Do You Have a Deficiency of Qi or Yang?
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Terms used in traditional Chinese medicine
Central to the belief and treatment of medical conditions, it is accepted that the body and mind are inseparable, and composed of a number of vital substances
These vital substances include qi, blood, essence, and body fluids
These are considered responsible for all aspects of human life – physical, mental, emotional, spiritual

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Qi and Yang
- Qi (or chi) plays a central role in traditional Chinese medicine, but is classically extremely difficult to define
- It is considered the fundamental power underlying all the activities of nature as well as the vital life force of the human body
- Qi flows through the body within a closed system of channels, or meridians
- There is a complex association of meridians and organ systems, as well as 24 hour cycling allowing for manipulation and adjustment
Qi and Yang

- Yin and yang first appeared in written form around 700 B.C.
- Yin and yang resulted from the observation of nature to describe the constant state of change, which according to theory, is expressed in an endless cycle of polar opposites that are also interdependent
  - Yin – darkness, rest, moisture, cold, structure
  - Yang – light, activity, dryness, heat, function

So, where am I going with this?

- Do YOU have a deficiency of qi, blood, or yang?

Most cases of the condition that we will be discussing is a combination of an imbalance or alteration of these components (at least in traditional Chinese medicine)

FATIGUE!

The feeling of weariness, tiredness, or lack of energy (also described as a deficiency of qi, blood, and/or yang)

Fatigue

Time to take a test!

The Piper Fatigue Scale

(Please only answer 1-23)
Fatigue

- **Diagnosis**
- **Inclusion criteria:**
  - Clinically evaluated, medically unexplained fatigue of at least 6 months' duration of new onset
  - Not the result of ongoing exertion
  - Not substantially alleviated by rest
  - Associated with a substantial reduction in previous level of activities

Fatigue

- **Diagnosis**
- **Exclusion criteria:**
  - Active, unresolved, or suspected medical disease or depression (includes psychotic, melancholic, or bipolar depression, but not other uncomplicated major depression)
  - Psychotic disorders
  - Dementia
  - Anorexia or bulimia nervosa
  - Alcohol or substance abuse/misuse
  - Severe obesity

Fatigue

- Chronic fatigue syndrome (CFS) is an excepted diagnosis found in up to 2% of primary care patients
- It is a condition lasting at least 6 months, that generally starts with flu-like symptoms
- It's a diagnosis of exclusion
- Most with this diagnosis do not get relief from rest
- Not to be confused with fibromyalgia, which is also associated with fatigue (in fibromyalgia, muscle pain is the more predominant feature or symptom)
- If untreated, only 10% of patients will recover within 4 years
- If there is a patient preoccupation with evaluation of possible medical causes, this is considered a negative prognostic factor

Fatigue

- Normally distributed in the general population
- Clinically significant fatigue and its prevalence depends on the degree of associated disability chosen, as well as its persistence
- Approximately 5-10% of the population surveyed report fatigue that is bothersome and persistent
- In general, it is not associated with occupation or age, but is twice as common in women
- Approximately 5-10% of all primary care visits are reported to have fatigue as their chief complaint, with an additional 5-10% noting it as their secondary complaint
- Greater than 90% of patients will not be found to have an underlying disease or cause of their fatigue
Fatigue
- It is not drowsiness (feeling the need to sleep), but rather the lack of energy or motivation
- Drowsiness and apathy, however, can be associated with fatigue
- Fatigue can be normal, especially if it is in response to excessive physical exertion, emotional stress, boredom, or lack of sleep
- Fatigue may be abnormal, especially if it is associated with another either physical or psychological disorder, such as depression, cancer, or sleep apnea

Fatigue
- Common causes:
  - Allergy and asthma
  - Anemia
  - Depression or grief
  - Chronic pain
  - Sleep disorders (chronic insomnia, sleep apnea, narcolepsy)
  - Thyroid dysfunction
  - Substance abuse or dependence (alcohol, drugs, narcotics)

Fatigue
- Commonly associated with:
  - Addison’s disease
  - Eating disorders, especially anorexia or malnutrition
  - Autoimmune disorders, including arthritis
  - Malignancy
  - Congestive heart failure and COPD
  - Diabetes
  - Fibromyalgia
  - Infection, including HIV/AIDS, TB, and Mononucleosis
  - Chronic renal or hepatic disease
  - Neuromuscular diseases, such as MS and RLS

Fatigue
- Predisposing factors:
  - Female gender
  - Depression
- Precipitating factors:
  - Acute physical stress (i.e. EBV infection)
  - Acute psychological stress (i.e. family death)
  - Chronic social stress (i.e. problems at work)
- Perpetuating factors:
  - Physical inactivity or general lack of exercise
  - Emotional or psychiatric disorders
  - Ongoing social stresses
  - Sleep dysfunction
Fatigue

- Medications can lead to fatigue:
  - Antihistamines
  - Antihypertensives
  - Steroids
  - Diuretics
  - Benzodiazepines
  - Barbiturates
  - Other neuropsychiatric medications
  - Etc...

Fatigue

- How to reduce fatigue:
  - Have adequate, regular, and consistent number of hours of sleep each night
  - Have a healthy, well-balanced diet with adequate water intake daily
  - Regular exercise
  - Learn behavioral techniques to help with relaxation, such as yoga or meditation
  - Decrease stress sources, such as taking a vacation or changing work environments
  - Avoid alcohol, nicotine, or drug use

Fatigue

- Treat underlying medical disease or condition, if etiology is found, such as depression
- Identify unhelpful beliefs (i.e. misconception that an alcoholic beverage at bedtime promotes better sleep)
- Discuss activity levels, and gradual increases in exercise
- Identify and manage occupational and social stresses, involving a problem solving approach and behavioral/lifestyle modification with a counseling specialist if needed

Fatigue

We’ll take a look at precipitating and perpetuating factors, particularly in the workplace.
Fatigue

- But first, a "fun" fact regarding the effects of sleep deprivation causing or precipitating fatigue:
  - 17-19 hours of sleep deprivation = 0.05% functional serum EtOH level
  - 19-21 hours of sleep deprivation = 0.08% functional serum EtOH level
  - 24 hours of sleep deprivation = 0.1% functional serum EtOH level

- 0.1% is a level considered functionally intoxicated in every state (associated with significant impairment of cognitive function)
- Following sleep deprivation, 3 consecutive nights of 8 hours of sleep are required for full recovery

Fatigue

- Long or irregular hours can contribute to sleep dysfunction, and therefore fatigue (i.e. our residents)
- Starting the 2010-2011 academic year, ¼ of our residents will be spending 2 – 3 months per year working "second" shift or night shift
  - PGY1: 1.5 months "second" shift, 1.5 months night shift
  - PGY2: 1 month "second" shift, 1 month night shift
  - PGY3: 1.5 months "second" shift, 1.5 months night shift
  - PGY4: Day shifts only

- "Second" shift: 12pm-12am
- Night shift: 3pm-7am
- All levels take weekend calls that involve extended hours and working nights

Fatigue

- Mandatory regulation of resident work hours started in NY in 1989, after the death of a woman who was initially linked to resident physician fatigue
- No data exists to suggest medical errors have decreased or that patient care outcomes have improved due to work hour restrictions
- Despite resident physician work hour restrictions, there is no restrictions on the average practicing Ob/Gyn
  - (who now works significantly more hours than the resident)
  - 61% reported working > 80 hours/week
  - Physicians more likely to work > 80 hours/week were men > 50 years of age, regardless of marital status and whether children lived at home

Work stress in all professions can also precipitate as well as perpetuate fatigue
- According to a survey by Northwestern National Life, 40% of workers report their job as "very or extremely stressful"
- A survey by the Families and Work Institute found that 26% of workers report they are "often or very often burned out or stressed by their work.”
- 29% of workers surveyed by Yale University reported they feel "quite a bit or extremely stressed at work"
Fatigue

- ¼ of employees view their job as the number one stressor in their lives (Northwestern National Life)
- ¾ of employees believe the worker has more on-the-job stress than a generation ago (Princeton Survey Research Associates)
- Problems at work are more strongly associated with health complaints than are any other life stressors, more so than even financial or family problems (St. Paul Fire and Marine Insurance company)

Fatigue

- Warning signs for job stress and resultant fatigue:
  - Headache
  - Sleep disturbances
  - Difficulty concentrating
  - Short temper
  - Upset stomach
  - Job dissatisfaction
  - Low morale
  - (Is this not sounding a lot like a typical intern year?? Or a over-tired attending??)

Fatigue

- Snoring is a common problem, and is harmless
  - Yes, harmless in most, but could be a sign of sleep apnea
- You can “pay back” sleep debt
  - Most adults need 7-9 hours of sleep nightly for optimal performance, health and safety
  - Teenagers need 8.5-9.25 hours of sleep nightly
  - Sleep patterns change with aging, but older people still need 7-9 hours of sleep, and this can be obtained with regular napping
- Obesity, diabetes, hypertension and depression are unrelated to the amount and quality of a person’s sleep
  - Hormonal changes and effects on the sleep cycle and circadian rhythms can be caused by individual disease(s)

"My doctor can't figure out why I'm so tired"
(Common myths, self-medication and self-treatment)
Fatigue

- Caffeine has been considered the most popular drug in the world
- Found naturally in over 60 plants
- It acts as a stimulant that does not replace sleep; it only acts to temporarily make us feel more alert by blocking sleep-inducing chemicals in the brain and increasing adrenaline production
- Moderate intake (three 8oz cups of coffee) versus excessive intake (six or more 8oz cups of coffee) can affect fatigue, and it's chronicity

Fatigue

- Common herbs marketed towards women, in particular, with fatigue include:
  - Oat straw
  - Ginger
  - Ginkgo biloba
  - Licorice root
  - Dandelion root
  - Siberian ginseng
  - Passionflower
  - Valerian root

Fatigue

- Cautions and concerns:
  - Licorice root can cause hypokalemia, hypertension, and hyperglycemia particularly with long term use of high doses
  - Passionflower may increase levels of serotonin, interact with MAOIs and may lead to arrhythmia
  - Valerian root can have a significant sedative effect, and can augment the effects of benzodiazepines and barbiturates
  - Gingko Biloba can lead to risk of hemorrhage at time of surgery due to it's anticoagulant effects

Fatigue

- Cautions and concerns:
  - Siberian ginseng may cause significant hypoglycemia, (especially in people with diabetes), can interfere with coagulation function (particularly if already on warfarin or plavix), and can exaggerate the effect of sleepiness of other sedating medications
  - Dandelion root can act as a potent diuretic as well as cause hypoglycemia
  - Ginger in excessive doses may affect coagulation
  - Oat straw is generally safe, but should be avoided by individuals with celiac disease
Fatigue

Beyond specific herbs...
Marketing to the public, bypassing traditional medicine and medication

Fatigue

• Benefits of Oxygen
  - Restores alertness and reduces drowsiness while driving.
  - Reduces effects of hangover or fatigue.
  - Reduces stress from work or other stressful situations.
  - Restores energy levels from physical activity.
  - Provides temporary relief while traveling at high altitudes.
  - Restores depleted oxygen levels in blood.
  - Fights cancer causing toxins from carcinogens.
  - Reduces minor aches and pains including backaches.
  - Improves concentration, alertness and memory.
  - Improves vision.
  - All natural energy without the caffeine and hangover effects.
  - Sorry guys – Does not grow hair or produce 4 hour erections.

http://www.oxygeninhican.com

Fatigue

• "What is oat straw herbal?"
  Known scientifically as oat straw, or grown out in a pale green grass cultivated for its edible grain.
  Oat straw has many medicinal purposes, and has been known to be a restorative tonic for the nervous system, thus reducing stress, exhaustion and nervousness.
  Oat straw herbal can also improve mental function, concentration, as well as sharpen focus.
  Another oat straw benefit is helping with alcohol, cigarettes and drug dependency.
  Oat straw provides a "boost" that invigorates and provides a natural substitute for drugs and alcohol.
  One of the most popular applications for oat straw is in sexual enhancement supplements, as it has aphrodisiac-like effects on the body.
  Oat straw can enhance libido by reducing stress and easing the mind, much like ginkgo and damiana.

Feathered Oat Straw Herbal Supplement

It's now discovered a natural sexual enhancement product that contains pure oat straw, as well as other herbal extracts for libido stimulation including damiana, ginseng herbs, saw palmetto, licorice root, and licorice.

The product is called Provera and it is specially formulated for women, with specific nutrients to improve sexual performance as well as improve overall health and well-being.

"Take a look at this safe, natural libido enhancer and discover how you can improve your sex life today!"

http://www.herbalsexsupplements.com/oat_straw.html

Activive

• "Discover the All Natural Formula Guaranteed to Fight Fatigue and Support Your Return to an Active, Healthy Lifestyle"
  - Safely and immediately relieve fatigue symptoms, including exhaustion, dullness and muscle weakness.
  - Restores energy levels and provides therapeutic support for optimal overall health and vitality.
  - Provides fast, all natural relief with no negative side effects.
  - Activive is a proprietary, homeopathic, oligo-herapeutic complex formulated for superior, all natural fatigue relief. Activive is formulated to safely and effectively relieve fatigue symptoms, so you can immediately return to a better quality of life, symptom-free.
  - Our unique approach utilizes a multi-directional process to safely relieve fatigue and to naturally promote a healthy lifestyle marked by energy, vision, and a fresh approach to life.
  - Whether your fatigue symptoms are caused by overwork, undereat, or illness, take Activive daily to naturally relieve:
    - Fatigue - Drowsiness - Dullness - Exhaustion - Indifference - Muscle weakness - Nervousness

http://www.activive.com/activive.html
**Fatigue**

- "The oligotherapeutic blend in Activite works at the cellular level to support the body's natural healing process, including:
  - Increased cell permeability
  - Healthy formation of RNA and DNA
  - Cell demodulation
  - Strong organic electrolytes
  - Increased oxygenation
  - Alkaline detox medication delivery

- Once our homeopathic ingredients and oligotherapeutic base are in place, we imprint Activite with tech frequencies to ensure you receive optimal relief from fatigue and support for better overall health.

- **Cutting-edge Vibrational Frequency Technology**
  - Science has uncovered a key to health known as Vibrational Frequency Technology. Scientists have discovered that all life, from a particular frequency on the subatomic level. Higher frequencies are associated with good health, while lower frequencies can cause cell damage.
  - At ITS Irvine, California, we have been creating a new technology: electricity and the use of homeopathic principles, minerals and nutrients that have been known to support health for hundreds of years.

- "We guarantee* you that Activite will relieve your fatigue and support optimal energy and study. This concept activates your new technology in combination with homeopathic principles, minerals and nutrients that have been known to support health for hundreds of years.

http://www.microarena.com/activite.html

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**Fatigue**

- "Our Science*
  - The NT Factor’s unique cutting edge Antioxidant Therapy is a powerful Healthy Aging strategy. It is a clinically proven solution to fight fatigue, giving you the energy you had when you were half your age.

**NT Factor** does what vitamins can’t do, it repairs damaged cells. Taking NT Factor® creates sustained energy levels – not just a quick jolt like energy drinks or caffeine provide. True, healthy aging energy! NT Factor is considered by many to be a major clinical breakthrough, proven by study after study.*

http://ntfactor.com/antioxidant

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**Fatigue**

- "Researchers from the University of California at Irvine, and the Institute for Molecular Medicine, call this achievement "Lipid Replacement Therapy."

  - Referring to nutrients that had been damaged by free radicals, researchers found that using this new technology, healthy cell components could simply replace denatured and deteriorated membranes. The end result was that in no less than eight weeks, study participants whom had an average age of 75 years, regained membrane activity normal for healthy young adults.*

http://www.propax.com/

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**Fatigue**

- "What is Propax with NT Factor®?
  - PROFAK with NT Factor® is dietary supplementation clinically validated to reduce and eliminate fatigue, the most frequently mentioned complaint in primary care.
  - Propax with NT Factor® provides a broad range of vitamins, minerals, anti-oxidants, fatty acids with pro-biotics. NT Factor®, a nutrient complex medically validated to improve and preserve membrane health. It is a whole food tablet base that improves membrane health, enhances gastrointestinal health, enhances nutrient absorption, supports immune function and provides for the tablets to be all-natural and well balanced.

  - This formula includes all the nutrients a person typically would want or need for the purposes of providing effective nutritional support from a dietary supplement.

  - Note: it does not provide a significant calorie value and does not replace meals.

  - All the nutrients that would be contained in a quality multi-vitamin, multi-mineral, anti-oxidant, essential fatty acid, probiotic and energy support formulations are included in moderate and well balanced amounts in PROFAK with NT Factor®."
So, do YOU have a deficiency of qi, blood, or yang?

And how DO we correct our qi, blood, or yang deficiency?

- The Piper Fatigue Scale
  - Measures 4 dimensions of subjective fatigue
    - Behavioral/severity (#2-7)
    - Affective meaning (#8-12)
    - Sensory (#13-17)
    - Cognitive/mood (#18-23)
  - Total up each of the dimensions separately for your "severity code" per dimension
  - To calculate a total fatigue score, add #2-#23, and divide by 22
  - Severity: 0 = none, 1-3 = mild, 4-6 = moderate, 7-10 = severe

Per traditional Chinese medicine, these (qi and yang) are considered responsible for the balance of all aspects of human life – physical, mental, emotional, spiritual

- A weak or deficient yang may require ginger, Angelica sinesis, huang qi, bai shao, among other herbal combinations to bring a return of balance
- For a qi that is too hot or too cold, treatments may include forsythia, licorice, gardenia, peony, panax ginseng, or cyprus extract

In modern or western medicine, it's likely a combination of factors that are generally associated with overall good health:

- Get enough sleep
- Eat right
- Exercise enough
- Treat and/or correct any underlying diseases, disorders, or destructive behaviors
- Keep stress to a minimum
- Everything in moderation