on a white surface with soft lighting.

Respiratory
Immune



Right herb for the Individual

Chinese aphorism on treatments

"yi bing tong zhi
tong bing yin zhi"

Different diseases, same treatment
Same disease, different treatments

"Its not the disease that the person has that
matters, but the
person who has the disease."



Right herb quality

Quality

Use professional brands

Ask professionals for advice

Refer to professional resources

Journals, websites, blogs

Preparations





Tea

Infusion

Delicate herb parts
(flower, leaf)



Decoction



Tea Advantages

Control of ingredients
No binders, additives, alcohol
Inexpensive
Easily swallowed
Convenient for high dose

Tea Disadvantages

Liquid volume

Taste

Messy

Time consuming

All active ingredients may not be extracted

Spoilage





Tea Comments

Best for mild flavor & actions, large quantities

Amounts (mild herbs):

30-90 grams dry herb per day, brewed (acute)

15-30 g dry herb per day, brewed (chronic)

Usual beverage dose: 1 tsp. dry herb/cup water

Usual teabag wt. is 2 grams

Life: brew, room temperature: 1 day

Brew, strain, refrigerate: 7 days

May brew more dilute, add sweetener/flavor

Tincture





LIQUID HERBAL EXTRACT

MILK THISTLE

Silybum marianum

Pericarp (seed coat)

Promotes Healthy
Liver Function*



HERBAL SUPPLEMENT

1 fluid ounce (29.6 ml)

Tincture

Prepared by maceration
(soaking or percolation)

Generally 1 part herb (weight)
to 5 parts menstruum (volume)
(1:5 strength) (20% strength)

May be 1:4

Put in 1 ounce water or juice to administer





Tincture advantages

Less expensive than capsules
(if packed in large quantity, typical 1 oz.
dropper bottles are most expensive)
Travels well, convenient
Easily swallowed & digested
Fast acting
Never loses potency



Tincture disadvantages

Taste

Requires liquid medium to dilute to
swallow

Possible mess, spills

Alcohol content

All active ingredient may not be
extracted

Necessary dose has strong bad taste



Tincture comments

Tinctures not more potent than other forms

all forms dose dependent

Solvents

alcohol, glycerin ("glycerite"), vinegar
extracts, preserves
for oil soluble ingredients

Std. dose 15 ml (app. 1/2 liquid
ounce)/day

Shelf life: forever (proper conditions)



Bogus amateurish
products

Capsule





Capsule advantages

Entire herb used

No taste

Convenient, travel well

Easy dose count

Long life span (3 yrs)

Capsule disadvantages

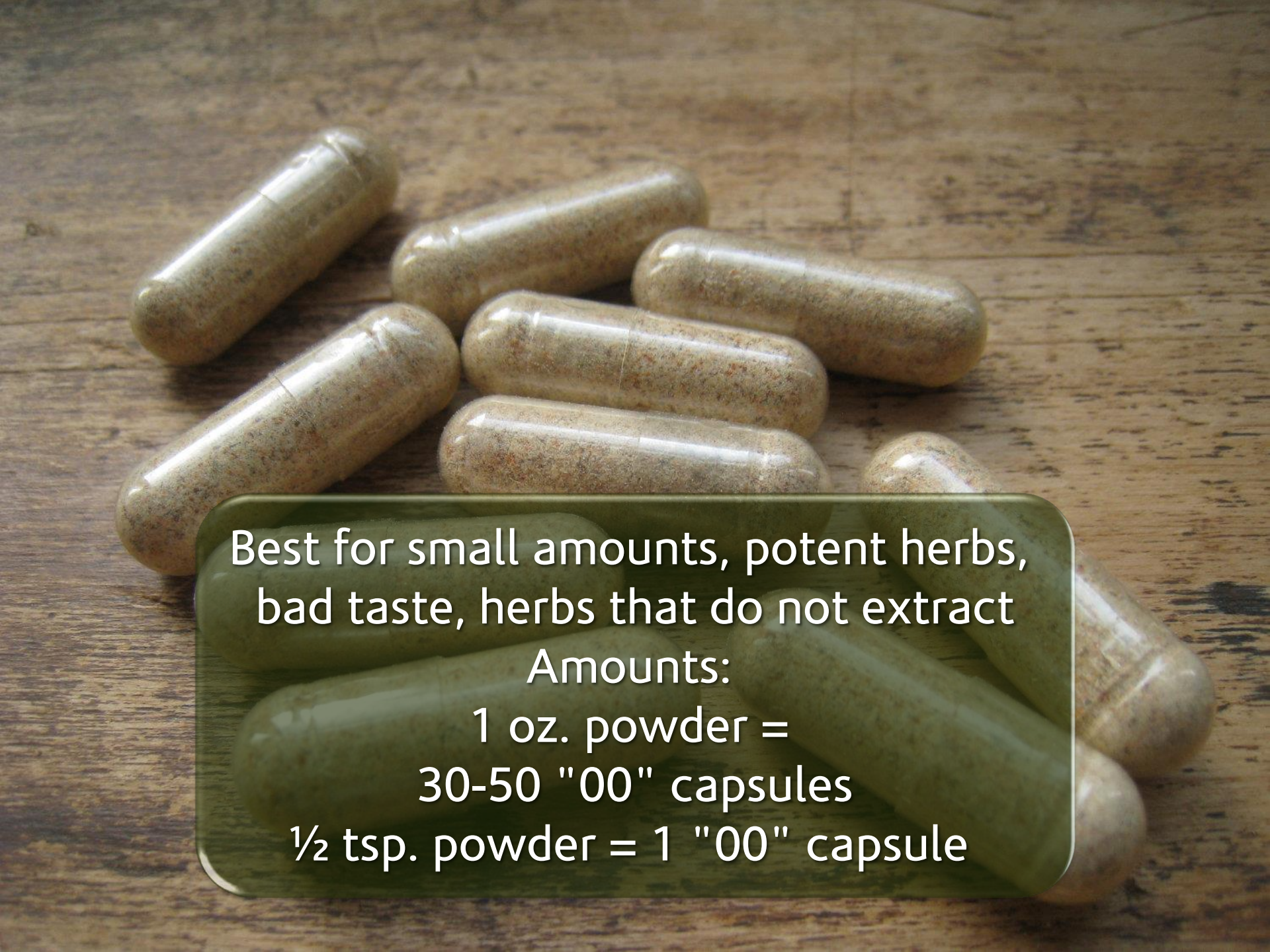
Expensive

Absorbed slowly

Swallowing problems

Digestive difficulty

Little herb per dose

The background of the image shows several tan-colored, cylindrical capsules scattered on a dark, textured wooden surface. The capsules are semi-transparent, revealing a light brown powder inside. They are arranged in a loose cluster, with some lying horizontally and others at slight angles. The lighting is soft, highlighting the texture of the wood and the capsules.

Best for small amounts, potent herbs,
bad taste, herbs that do not extract

Amounts:

1 oz. powder =
30-50 "00" capsules

½ tsp. powder = 1 "00" capsule



A wooden mortar and pestle are shown on a burlap background. The mortar contains a mixture of dried green and yellow herbs. The pestle is filled with several translucent capsules containing small brown beads. A single green leaf is placed on top of the capsules. A semi-transparent rectangular box with rounded corners is centered over the image, containing the text "Right dose" in white.

Right dose



Doses

ESTD:1956



രാഘവ ആയുർവേദിക ഫാർമസി (റഗ്ഗി)

DE.NO:47/25/01

RAGHAVA AYURVEDIC PHARMACY (REGD.)

T.C. ROAD - H.O. THALASSERY. PHONE.2320322 - (FAC) 2352544

Ragpakala TV

Pharmacological

Chinese and Ayurvedic medicine

Often for long periods

Modifications to reduce side effects

Label dose is not
the real dose



The background image is a collage of various pharmaceutical forms. At the top center is a large, yellow, spherical pill. Below it, a semi-transparent grey box contains the word 'Preparations' in white. To the right of the box are several brown, cylindrical capsules. In the bottom left corner is a small pile of brown, granular powder. The entire scene is set against a light, textured background.

Preparations

Tea dose



Pharmacological

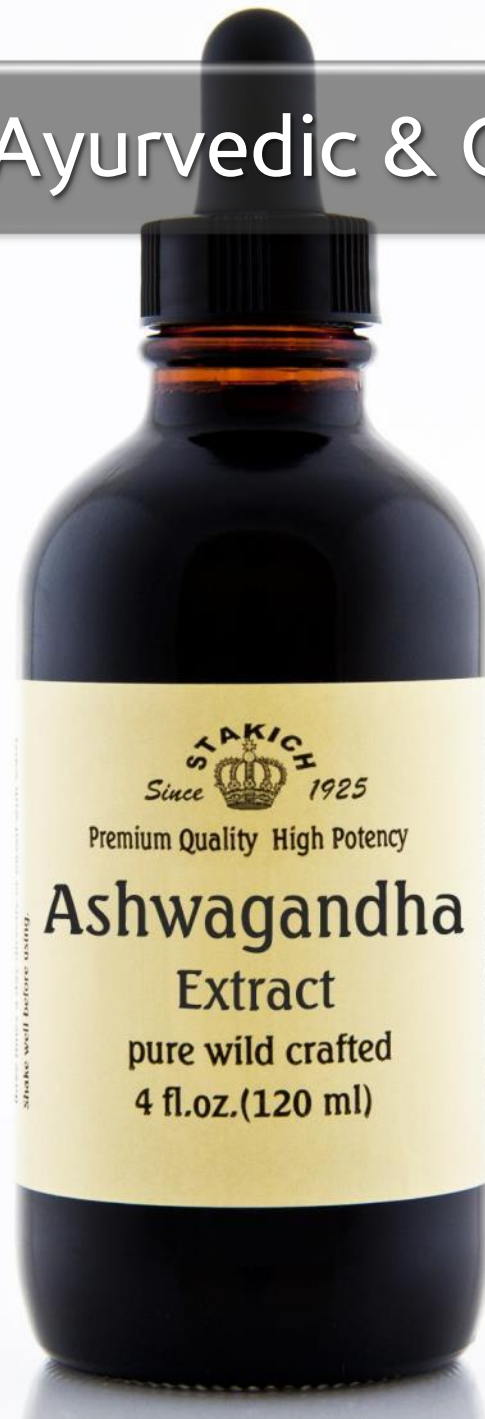
Dr. Suresh Kumar:

Standard daily dose of typical Ayurvedic decoction is 60 g crude herb, decocted, administered twice or thrice per day

Pharmacological

However, experience shows Indian dose is too high for good compliance by Westerners, so amount can be reduced to 15 or 30 g

Tinctures for Ayurvedic & Chinese herbs?



Never tinctured
before in history





Ayurveda



Mainly mixed
powders



Chinese


Decoctions
Mild herbs
Long simmer
High dose



Use traditional
preparations until
validated



Dose examples

The background of the slide is a close-up photograph of Centella asiatica (Gotu kola) leaves. The leaves are bright green, rounded, and have a prominent network of veins. Several small, clear water droplets are visible on the leaf surfaces, particularly on the right side. A semi-transparent green rectangular box with rounded corners is centered over the image, containing the text.

Centella

Premier herb in Global herbalism

A close-up photograph of a large pile of fresh Gotu kola leaves. The leaves are bright green, heart-shaped with deeply lobed or serrated margins, and have prominent veins. They are piled together in a silver-colored metal bowl. A green, rounded rectangular label with the text "Gotu kola" is overlaid on the top center of the image.

Gotu kola

A pile of dried, crushed Gotu kola leaves and stems is shown on a wooden surface. The plant material is green and brown, with some stems showing a reddish-brown hue. A green oval label with the text "Gotu kola" is positioned above the pile.

Gotu kola

Tea

A glass bottle of golden-brown Gotu kola tea, a small white bowl of dried Gotu kola leaves, and a sprig of fresh Gotu kola on a wooden slice.

Gotu kola

60 grams
As tea

Vital Force

The Inner Healing Power of the Body

Inherent body healing wisdom

Listen to and read the Vital Force to guide
the client to health

Symptoms

The body produces symptoms for a reason
Suppressing symptoms does not bring cure

The body has a healing priority order

Vital Force prioritizes health and recovery

Survival priority order

Some symptoms respond to treatment quickly

Constipation

Anemia

Pain

Gastritis (heartburn)

Cold & flu

Bacterial infection

Some symptoms long-term approach

Fatigue

Inflammatory skin disease

(dermatitis, adult acne)

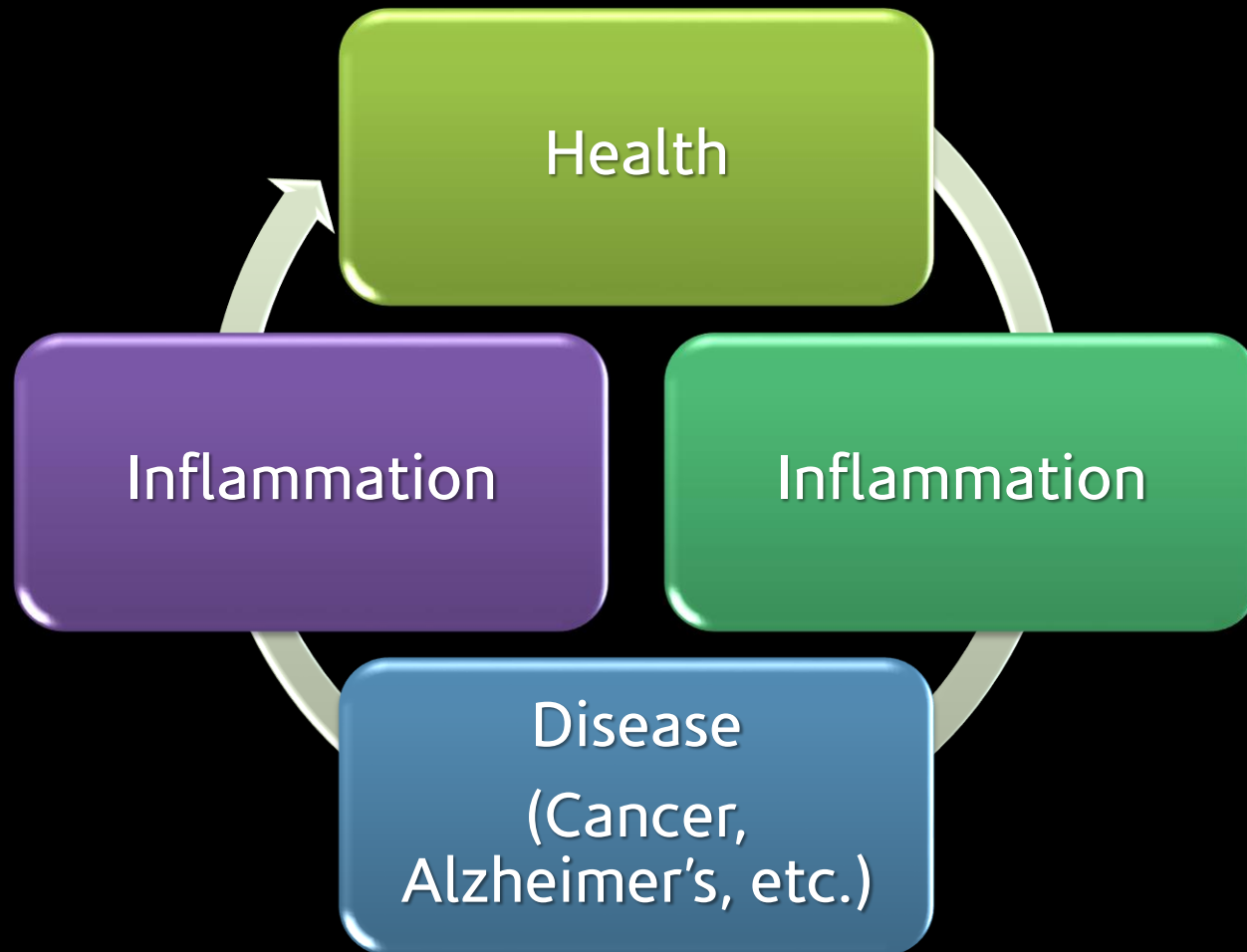
Chronic degenerative conditions

(arthritis, diabetes)

Eyesight

Cataracts

Inflammation and disease



Hering's Law

Constantine Hering
Founder,
Homeopathic Medical
College of Pennsylvania



Hering's Law

"Cure proceeds from above downward, from within outward, from the most important organs to least important organs and in the reverse order of appearance of symptoms."

Symptoms as body responses

Symptoms are manifestations of necessary body responses

Based on:

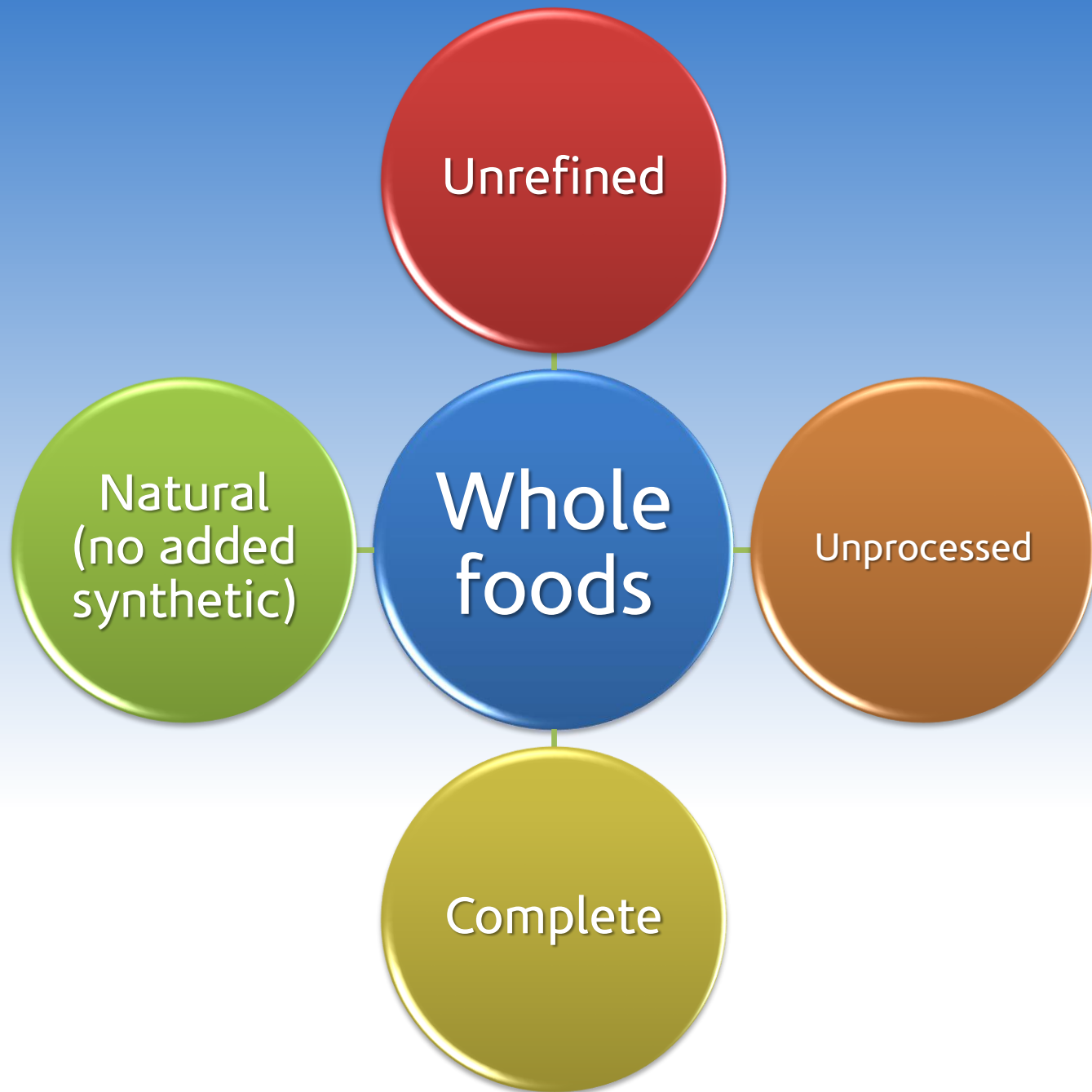
- Genetic predisposition
- Emotional and physical environment
- Stress level
- Diet
- Lifestyle and habits

A top-down view of a white ceramic bowl filled with oatmeal. The oatmeal is topped with sliced fruit, possibly apples or pears, and a dusting of brown powder, likely cinnamon. A silver spoon is placed to the right of the bowl, resting on a light-colored bamboo placemat. A semi-transparent brown rectangular box with rounded corners is centered over the bowl, containing the text "Whole Foods" in white.

Whole Foods

"If it came from a plant, eat it; if it was made in a plant, don't."

Michael Pollan



Whole Foods

Nutrient dense

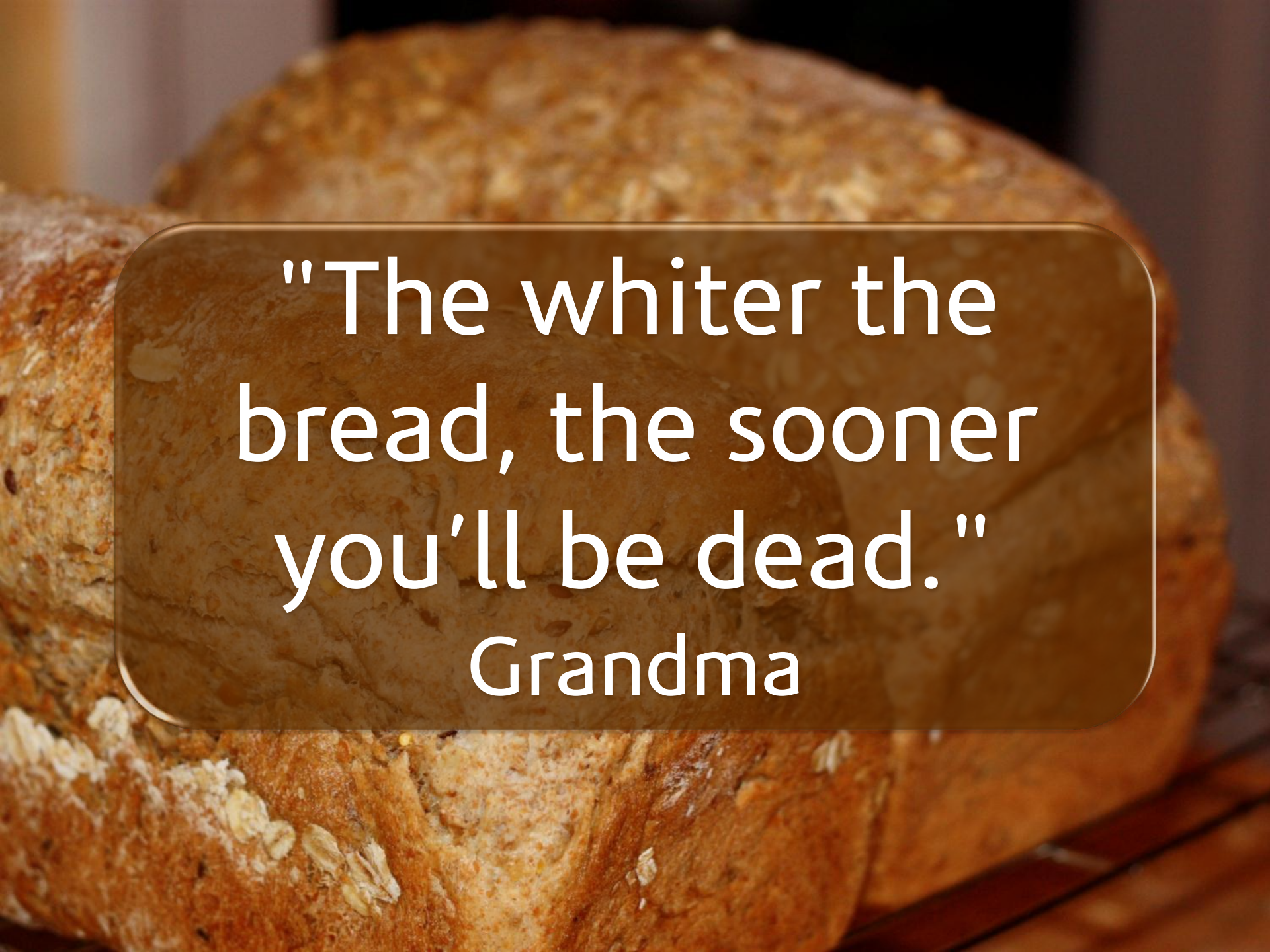
Fiber rich

Eliminate artificial flavors, colors, preservatives,
sweeteners and hydrogenated fats

Cook.

"Cooking for yourself is the only sure way to take back control of your diet from the food scientists and food processors."

Michael Pollan



"The whiter the
bread, the sooner
you'll be dead."

Grandma

A photograph of a loaf of whole grain bread, heavily seeded with various grains like flax, sunflower, and sesame seeds. The bread is sliced, revealing a dense, light-colored interior. It sits on a rustic wooden surface. In the foreground, several stalks of wheat are laid out. The background is dark and out of focus.

Whole grain bread is whole
but not unprocessed

Processed & Refined



Whole, Natural, Unprocessed



Natural



Not Unprocessed
Not Whole



Brown rice

A close-up photograph of a light blue ceramic bowl filled with cooked whole grain rice. The rice grains are long and slightly irregular, with a mix of white and light brown/tan colors. The bowl has a rustic, speckled appearance. In the background, another similar bowl is partially visible, and the surface appears to be a wooden table.

Whole

Natural
Cooked

Unprocessed (??)



Lentil

Whole, Natural, Unprocessed



Processed
Unrefined



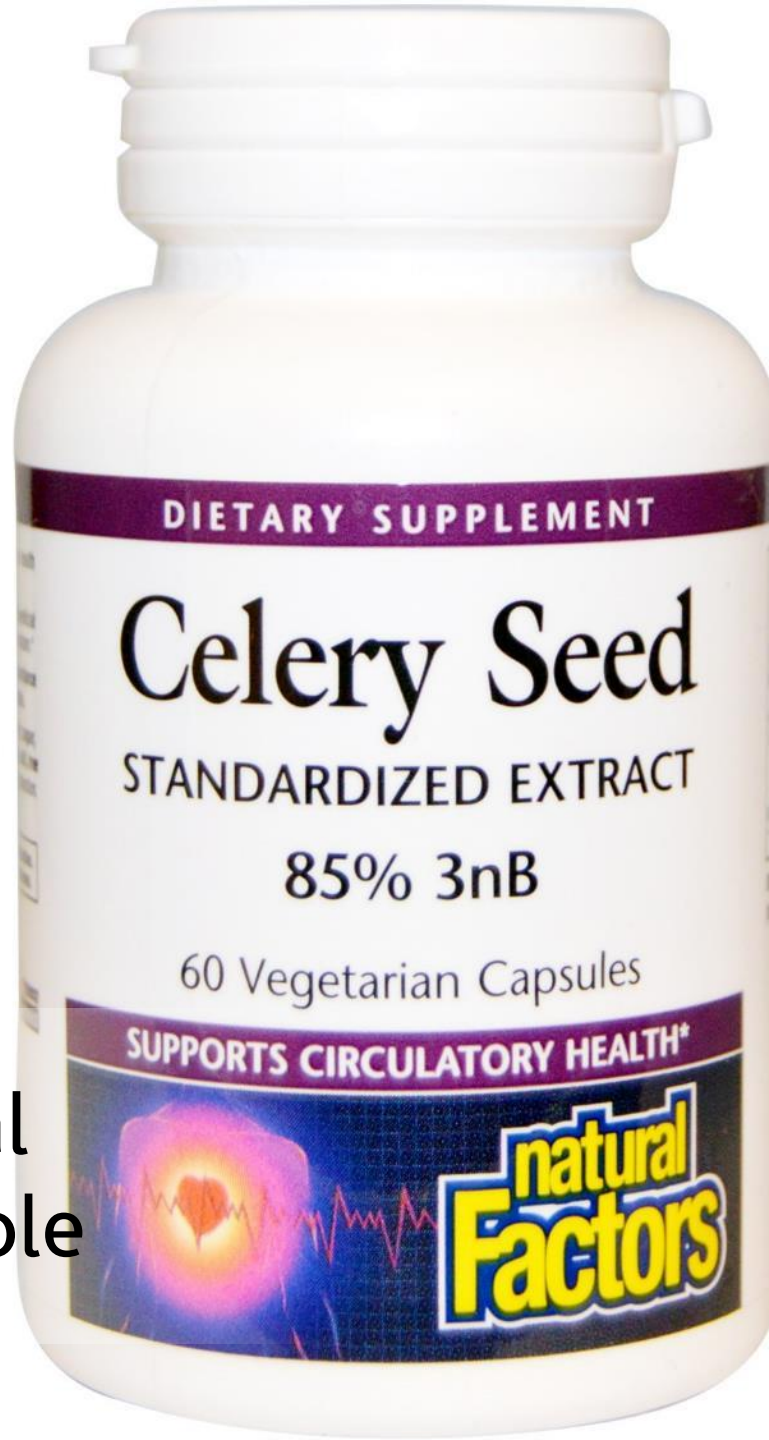


Synthetic



Natural

Natural
Not whole





Natural
Whole



Natural
Not whole



Whole Herb Advantages

All constituents intact

Not processed

Less expensive for same result
(usually)

Whole Herb Disadvantages

Higher dose (usually)

Taste, Mess

Possible digestive stress

Herb Extract Advantages

Lower dose (usually)

Guaranteed constituent %

Targeted effect

Herb Extract Disadvantages

Limited constituents

Processed

More expensive for same
result (usually)



Nutrient Content

Research: many vegetables lost significant nutritional value

1950

3 ½ oz. string beans

9% of daily calcium

1999

3 ½ oz. string beans

5% of daily calcium (43% drop)

2004

Donald Davis, University of Texas at Austin

USDA data on vegetable nutrients 1950 to 1999

Notable decreases key nutrients

Calcium

Iron

Phosphorus

Riboflavin

Ascorbic acid

Reason? Breeding high yield varieties

50 years producing crops varieties yield more
Ignoring effects on nutrient content

Davis cites studies that compared high-yield varieties to non-high-yield varieties, same soil & growing conditions

Found decreased nutrient content
in high-yield

Are Vegetables Losing Nutrients?

Why you might want to eat more spinach than your grandparents did.

Calcium

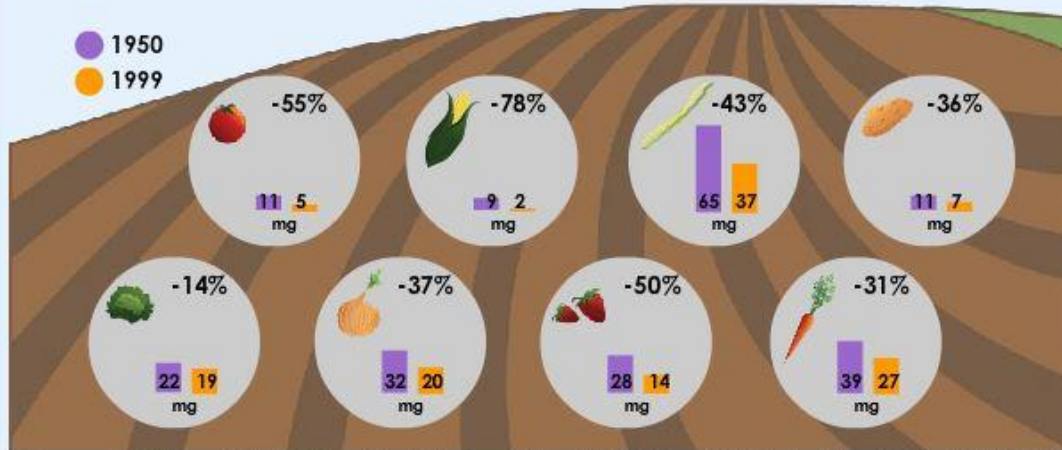
Iron

Phosphorus

Riboflavin

Ascorbic Acid

Most of the calcium in your body - about 99 percent - is in your bones and teeth. The other one percent is used to help veins contract and expand, move muscles, transmit nerves and secrete hormones. Your body needs vitamin D in order to absorb calcium. Dairy products such as yogurt, milk and cheese are good sources of calcium, and vegetables such as spinach and kale also have a lot. The daily recommended value ranges from 700 mgs a day for kids to 1300 mgs a day for teenagers and seniors. Half a cup of cooked spinach has 120 mgs of calcium.



Data source: Davis D: Changes in USDA Food Composition Data for 43 Garden Crops, 1950 to 1999. Journal of the American College of Nutrition 23:6:669-682, 2004.

Are Vegetables Losing Nutrients?

Why you might want to eat more spinach than your grandparents did.

Calcium

Iron

Phosphorus

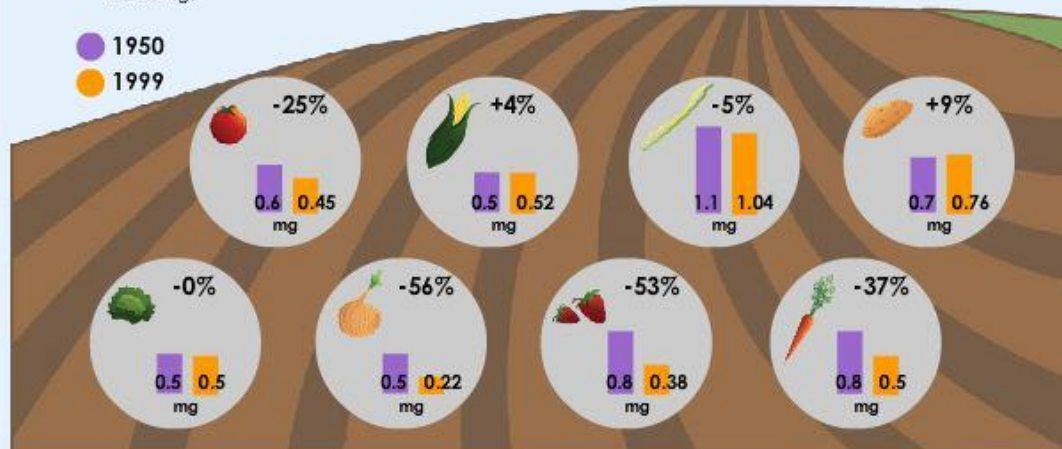
Riboflavin

Ascorbic Acid

Iron helps transport oxygen throughout your body, and not getting enough iron can make you feel tired and fuzzy-headed. An iron deficiency (anemia) can cause you to get sick more easily. Most iron is in the blood. Meat sources are the easiest way to get iron, but significant amounts can also be found in soy beans, lentils, spinach and fortified cereals. Nutritionists recommend that teenagers and menstruating women get 18 mgs of iron per day, and others a minimum of 7 mgs. Three and a half ounces of cooked chicken liver has 12.8 mgs of iron, and a cup of boiled lentils has 6.6 mgs.

1950

1999



Data source: Davis D: Changes in USDA Food Composition Data for 43 Garden Crops, 1950 to 1999. Journal of the American College of Nutrition 23:6:689-682, 2004.

Are Vegetables Losing Nutrients?

Why you might want to eat more spinach than your grandparents did.

Calcium

Iron

Phosphorus

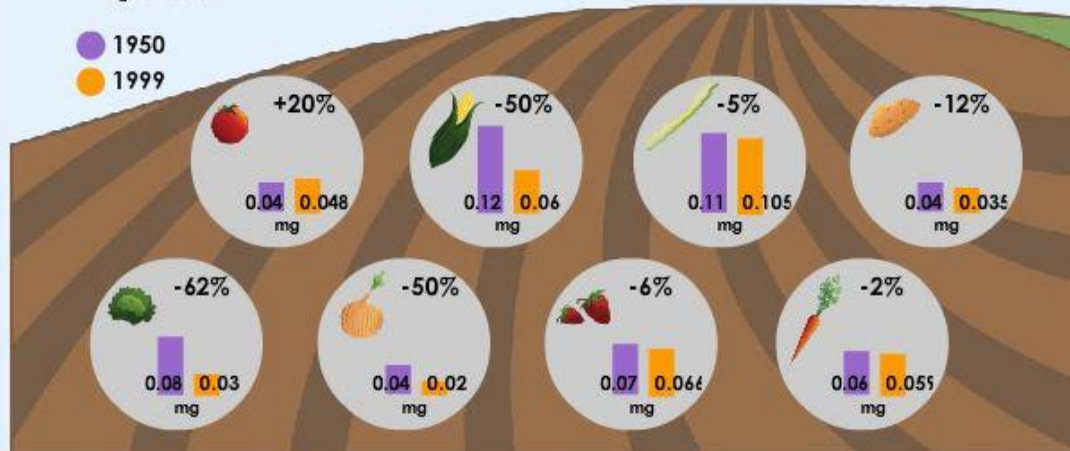
Riboflavin

Ascorbic Acid

Riboflavin is also known as vitamin B2. It is important for helping to metabolize fats, carbohydrates and proteins in the body so that we can use them beneficially. Not getting enough riboflavin could cause a person to have cracked and red lips, cracks at the corners of the mouth, a sore throat, dry and scaling skin and iron-deficiency. Asparagus, popcorn, bananas, persimmons, okra, leafy greens, milk, yogurt, meat, eggs and fish are all good sources of riboflavin. Nutritionists recommend adults get about 1.3 mgs a day of riboflavin. A cup of cooked spinach has 0.42 mgs of riboflavin.

1950

1999



Data source: Davis D: Changes in USDA Food Composition Data for 43 Garden Crops, 1950 to 1999. Journal of the American College of Nutrition 23:6:669-682, 2004.

Are Vegetables Losing Nutrients?

Why you might want to eat more spinach than your grandparents did.

Calcium

Iron

Phosphorus

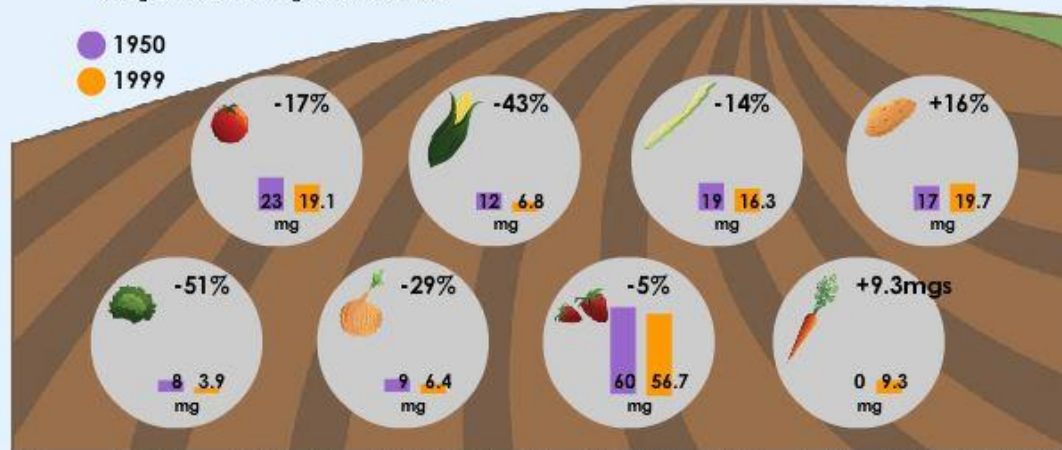
Riboflavin

Ascorbic
Acid

Ascorbic acid is a form of vitamin C and a required part of a human diet. It helps the body make and repair skin, cartilage and tendons and maintain bones and teeth. Severe vitamin C deficiency, scurvy, can cause lethargy, spots on the skin, weakened gums and tooth loss. Less extreme deficiency can cause dry hair and skin, gingivitis, easy bruising and decreased ability to heal wounds. Good sources of vitamin C are oranges, watermelon, strawberries, broccoli, tomatoes and leafy greens. Nutritionists recommend adults get 75-90 mgs of vitamin C a day. A medium size orange has about 63 milligrams of vitamin C.

● 1950

● 1999



Data source: Davis D: Changes in USDA Food Composition Data for 43 Garden Crops, 1950 to 1999. Journal of the American College of Nutrition 23:6:669-682, 2004.

HOW HEALTHY ARE YOUR VEGETABLES?

	Days from field to plate	Typical nutrient loss
Green beans	11-15	45%
Broccoli & Cauliflower	6-16	25%
Garden peas	8-10	15%
Carrots	9-10	10%

Data is based on average losses
and key vitamins only



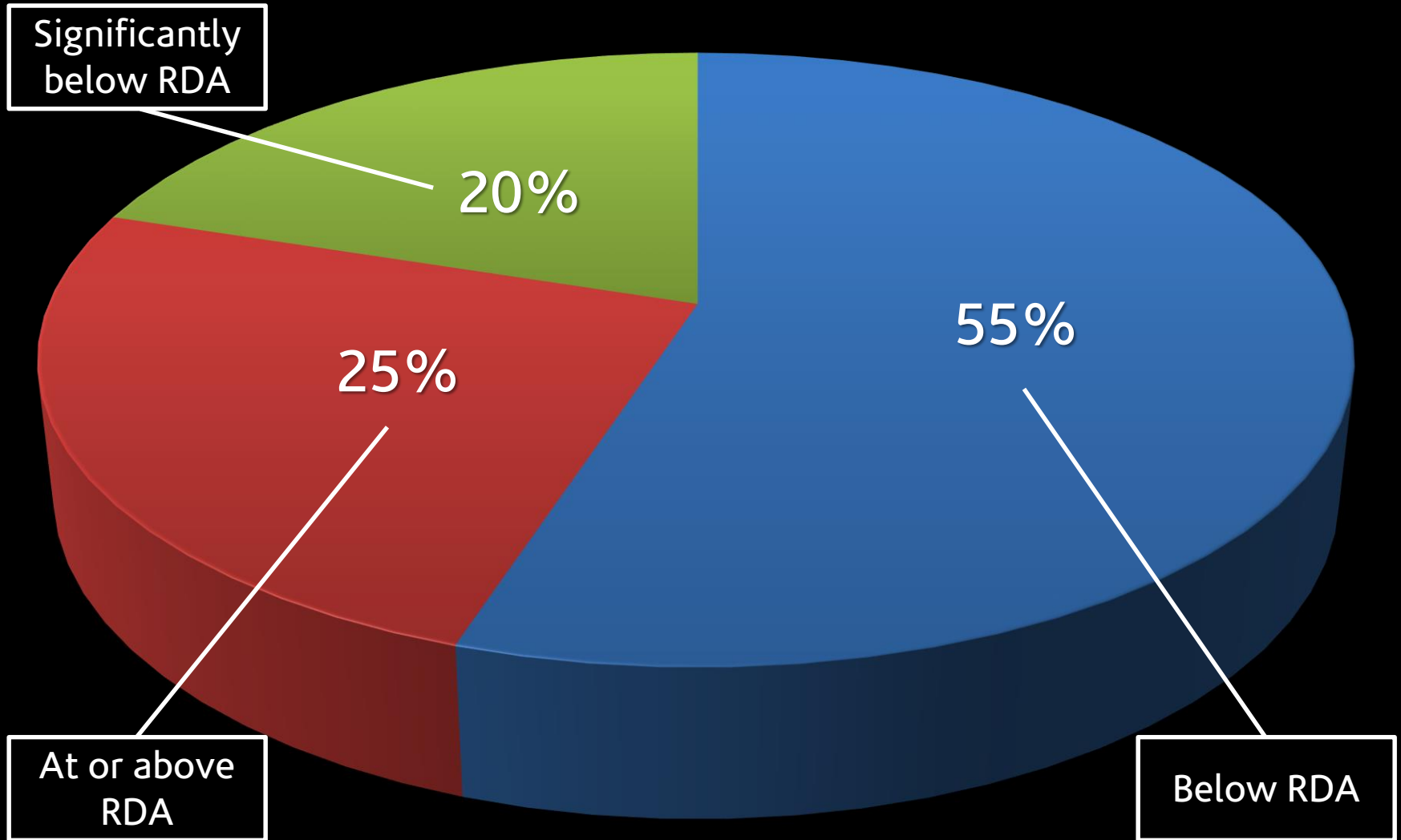
Magnesium

Most common nutritional deficiency in US
(after vitamin D)

Magnesium content in foods varies widely,
as does the soil content of magnesium

U.S. Magnesium Intake

Percent U.S. population ingesting RDA



Magnesium

Some studies

90-95% U.S. population deficient

Most American adults

not get RDA 400-500 mg

"It is highly regrettable that the deficiency of such an inexpensive, low-toxicity nutrient results in diseases that cause incalculable suffering and expense throughout the world."

Tong, GM and RK Rude. 2005. Magnesium deficiency in critical illness. J Intensive Care Med 20 (1):3-17. Review.

Deficiency signs

Muscle cramps or twitches

Insomnia

Irritability

Sensitivity to loud noises

Anxiety

Autism

ADD

Palpitations

Angina

Constipation

Anal spasms

Headaches

Migraines

Fibromyalgia

Chronic fatigue

Asthma

Kidney stones

Diabetes

Obesity

Osteoporosis

High blood pressure

PMS

Menstrual cramps

Irritable bladder

Irritable bowel syndrome

Reflux

Trouble swallowing

Inflammation

High CRP levels

Vitamin D

85% Americans
deficient

Vitamin D

Pacific Northwest 95%



It may take longer
than you expect

Timing

Many experts estimate
One month recovery
for each year of symptoms

Main objectives

Fill the micronutrient tanks

Detoxify

Resolve current symptoms if possible

Support basic tissues and function

Plan for the future

Anti-aging

Nutrient Pharmacology





Isolated nutrients target specific conditions,
usually in exceptionally large doses
Most dietary supplement therapy
"Nutrient pharmacology"

Also known as...

Orthomolecular medicine

Orthomolecular psychiatry

"ortho" = correct ("orthodox")

Orthomolecular medicine



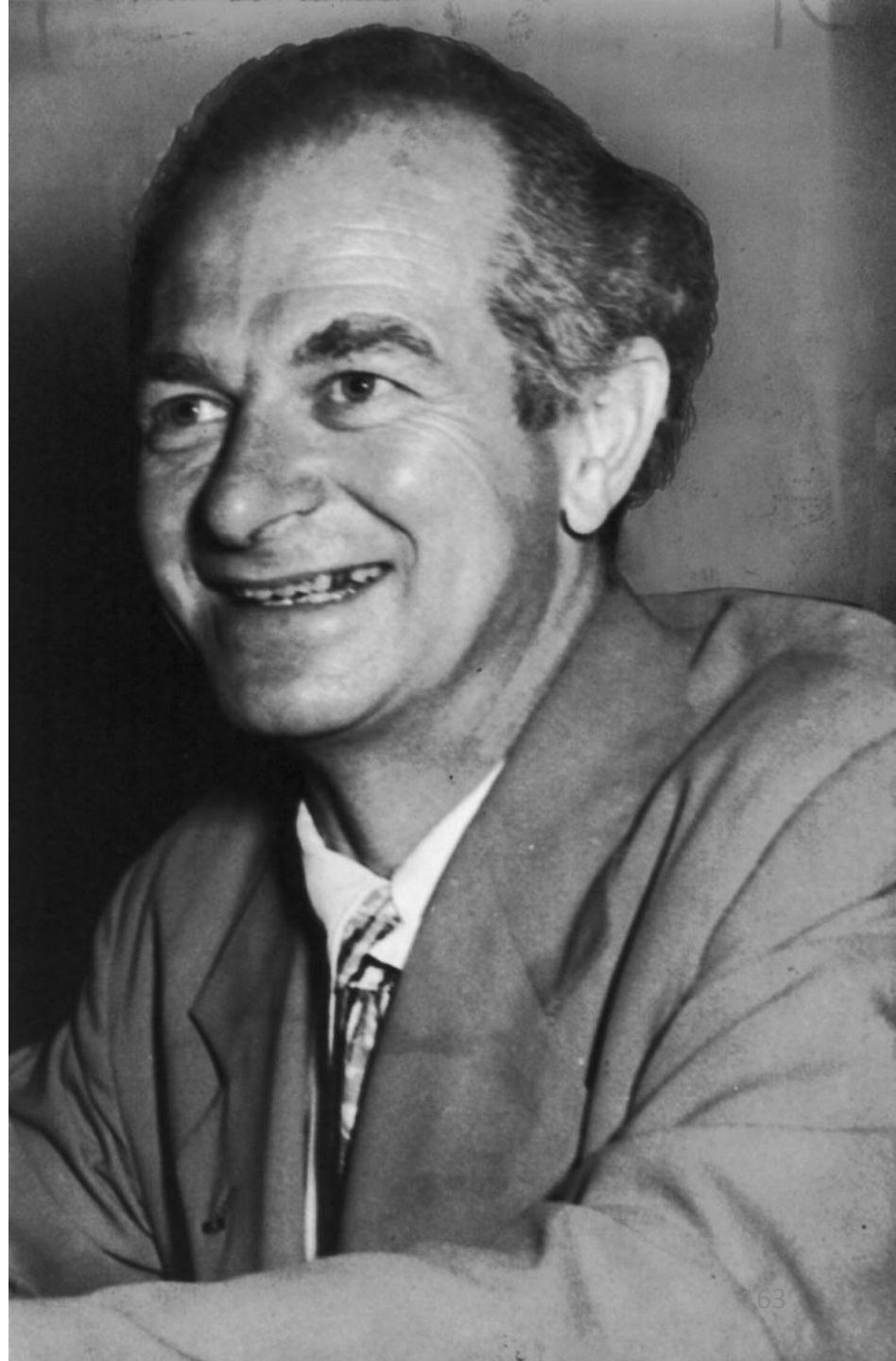
Term "orthomolecular"
coined by Linus Pauling

A portrait of Linus Pauling, an elderly man with white hair, wearing a dark suit, white shirt, and dark tie. He is also wearing a dark beret. He is sitting at a desk, holding a pen in his right hand and a calculator in his left hand. He is looking directly at the camera with a slight smile. The background is a plain, light-colored wall.

Linus Pauling

"the right molecules in the
right amounts"
(ortho is Greek for "right")

Linus Pauling
Born in Portland, OR





Oregon State University

Orthomolecular medicine

Form of CAM

Maintain health & prevent or treat disease by optimizing nutritional intake and/or supplements

Also called megavitamin therapy

Doses of vitamins/minerals many much higher than Dietary Reference Intake

Also:

Dietary adjustment

Megadoses of non-vitamin nutrients
(ex. Lipoic acid)

Drugs

Non-optimal nutrient levels cause health issues beyond simple deficiency

Involves:

- individual biochemical variation

- inborn errors of metabolism

Orthomolecular psychiatry

Orthomolecular medicine for mental illness

1950s Psychiatrist Abram Hoffer

acute schizophrenic episodes

high doses of niacin



ORTHOMOLECULAR MEDICINE FOR EVERYONE

*Megavitamin Therapeutics
for Families and Physicians*

- The basics of orthomolecular medicine explained
 - 5 simple rules for healthy eating
 - How to take vitamins, minerals, and other nutrients in optimum doses
- Megavitamin therapy for arthritis, cancer, behavioral problems, and many other conditions

**Abram Hoffer, MD, PhD,
and Andrew W. Saul, PhD**

Carl Pfeiffer

Carl Curt Pfeiffer, M.D., Ph.D. (1908–1988)

Biochemist

Chair, Pharmacology Dept Emory University

Researched schizophrenia, allergies

interested in trace element & mineral
metabolism, amino acids

Schizophrenia, bipolar disorder

Functional medicine

Identify and address
the root causes of disease

Functional medicine

Treatments and drugs that may not have
clinical research evidence

homeopathy

orthomolecular medicine

detoxification

Functional medicine

"Diet, nutrition, and exposure to environmental toxins play central roles in functional medicine because they may predispose to illness, provoke symptoms, and modulate the activity of biochemical mediators through a complex and diverse set of mechanisms."



Jeffrey Bland, PhD
Institute for Functional Medicine

GENETIC NUTRITIONEERING

*How You Can Modify Inherited Traits
and Live a Longer, Healthier Life*

- Is All Disease Inherited?
- How Can Food and Nutrients Improve Gene Expression?
- Can We Reprogram Our Genes?

JEFFREY S. BLAND, Ph.D.
WITH SARA H. BENUM, M.A.

Copyrighted Material



Deficiency
Symptoms

Optimal
Wellness

Nutrient
Pharmacology

Vitamin D

Deficiency
Symptoms

Optimal
Wellness

Nutrient
Pharmacology

2 ng/ml
Rickets

75 ng/ml
Physiological
Level

100 ng/ml
Cancer
Autism

Death

Optimal
health

Diagnosed
pathology
Clinical
disease

Defined
disease
Early stages
Nonspecific
functional
defects

Chronic
complaints
Reduced
function
Impairment
of
biochemical
functions

Some loss of
function
Age-related
decline
Subclinical
insufficiency

Optimal
tissue levels

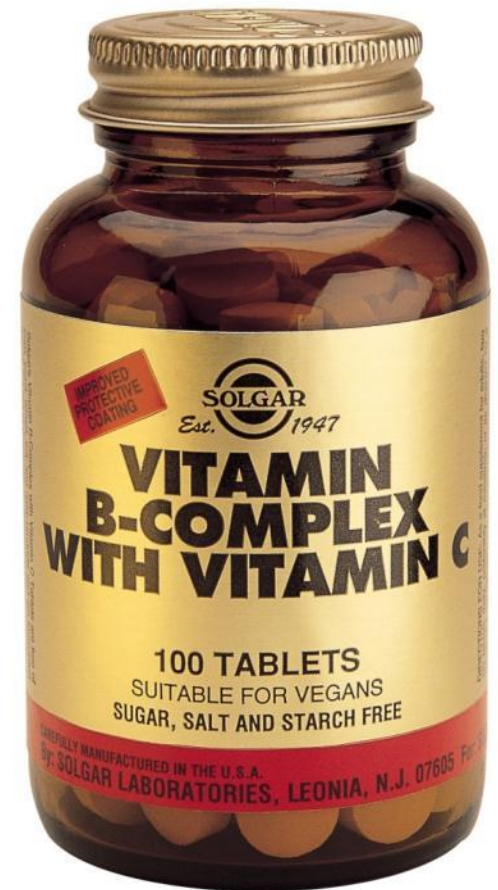
Nutrient Pharmacology For Disease

Vitamin A

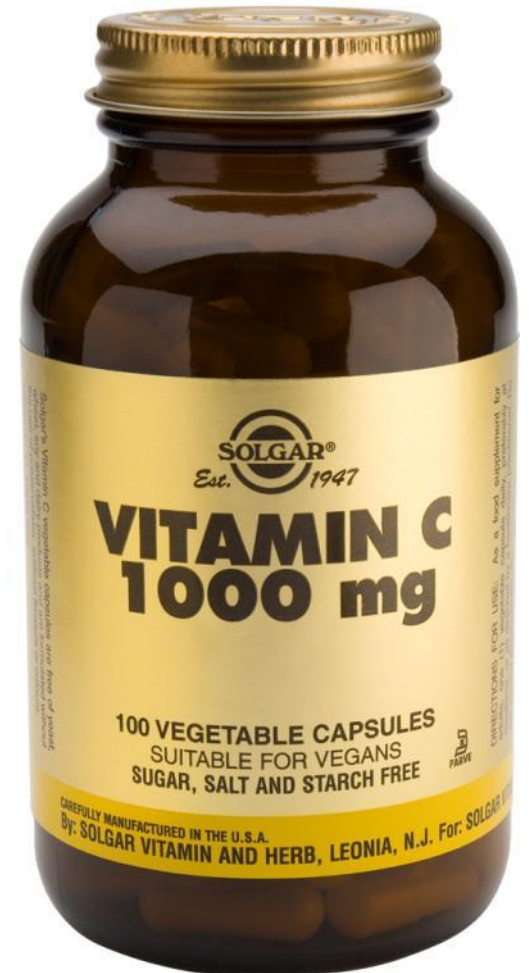


Psoriasis
Warts

Vitamin B, individual
and complex
almost all
applications



Vitamin C
detox, immune,
asthma



Vitamin E

burns, injuries, scars



Lysine Virus



Tryptophan

Sleep



L-Tyrosine

Fatigue



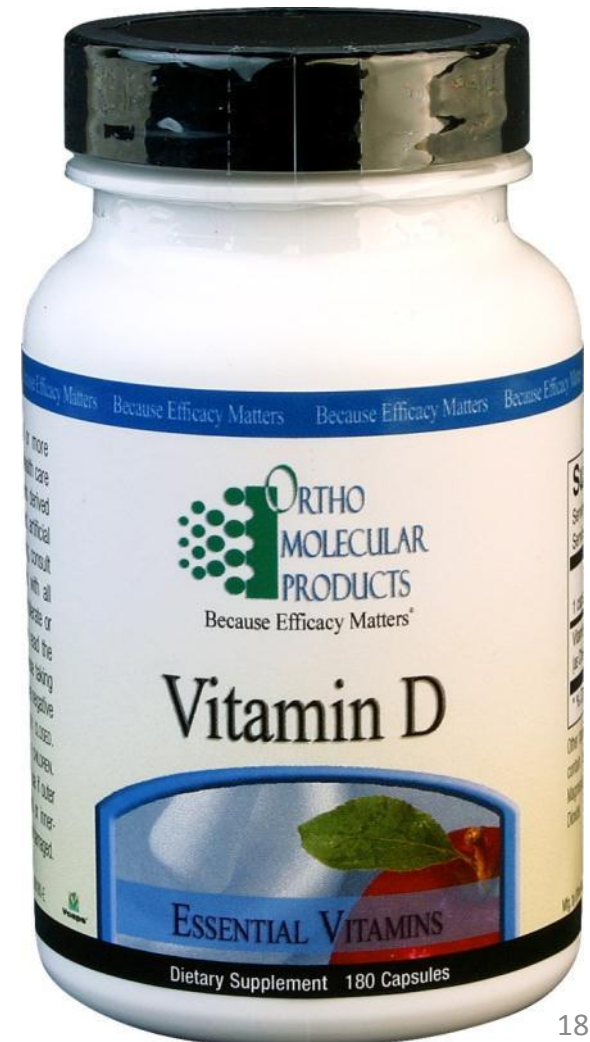
Quercetin

Inflammation



Vitamin D

What is proper level?



Herb therapy

A photograph of a wooden tray filled with various dried herbs and spices, organized into compartments. The herbs include cinnamon sticks, dried rose petals, dark red dried flowers, white crystalline substances, blue and yellow dried fruits, dark brown dried roots, and various other dried plant materials. In the background, there are jars of honey and other products.

Different (not isolated substances)
Largely nontoxic pharmacology

Food therapy

1. Aggressive targeted
2. Long-term lifestyle diet

Cleansing Diets



Fasting and Monodiet



No strict water fasting



Body thinks it's starving



Same diet every day



Reduces complications
Allows digestion to rest



Monodiets

Less stressful

than water fasting

Gives digestion a break

Adjust for condition of patient

Monodiets

Still provides some calories for energy

Vegetables better than fruit (blood sugar)

Easy to manage

Boring

Types

Mung beans and rice

Vegetables and rice

Raw green vegetables

Melons



Water
Lemon/Honey, etc.



Juices






Concentrate nutrients



Detoxify wastes



NIMMA MANE 

RE



Vegetable juices



A top-down view of a bowl filled with fresh vegetables. Several bright orange carrots with green leafy tops are prominent. There are also green squash, some with dark green stripes, and several large, ripe red tomatoes. A whole purple onion is visible at the bottom. The vegetables are resting on a light-colored wooden surface.

Foods for life

THE TONIC LIFE

The Tonic Life

Building

Balancing

Broad spectrum

Energy

Sexual function

Immune

The Tonic Life

Tonic Herbs

Tonic Food

Tonic Supplements

Tonic Sleep

Tonic Exercise

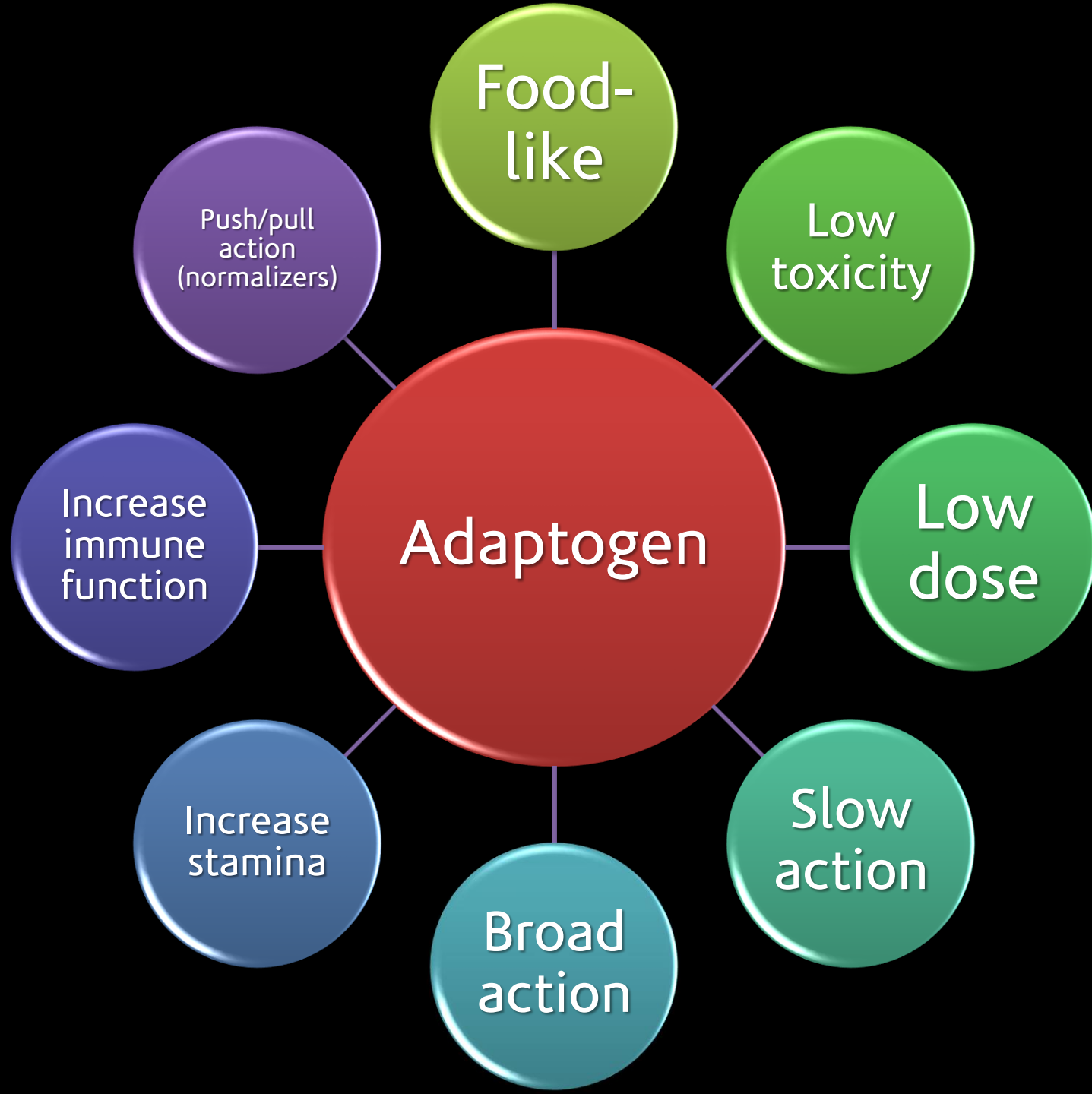
Tonic herbs



Every other culture



**TONIC =
ADAPTOGEN**



Adaptogens

Food-like

Low toxicity

Low dose

Slow action

Broad action for every system

Increase stamina

Increase immune function

Push/pull action (normalizers)

Next steps



A top-down view of a rustic, light-brown ceramic bowl filled with creamy hummus. The hummus is drizzled with golden olive oil and garnished with finely chopped green herbs. To the left of the bowl, several fresh vegetables are arranged: a bunch of colorful carrots in shades of orange, yellow, and red, along with stalks of green celery. These are resting on a black and white patterned cloth. In the bottom right corner, a small black dish contains coarse sea salt. The entire scene is set on a light-colored, textured surface.

Kitchen Table Medicine

Use folk medicines

And familiar
kitchen remedies



Rely on
reputable remedies



A woman with brown hair, wearing a white lab coat, is shown from the chest up. She is holding a small, dark brown glass bottle in her left hand and a glass dropper in her right hand. The dropper has a black cap and a clear glass tube with a small amount of yellowish liquid inside. She is looking directly at the camera with a focused expression. The background is plain white.

Know your limits

Use professionals
when needed

