

Fatigue and Hypothyroid: Case Panel

29yo F

Chief concerns:

- | Fatigue
- | Hypothyroid
- | Anxiety and depression

OPQRST

O: "as long as she can recall"

P: improved by feeling part of something she can believe in.

Q: loss of self, grief, empty, constant pull back and forth

S: 10/10 (10 being worst).

Past Medical History

11yo: Graves' dz

13yo: RAI Ablation

14yo: family issues

Therapeutic Order

A Therapeutic Order

- ▶ A therapeutic strategy that seeks first to establish the normal determinants of health and life.
- ▶ Strong treatments with suppressive effects may be used in a harm-reduction strategy if more basic interventions are not possible.
- ▶ Asclepias: "First the Word, then the Herb, and then the Knife"
- ▶ *Nei Jing*: "Once you have resorted to needles and herbs you have already failed."
- ▶ Baghdad Medical Exam (800 AD) "Anyone found to have used a strong herb when a mild herb would do, or a mild herb when dietetics would suffice, or dietetics when a lifestyle change would suffice, shall be disqualified from practicing medicine in the marketplace. "



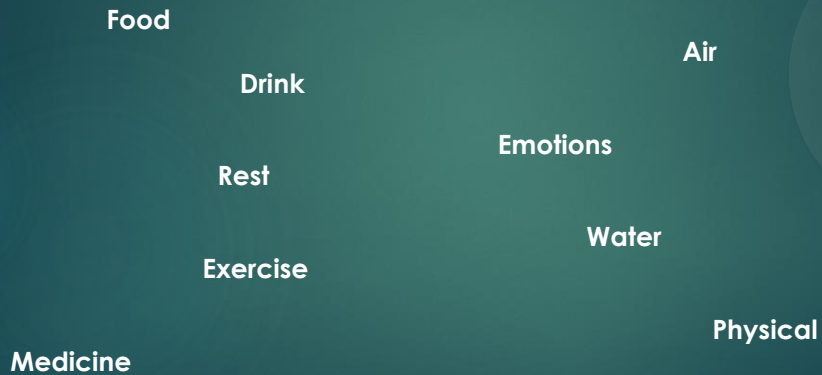
"A Hierarchy of Healing: The Therapeutic Order." Zeff J. and Snider P.

The six fundamental principles of modern naturopathic medicine

The Healing Power of Nature

- ▶ Trust in the body's inherent wisdom to heal itself.
- ▶ ***Identify and Treat the Causes***
- ▶ Look beyond the symptoms to the underlying cause.
- ▶ ***First Do No Harm***
- ▶ Utilize the most natural, least invasive and least toxic therapies.
- ▶ ***Doctor as Teacher***
- ▶ Educate patients in the steps to achieving and maintaining health.
- ▶ ***Treat the Whole Person***
- ▶ View the body as an integrated whole in all its physical and spiritual dimensions.
- ▶ ***Prevention***
- ▶ Focus on overall health, wellness and disease prevention.

Classical Regimen of the Ancients The determinants of health



Herbs and regimen

- ▶ Herbs may be used to treat the end stages of poor regimen, to mask the consequences. They may be used
- ▶ Or, herbs may be used to support the determinants of life:
 - ▶ As food
 - ▶ As drink
 - ▶ To support rest
 - ▶ To support emotional balance
 - ▶ To purify the air

Botanicals and the Therapeutic Order



Concentrated forms or pharmaceutical drugs

Strong forms or doses to alter or suppress natural function

Herbs in support of bodywork

Moderate doses or herbs to support Normal function or lifestyle

Lower Dose herbs, homeopathy, flower essences

Nutritive herbs

Cure disease

Less likely to do harm; more likely to produce permanent cure



Treat symptoms

More likely to produce side effects, tolerance, dependence, withdrawal or rebound effects, or permanent harm. Chronic suppression of acute symptoms results in chronic disease

▶Edward Bach

“In correct healing nothing must be used that relieves the patient of their own responsibility, but such means only must be adopted that help them overcome their faults.

▶Henry Lindlahr:

Question: “Why don’t more people use your methods if they work so well? Reply: “Because they require a degree of self-mastery and most people don’t want that.”



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Herbs as Nutrition

Experience at NAIMH clinics

- ▶ Student experiences in first weeks of school
- ▶ “Quart a day” herbal tea strategy
- ▶ Ongoing NAIMH “style” over the years.
- ▶ May substitute for soft drinks.

Nutrition vs. herbs in healing

- ▶ In every era of human history, except the past 150 years, an herbalist was first a dietician, and then an herbalist.
- ▶ Setting the basics of life in order, including the nutrition, is the foundation of *healing* (as opposed to *treating* by the book.)
- ▶ Using herbs for their *nutritive* role (as opposed to *pharmacological*) is a fundamental pillar of healing.

Nutrients and the role of herbs

- ▶ Protein
 - ▶ Fats
 - ▶ Metabolic carbs
 - ▶ Non-metabolic carbs
 - ▶ Vitamins
 - ▶ Macrominerals
 - ▶ Trace Elements

 - ▶ Flavonoid/antioxidant
- ▶ No contribution
 - ▶ No contribution
 - ▶ No contribution
 - ▶ Roots of some herbs
 - ▶ Some food-like herbs
 - ▶ Significant contribution
 - ▶ Contribution significant to critical
 - ▶ Significant contribution

Non-metabolic carbohydrates

- ▶ Indigestible fibers provide food for microbiome.
- ▶ Include starches, polysaccharides, inulin, pectin, mucilage
- ▶ Microbiome metabolizes these to short-chain fatty acids (SFCA)
- ▶ SFCA in humans provide about 10% of caloric needs.
- ▶ SFCA also have regulating role on immunity, insulin resistance, glycemic control, etc.

Herbs containing Inulin

- ▶ *Arctium lappa* (Burdock) 50% of root weight
- ▶ *Inula helenium* (Elecampane) 40% of weight
- ▶ *Taraxacum officinale* (Dandelion) 25% weight
- ▶ Of these, only *Arctium* is mild enough to consume as food without strong medicinal effects.
- ▶ Japanese *gobo root* is a cultivated variety
- ▶ *Arctium* root powder is mildly sweet (not bitter). It can be consumed as a teaspoon to a tablespoon sprinkled on or in food at meals.
- ▶ Specifically feeds a segment of friendly bacteria. *Lactobacillus* and *Bifidobacter*.

Minerals and Trace elements

- ▶ Critical roles in structures and also as rate-limiting enzymes for thousands of processes in the body. See examples:
- ▶ Copper and silicon are necessary for cross-linkages of collagen and elastin in connective tissue
- ▶ Boron is essential to bone metabolism and insulin function
- ▶ Chromium essential to insulin function
- ▶ Example: lithium essential to emotional balance.

21st Century crisis in mineral nutrition

The depletion of soil minerals

- ▶ Primeval top soils are rich with minerals pulled from deep below & deposited on top.
- ▶ Agricultural foods draw the minerals up.
- ▶ Plant material removed from the system removes the mineral content.
- ▶ In the absence of remineralization of the soil through fertilizers, the average soil will not be able to produce food after about ten years.
- ▶ Each crop over that ten years contains less mineral nutrition than the one before it.

- ▶ Traditional farmers developed ways of recycling nutrients to the soil.
- ▶ Wild plants, seaweeds, animal bones, etc, return the full spectrum of minerals and trace elements
- ▶ Plant metabolism requires nitrogen (N) from the air, fixed into the soil by bacteria, or as manure/urine; It also requires Phosphorus (P) and Potassium (K). Most plants do not require the trace element spectrum.
- ▶ Synthetic NPK fertilizer has enabled sterile soils to produce food throughout the world especially since the 1960s.
- ▶ The resulting food looks like food but is essentially remineralized.

Minerals in wild vs. cultivated greens

	Nettle Leaf	Cabbage	Change	
▶ Calcium	966.67		47	
-95.13				
▶ Magnesium	286.67		15	
-94.76				
▶ Iron (mg)	1.40		0.59	-57.85
▶ Potassium	583.33		246	-57.82
▶ Manganese	0.26		0.159	-38.84
▶ Zinc		0.16		0.18
+14.89				

* measurements in grams per ounce.

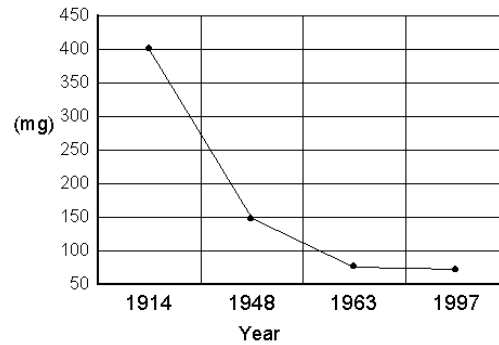
- ▶ Mineral content in a food or herb is entirely dependent on the minerals on the soil in which they have grown.
- ▶ No food or herb has a specific amount of minerals.
- ▶ Organic food do not necessarily contain more minerals to meet organic standards.
- ▶ Only if the farmer takes specific steps to re-mineralize the soil will the food or herb have more minerals in it.



The Fedicamp organization in Nicaragua teaching rural farmers to make a mineral stew to replace depleted minerals in their fields

<https://www.organic-center.org/hot-science/farmstoryometepenicaragua/>

Average mineral content in selected vegetables, 1914-1997



Sums of averages of calcium, magnesium, and iron in cabbage, lettuce, tomatoes, and spinach

(Lindlley, 1914; Hamaker, 1982; USDA, 1963 and 1997)

Green Leafy Vegetables, 1963-1992

		1963	1997	Cx(%)
Broccoli, raw				
▶calcium (mg)		103	48	-53.40%
▶iron (mg)		11.1	0.88	-20.00%
▶magnesium (mg)	24		25	4.17%
▶phosphorus (mg)	78		66	-15.38%
▶potassium (mg)	382	325		-14.92%

Significant and broad spectrum loss of minerals and trace elements

- ▶All grains
- ▶All beans
- ▶All vegetables
- ▶All fruits
- ▶All meats

Calcium and magnesium Mg/Oz

		Calc	Mag
▶Kelp	1013		289
▶Nettle Leaf	966		286
▶Horsetail	630		145
▶Comfrey leaf	600		23
▶Peppermint	540		220
▶Oatstraw	476		400
▶Red Clover	436		116
▶Red Rasp.	403		106
▶Chickweed	403		176
▶Alfalfa		299	76
▶Licorice		292	321
▶Marshmallow	272		172

Trace elements Mg/Oz

	Chromium	Mang	Iron Sel	Sil
▶Red Rasp.		3.3	0.04	
	4.8	0.08	0.04	
▶Catnip		4.6	0.09	
	1.25	0.41	0.00	
▶Nettle Leaf		1.4	0.13	
	0.26	0.07	0.34	
▶Kelp		0.5	0.02	
	0.25	0.06	0.03	
▶Horsetail		4.1	0.01	
	0.23	0.04	1.29	
▶Red Clover		0.0	0.11	
	0.20	0.03	0.04	
▶Burdock		4.9	0.01	
	0.20	0.05	0.75	
▶Comfrey leaf		0.4	0.06	
	0.19	0.04	0.30	

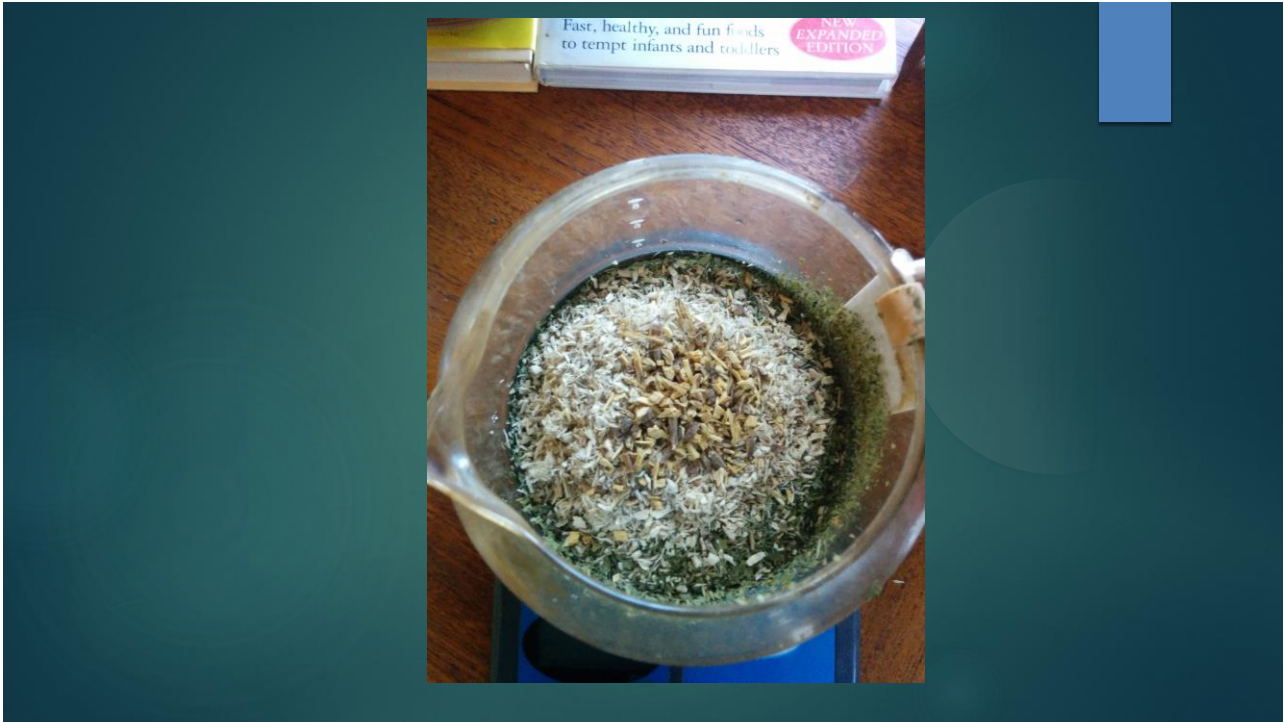
Potassium (Mg/Oz)

▶Catnip	783
▶Peppermint	753
▶Skullcap	726
▶Kelp	703
▶Red Clover	666
▶Nettle Leaf	583
▶Comfrey leaf	566
▶Burdock	560
▶Horsetail	520
▶Red Rasp.	446
▶Marshmallow	403
▶Alfalfa	400
▶Licorice	380
▶Chickweed	280

Strong teas

- ▶ Overnight soak followed by standard decoction (30 minute simmer). A method of the British Physiomedicalists. Requires much lower dose of the final product.
- ▶ Coffee pot/hot-plate method (de-fusion at lower heat)
- ▶ Canning Jar. Fill 1/5 with herbal material. Cover with boiling water, seal. Let stand overnight.
- ▶ French Press
- ▶ Add 1 T blackstrap molasses to enhance mineralization







Individual Herbs

Urtica spp Nettle

- ▶ May eat in food quantities
- ▶ Do not eat "late nettles" after seeding.
- ▶ Make rich decoctions
- ▶ Combine with complementary nutritive herbs
- ▶ Drying and diuretic in effects.
- ▶ Combine with moistening herbs (licorice, marshmallow)
- ▶ Medicinal effects; anti-inflammatory; anti-diabetic

Avena sativa Oat Straw

- ▶ Differentiate oat seed, from straw, from preparations of "milk."
- ▶ Straw contains high amounts of minerals and trace elements
- ▶ Straw has little humoral effect, it is not particularly hot, cold, drying, or moistening.
- ▶ Thus it can be used to "juice" up other herbal decoctions with some nutrition, without otherwise much altering their flavor or medicinal effects.
- ▶ **Should be avoided in a gluten-free diet.** We have often seen it to cause GI upset in people with gluten sensitivity.

Rubus spp. Raspberry leaf

- ▶ Highly nutritive
- ▶ May specifically concentrate manganese – manganese deficiency may cause infertility
- ▶ Used traditionally to produce “Rubus babies” in mothers who had been infertile.
- ▶ Very drying in nature, will *dry up diarrhea*.
- ▶ Should be combined with other nutritive herbs plus demulcents to counter the dryness.

Rosa fruit Rose hips

- ▶ Contains a spectrum of *flavonoid* nutrition.
- ▶ Contains vitamin C
- ▶ Moistening and demulcent in effects.
- ▶ Seeds are an inconvenience; can purchased “seeded” rose hips, or powder.
- ▶ See recipe for “flavonoid bomb”
- ▶ Can be consumed like jam, or spiced like chutney.

Equisetum spp. Horsetail

- ▶ A very powerful mineral concentrator
- ▶ Used as nutritive “booster” in medicinal teas in the Andes mountains.
- ▶ Contains large amounts of water soluble *silicic acid*, a cofactor in connective tissue regeneration.
- ▶ Decoct 1 ounce of the herb in 1 pint of water for several hours. 2-4 ounces of this greatly exceeds the RDA for silicon.
- ▶ Medical effects: diuretic

Herbal “green drinks”

- ▶ Combine powders of nutritive and flavorful herbs for “green drinks.”
- ▶ Example, using powdered herbs
 - ▶ 1 ounce nettle
 - ▶ 1 ounce oat straw
 - ▶ 1 ounce peppermint
 - ▶ 1 ounce raspberry
 - ▶ 1 ounce powdered marshmallow
 - ▶ ¼ ounce horsetail
- ▶ Stir 1-2 Tbls into warm water and drink with the powder.



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Nutritive herbs

Sleep and Sleep debt

Sleep debt and fatigue

- ▶ Average hours of sleep per night in US in 1900: 9.0
- ▶ Average hours of sleep per night in US in 1963: 8.5
- ▶ Average hours of sleep per night in US in 2002: 5.9 on Sunday through Thursday, and 8.0 on Weekends.
- ▶ Average of 6.9 to 7.2 for week.
- ▶ Symptoms of sleep debt: fatigue, cognitive decline, cortisol cycle disturbances, insulin resistance, immunodeficiency.
- ▶ Recovery dose: 10-12 hours bedrest with 9.5+ hours sleep for 3 nights.

Endocrine effects of short-term sleep debt

- ▶Thyroid hormone levels rise within 4 days.
- ▶Time of growth hormone secretion during sleep is reduced.
- ▶Afternoon cortisol become elevated.
- ▶Cortisol suppression of ACTH is blunted
- ▶Multiple effects on measures of insulin resistance

Sleep debt and insulin resistance

- ▶Glucose clearance reduced by 40% within 4 days.
- ▶Impaired glucose tolerance in previously normal subjects within 4 days.
- ▶Increased incidence of obesity with chronic debt
- ▶Abdominal pattern of obesity with long term debt
- ▶Increased tendency of blood to clot with long term debt.
- ▶Elevated triglycerides long term correlation

Cardiovascular effects

- ▶ Elevated hypertension long term correlation.
- ▶ Heart attack risk increased 200-300% in men who get less than 5 hours of sleep 2 nights per week.
- ▶ Heart attack risk increased 82% in women sleeping less than 5 hours per night
- ▶ Heart attack risk increased 30% in women sleeping less than 6 hours per night.

Effects on brain functioning

- ▶ Night-time problem solving activity is reduced
- ▶ Ability to incorporate new information in problem solving is reduced.
- ▶ Ability to modify unsuccessful problem solving strategies is completely curtailed in some studies.
- ▶ Consider implications for self-care and judgment in lifestyle.

See: Dreamland: Adventures in the Strange Science of Sleep. David K Randall

Interventions with bed rest

- ▶ May be therapeutic
- ▶ May be diagnostic of level of fatigue/burnout
- ▶ Circadian rhythm bed rest prescription
- ▶ Sleeping in nature prescription (camping without lights)
- ▶ 10-12 hour bed rest prescription
- ▶ Weekend bed rest
- ▶ Longer period of bed rest.

Pulsed dose of bedtime herbs

- ▶ General stress management and formula during the day
- ▶ Small to moderate dose of mild relaxant herbs after work.
- ▶ Start 90 to 120 minutes before bedtime
- ▶ Give 3 spaced doses, ending at bedtime, with steadily increasing doses
- ▶ Bedtime formula components:
 - relaxants
 - sedatives
 - hypnotics
 - include antispasmodics
 - include anodynes

Knockout drops

Relaxant/Sedative

- ▶ Scutellaria
- ▶ Passiflora
- ▶ Paeonia

Antispasmodic

- ▶ Viburnum opulus
- ▶ Dioscorea villosa
- ▶ (Paeonia)

Anti-stress

- ▶ Pulsatilla

Warming relaxant

- ▶ Lavandula
- ▶ Melissa

Anodyne

- ▶ Eschscholtzia
- ▶ Piscidia

Tinctures: 20 drops to 1 tsp.



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Stimulate the vital expression

- ▶ Most herbs, even in small doses, evoke a vital reaction from the body. These are “vital stimulants.”
- ▶ Some evoke a general relaxation of the vital tone, useful in even small doses in hypertonic conditions.
- ▶ Some evoke a general astringency, tonification of the vital tone.
- ▶ <http://naimh.com/Actions/naimh-actions-database.htm>

“Vital force” formula

- | | |
|----------------------------|---------|
| ▶ <i>Hydrastis</i> | 3 parts |
| ▶ <i>Commiphora myrrha</i> | 3 parts |
| ▶ <i>Lobelia inflata</i> | 3 parts |
| ▶ <i>Capsicum spp.</i> | 1 part |

May be used as adjuvant addition to any other formula
For vital stimulation, think small frequent doses.



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Support normal digestion

Support normal digestion to raise vitality

- ▶ "Food *chi*" in Chinese medicine = 70% of energy
- ▶ An initial course of digestive herbs will frequently remove the indications for tonics or adaptogens.
- ▶ Must be accompanied by appropriate dietary changes, primarily removal of immunogenic foods

Gut healing tea

- ▶ Matricaria
- ▶ Mentha
- ▶ Foeniculum
- ▶ Glycyrrhiza

Balance parts as appropriate to patient
Screen for contraindications, allergy, or distaste

- ▶ Calendula
- ▶ Plantago
- ▶ Althaea

Balance parts according to dry or damp
presentation of patient

Low temperature decoction, or powder. Take 2-3 8 oz
cups on empty stomach, or sip throughout the day.
Or 2-3 T in applesauce



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Physical Medicine/Structural integrity

Physical Medicine

- ▶ Elements of structural integrity are at the base of the Therapeutic Order (Establish Fundamental Conditions for Health)
- ▶ Physical lesion may be permanent obstacle to cure until corrected.
- ▶ In some cases, correcting the lesion alone will correct the problem.
- ▶ In some cases, may work synergistically with homeopathy or botanical medicine.

Herbal adjuncts for body work

Lobelia liniment

Lobelia inflata acid tincture. 60% ETOH
with 30% H₂O and 10% vinegar.

Lobelia 1 pint

Oil of spearmint 10 ml

Oil of oregano 5 ml

May add capsicum, 1 ounce

Herbal Adjuncts for bodywork

Internal muscle relaxant

- ▶ *Pedicularis spp* 2 parts
 - ▶ *Viburnum opulus* 2 parts
 - ▶ *Paeonia spp* 2 parts
 - ▶ *Anemone pulsatilla* 1 part
- 1 dropper repeated in ten minutes if necessary

Formula 1

- 4g Medicago (alfalfa)
- 4g Hypericum (St John's Wort)
- 2g Matricaria (Chamomile)
- 7g Avena (Wild Oats)
- 2g Ocimum Sanctum (Holy Basil)
- 2g Rosa (Rose petals)
- 3g Trifolium (Red Clover)
- 4g Turmeric (Turmeric)

Sleep Tincture

- 15ml Skullcap
- 10ml Valerian
- 5ml Catnip

Tea formula 2

- 4g Avena (milky tops)
- 4g Ocimum (holy basil)
- 3g Rosa (rose petals)
- 2g Hypericum (St John's Wort)
- 4g Crataegus berry (Hawthorn)
- 3g Elettaria (cardamom)
- 3g Arctium (burdock)
- 5g Taraxacum root (dandelion)
- 2 g Calendula

Tea Formula 3

- ▣ 5g Hypericum (St John's Wort)
- ▣ 3g Avena (oats)
- ▣ 3g Crataegus (Hawthorn berry)
- ▣ 4g Matricaria (chamomile)
- ▣ 4g Lavandula (lavender)
- ▣ 3g Stachys (wood betony)
- ▣ 8g Stellaria (chickweed)