Healing the Wounds of Body, Mind and Spirit

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Disclosures

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Objectives

- Review Optimal Aging and Osteopathic Medicine
- Define and Discuss Evidence-based Alternatives and Care Interventions used with Geriatric Patients and funded by The National Center for Complementary and Integrated Health (NCCIH)
- Discuss Research Findings in Mind-Body Medicine
Optimal Aging

The capacity to function across many domains - physical, functional, cognitive, emotional, social, and spiritual – to one’s satisfaction and in spite of one’s medical conditions

Bates & Bates (1990)
Kenneth Brummel-Smith MD (2007)
OSTEOPATHIC MEDICINE

Principles of Osteopathic Medicine

Osteopathic Medicine views the human being as a unit of body, spirit and mind in which structure and function are interrelated or integrated

(Multiple authors interpreting A.T. Still)
According to Wikipedia

- The **human body** includes the entire structure of a human being and comprises a **head**, **neck**, **trunk** (which includes the **thorax** and **abdomen**), **arms** and **hands**, **legs** and **feet**.
- Every part of the body is composed of various types of **cells**.
- Anatomical Container of Mind and Spirit
Body CHALLENGES

Biological

- Impaired taste or smell
- Impaired vision
- Multiple medications
- Cognitive deficits
- Difficulty swallowing
- Stomach/intestine diseases
- End-stage disease
Body CHALLENGES

Functional
- Manual dexterity problems
- Mobility limitations
- Falls
- Incontinence
- Increasing chronic disease
Mind

According to Wikipedia

- A mind is the set of cognitive faculties that enables consciousness, perception, thinking, judgement, and memory—a characteristic of humans, but which also may apply to other life forms.

- Whatever its relation to the physical body it is generally agreed that mind is that which enables a being to have subjective awareness and intentionality towards their environment, to perceive and respond to stimuli with some kind of agency and to have consciousness, including thinking and feeling.
According to Wikipedia

- An **Incorporeal** (without a physical body, presence or form) but ubiquitous, non-quantifiable substance or **Energy** present individually in all living things. Unlike the concept of souls (often regarded as eternal and sometimes believed to pre-exist the body) a spirit develops and grows as an integral aspect of a living being
Spirit

- In my presentation: Life Energy
- In Hinduism or Buddhism: Prana or Shakti
- In Chinese: Qi
- In Japanese: Ki
- In Hebrew: Koach-ha-guf
- In Greek: Bios
- In also Greek and English: Aether
MIND and SPIRIT  CHALLENGES

Psychological/mental health
- Life Script
- Depression
- Dementia
- Bereavement
- Substance abuse
- Pre-death concerns
The mission of NCCIH is to define, through rigorous scientific investigation, the usefulness and safety of complementary and integrative health interventions and their roles in improving health and health care.

Scientific evidence informs decision-making by the public, by health care professionals, and by health policymakers regarding the use and integration of complementary and integrative health approaches.
10 most common complementary health approaches among adults—2012

- Natural Products*: 17.7%
- Deep Breathing: 10.9%
- Yoga, Tai Chi, or Qi Gong: 10.1%
- Chiropractic or Osteopathic Manipulation: 8.4%
- Meditation: 8.0%
- Massage: 6.9%
- Special Diets: 3.0%
- Homeopathy: 2.2%
- Progressive Relaxation: 2.1%
- Guided Imagery: 1.7%

* Dietary supplements other than vitamins and minerals.

Osteopathic Manipulation or Chiropractic

Osteopathic physicians, chiropractors, and some other health care professionals use a technique called spinal manipulation. Practitioners perform spinal manipulation by using their hands or a device to apply a controlled force to a joint of the spine. This technique can provide mild-to-moderate relief from low-back pain and may also be helpful for headaches.

NCCIH
Research Outcomes OMT

- Effects of comprehensive osteopathic manipulative treatment on balance in elderly patients: a pilot study.
  
  Lopez, King, Knebl. Et al (2011)

- Preventive Osteopathic Manipulative Treatment and Stress Fracture Incidence Among Collegiate Cross-Country Athletes
  
  Brumm, Janiski, Balawender, Feinstein (2013)

  
  Licciardone, Subhash (2013)

- Multicenter Osteopathic Pneumonia Study in the Elderly: Subgroup Analysis on Hospital Length of Stay, Ventilator-Dependent Respiratory Failure Rate, and In-hospital Mortality Rate
  
  Noll, Degenhardt, Johnson (2016)
Effects of comprehensive osteopathic manipulative treatment on balance in elderly patients: a pilot study.

- Falls, many of which are caused by balance problems, are a leading cause of injuries in elderly persons. Few studies have investigated osteopathic manipulative treatment (OMT) for patients with balance problems.

- Research laboratories of the University of North Texas Health Science Center Texas College of Osteopathic Medicine in Fort Worth.

- Forty healthy elderly patients aged 65 or older were enrolled and separated into an OMT group and a control group. Owing to the recruitment process and limited time for the study, the first 20 patients to enroll were in the OMT group, and the next 20 were in the control group. Patients were excluded if they had a condition that could impair balance.
Effects of comprehensive osteopathic manipulative treatment on balance in elderly patients: a pilot study.

- The OMT protocol comprised 7 OMT techniques applied weekly by the same osteopathic physician before balance tests. Patients in the control group received no treatment.

- Patients were asked to stand on a force plate and to perform 3 balance tests: (1) eyes open, (2) eyes closed, and (3) a modified Romberg test. The center of pressure between their feet was recorded for 30 seconds. The average center of pressure displacement for each test was used to determine anteroposterior (AP) sway and mediolateral (ML) sway. Balance tests were performed each week for 4 weeks. Tests were performed at the same time of day as the first test.
The OMT group had significantly reduced sway for the eyes-open test after 4 visits (P=.001).

The OMT protocol used in the present study improved the postural stability of healthy elderly patients, as measured by changes in sway values.
Acupuncture

The term “acupuncture” describes a family of procedures involving the stimulation of points on the body using a variety of techniques. The acupuncture technique that has been most often studied scientifically involves penetrating the skin with thin, solid, metallic needles that are manipulated by the hands or by electrical stimulation. Practiced in China and other Asian countries for thousands of years, acupuncture is one of the key components of traditional Chinese medicine.

NCCIH
Acupuncture

Although millions of Americans use acupuncture each year, often for chronic pain, there has been considerable controversy surrounding its value as a therapy and whether it is anything more than placebo. Research exploring a number of possible mechanisms for acupuncture’s pain-relieving effects is ongoing.

NCCIH
Acupuncture Outcomes

- Acupuncture for chronic pelvic pain syndromes (CPPS) and its effect on cytokines in prostatic fluid,

- Acupuncture as Adjuvant Therapy for Sleep Disorders in Parkinson's Disease.
  Aroxa FH, Gondim IT, Santos EL, Coriolano MD, Asano AG, Asano NM. (2017)

- Long term follow-up of cerebral inter vertebral disc herniation treated with integrated and alternative medicine: A prospective case series observational study.
Acupuncture Video

Dr. Joon-Shik Shin

Jaseng
Hospital of Korean Medicine
Meditation

- Meditation is a *mind and body practice* that has a long history of use for increasing calmness and physical relaxation, improving psychological balance, coping with illness, and enhancing overall health and well-being.
- Mind and body practices focus on the interactions among the brain, mind, body, and behavior.
- There are many types of meditation, most of which originated in ancient religious and spiritual traditions.

NCCIH
Meditation

Research suggests that practicing meditation may reduce blood pressure, symptoms of irritable bowel syndrome, anxiety and depression, insomnia, and the incidence, duration, and severity of acute respiratory illnesses (such as influenza). Evidence about its effectiveness for pain and as a smoking-cessation treatment is uncertain.

NCCIH
Meditation Research Outcomes

- The potential effects of meditation on age-related cognitive decline: a systematic review.
  Gard, Hölzel, Lazar, (2014)
- Internet-based Mindfulness Meditation for Cognition and Mood in Older Adults: A Pilot Study.
  Wahbeh H, Goodrich E.,Oken BS (2016)
- A Brief Mindfulness Meditation Training Increases Pain Threshold and Accelerates Modulation of Response to Tonic Pain in an Experimental Study.
  Reiner K, Granot M, Soffer E, Lipsitz JD (2016)
- Mindfulness-based stress reduction for chronic insomnia in adults older than 75 years: a randomized, controlled, single-blind clinical trial.
To assess the effectiveness of mindfulness-based stress reduction (MBSR) for chronic insomnia and combined depressive or anxiety symptoms of older adults aged 75 years and over in a randomized, controlled, single-blind clinical trial.

Participants included 60 adults aged 75 years and over with chronic insomnia.

Participants were randomly assigned to the eight-week MBSR group or the wait-list control group. Assessments using the Pittsburgh Sleep Quality Index (PSQI), Self-rating Anxiety Sale (SAS), and Geriatric Depression Scale (GDS) were taken at baseline and post-treatment. For each outcome measure, a repeated measures analysis of variance was used to detect changes across assessments.
Mindfulness-based stress reduction for chronic insomnia

- There was a significant time by group interaction for the Pittsburg Sleep Quality Index global score between the groups ($P = .006$);
- The Mindfulness-Based Stress Reduction group had a decrease in the PSQI global score while the control group did not.
- Among the PSQI components, there was a significant time by group interaction for daytime dysfunction ($P = .048$);
- This study demonstrated that the MBSR program could be a beneficial treatment for chronic insomnia in adults aged 75 years and older.
Yoga is a meditative movement practice with historical origins in ancient Indian philosophy. In people with chronic low-back pain, a carefully adapted set of yoga poses may reduce pain and improve function. Like other forms of regular exercise, yoga may have health benefits such as reducing stress and improving overall physical fitness, strength, and flexibility.

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There are numerous schools of yoga.

Hatha yoga, the most commonly practiced in the United States and Europe, emphasizes postures (asanas) and breathing exercises (pranayama).

Some of the major styles of Hatha yoga are Iyengar, Ashtanga, Vini, Kundalini, and Bikram yoga.
Yoga Research Outcomes

- Controlled pilot study of the effects of power yoga in Parkinson's disease.

- Effects of 8-Week Hatha Yoga Training on Metabolic and Inflammatory Markers in Healthy, Female Chinese Subjects: A Randomized Clinical Trial.
  Chen N, Xia X, Qin, L, et.al (2016)

- Study Quantifies Physical Demands of Yoga in Seniors
Controlled pilot study of the effects of power yoga in Parkinson's Disease (PD)

- To evaluate the effects of a specially designed power yoga program (YOGA) on bradykinesia, rigidity, muscular performance and quality of life in older patients with Parkinson’s Disease in a Randomized controlled trial in a university laboratory.
- Twenty-six patients with mild to moderate PD were randomly assigned to a YOGA or control group (CON). The YOGA program was three months, incorporating two sessions/wk of yoga classes.
- Upper and lower limb bradykinesia and rigidity scores from the Unified Parkinson's Disease Rating Scale, one repetition maximums (1RM) and peak powers on biceps curl, chest press, leg press, hip abduction and seated calf, and quality of life (PDQ-39).
Controlled pilot study of the effects of power yoga in Parkinson's Disease (PD)

- The YOGA group produced significant improvement in both upper and lower limbs bradykinesia scores, rigidity score, 1RM for all 5 machines and leg press power (p<.05). Significant improvements were seen in the PDQ-39 overall score, mobility and activities of daily living domain for the YOGA group.

- The 3-month YOGA program significantly reduced bradykinesia and rigidity, and increased muscle strength and power in older patients with PD. Power training is an effective training modality to improve physical function and quality of life for PD.
Qigong & Tai Chi

- A discipline from traditional Chinese medicine that combines gentle physical movements, mental focus, and deep breathing.
- An integration of physical postures, breathing techniques, and focused intentions.
- Practices can be classified as Martial, Medical, or Spiritual.
- All styles have three things in common: they all involve a posture, (whether moving or stationary), breathing techniques, and mental focus.

National Qigong Association
Qigong & Tai Chi

- Qigong is a discipline from traditional Chinese medicine that combines gentle physical movements, mental focus, and deep breathing.
- Tai chi, which originated in China as a martial art, is a mind and body practice. Tai chi is sometimes referred to as “moving meditation”—practitioners move their bodies slowly, gently, and with awareness, while breathing deeply.

NCCIH
Qigong & Tai Chi Research Outcomes

- Randomized, controlled trial of qigong for treatment of prehypertension and mild essential hypertension.
  Park JF, Hong S, Lee M, et.al. (2014)

- A comprehensive review of health benefits of qigong and tai chi.

- Effects of Qigong Exercise on Biomarkers and Mental and Physical Health in Adults With at Least One Risk Factor for Coronary Artery Disease.
  Hung HM, Yeh, SH, Chen CH (2016)

- Prescribing Tai chi for fibromyalgia—are we there yet?
  Yeh, Kaptchuk, Shmerling, (2010)
Other CAM Interventions

- Aromatherapy
- Art therapy
- Ayurvedic Medicine
- Biofeedback
- Dance therapy
- Esoteric Healing
- Guided Imagery
- Homeopathy
- Hypnotherapy
- Massage Therapy
- Moxibustion
- Music therapy
- Naturopathy
- Neutraceuticals
- Prayer
- Polarity Therapy
- Reiki
- Relaxation Techniques
- Traditional Chinese Medicine
The NCCIH defines mind-body interventions as those practices that "employ a variety of techniques designed to facilitate the mind's capacity to affect bodily function and symptoms", and include guided Imagery, guided meditation and forms of meditative praxis, hypnosis and hypnotherapy, prayer, as well as art therapy, music therapy, and dance therapy.
Mind-body medicine uses the power of thoughts and emotions to influence physical health. As Hippocrates once wrote, "The natural healing force within each one of us is the greatest force in getting well." This is mind-body medicine in a nutshell.

University of Maryland Medical Center
In their book Super Genes, Chopra and Tanzi define it this way:

- The mind-body connection is not like a footbridge connecting two banks of a river. It’s like a telephone line--many telephone lines, in fact teeming with messages. And each message, ...is being received by the entire system. Every cell is eavesdropping on what you think, say and do.
Can you influence your own DNA?
Can you effect your genetic make-up?
Can you exert some control on your aging by effecting the length of your telomeres?
Mind-Body Medicine

Deepak Chopra, M.D.

- American author, public speaker, alternative medicine advocate, and a prominent figure in the New Age movement
- Chopra studied medicine in India before emigrating to the United States in 1970 where he completed residencies in internal medicine and endocrinology
- As a licensed physician, he became chief of staff at the New England Memorial Hospital (NEMH) in 1980
- became the executive director of Sharp Healthcare’s Center for Mind-Body Medicine and in 1996 he co-founded the Chopra Center for Wellbeing.
Mind-Body Medicine

Deepak Chopra, M.D.

- believes that "human aging is fluid and changeable; it can speed up, slow down, stop for a time, and even reverse itself," as determined by one's state of mind.
- argues that what he calls "quantum healing" cures any manner of ailments, including cancer, through effects that he claims are literally based on the same principles as quantum mechanics.
- Ideas he promotes have been regularly criticized by medical and scientific professionals as pseudoscience. They say his treatments benefit from the placebo effect and some argue that his claims for the effectiveness of alternative medicine can lure sick people away from medical treatments.
- He is placed by some among the "quacks", "cranks" and "purveyors of woo", and described as "arrogantly obstinate"
Rudolph E. Tanzi, Ph.D

- is the *Joseph P. and Rose F. Kennedy Professor of Neurology* at Harvard University, and Director of the Genetics and Aging Research Unit at Massachusetts General Hospital (MGH)
- has been investigating the genetics of neurological disease since a student in the 1980s when he participated in the first study that used genetic markers to find a disease gene for Huntington’s Disease
- Tanzi co-discovered all three familial early-onset Alzheimer’s disease (FAD) genes and several other neurological disease genes including that responsible for Wilson’s Disease
- As the leader of the Cure Alzheimer’s Disease Alzheimer’s Genome Project, Tanzi has carried out multiple genome wide association studies of thousands of Alzheimer’s families leading to the identification of novel AD candidate genes (*CD33* and the first two rare mutations causing late-onset AD in the *ADAM10* gene)
You may be able to alter your own gene activity with meditation or biofeedback.

In a study titled “Mind-controlled transgene expression by a wireless-powered optogenetic designer cell implant” in the Journal *Nature Communications*, Swiss researchers led by Martin Fussenegger, Professor of Biotechnology and Bioengineering at the Department of Biosystems of the Swiss Federal Institute of Technology in Zurich completed this research.
Dr. Fussennegger states, “For the first time, we have been able to tap into human brainwaves, transfer them wirelessly to a gene network and regulate the expression of a gene depending on the type of thought.”

He goes on to say “Controlling genes in this way is completely new and is unique in its simplicity.”
The researchers were intrigued by the Mattel-developed game Mindflex, which uses brainwaves to steer a ball through an obstacle course, they decided to wirelessly transmit brainwaves from the EEG helmet using Bluetooth.

The brainwaves were subsequently turned into an electromagnetic field in a control unit and used to power an implant fitted with an LED lamp illuminating first a cell culture with near infrared light and second an implant in the brains of mice. The illumination then triggered the production of the desired protein in the cells.
In the article they published, the team described using the system first on cell cultures and then further demonstrating its viability on mice implanted with the device.

Multiple test subjects, were divided into three groups, and were asked to control protein expression by using their thoughts.

The test subjects were made to concentrate their mind by playing Mindflex on a computer.
In the first group the subjects received only instruction in how to proceed. This group only achieved limited results, as measured by the concentration of the protein in the bloodstream of the mice.

The second group received the same instruction, but proceeded while in a state of meditation or complete relaxation. This group induced a much higher rate of protein expression.

The third group received the same instruction. But additionally, were given the use of a method of biofeedback. They were able to consciously turn off and on the LED light implanted in the body of a test mouse.
Chopra and Tanzi conclude, “All in all, our genome is a fantastically nimble assembly of DNA and proteins that is constantly being remodeled in terms of structure and gene activity—and much of this remodeling appears to be in response to how we live our lives. “
**Epigenome:**
- The entire amount of epigenetic modification of the DNA in your body....it is here that genes get switched on and off (like a light switch) and up and down (like a thermometer) *Super Genes* Chopra and Tanzi

**Microbiome:**
- Large and diverse populations of bacteria, viruses, and fungi occupy almost every surface of the human body. It is estimated that there are nearly 30 trillion bacterial cells living in or on each human. That is about one bacterium for every cell in the human body. These microbes are collectively known as the microbiome.
Microbiome:

- Exposure to microbes first occurs during birth and is later influenced by environmental factors, such as diet and exposure to antibiotics.
- Due to differences in environment, diet, and behavior, the specific types of microbes that make up the microbiome can vary greatly between individuals.
- It is thought that every person’s microbiome is slightly different. In fact, work is underway to investigate the use of microbiomes to identify individuals, much like fingerprints. Cancer Quest Emory University
The Microbiome Gut-Brain Axis

- Broadly defined, the gut-brain axis includes the central nervous system, neuroendocrine and neuro-immune systems including the Hypothalamic-Pituitary-Adrenal Axis (HPA axis), sympathetic and parasympathetic arms of the autonomic nervous system including the enteric nervous system and the vagus nerve, and the gut microbiota.

- A bidirectional neuro-humoral communication system, is important for maintaining homeostasis and is regulated through the central and enteric nervous systems and the neural, endocrine, immune, and metabolic pathways, and especially including the hypothalamic-Pituitary-Adrenal (HPA axis)

Wang, Y; Kasper, LH (May 2014).
Interest in the field was sparked by a 2004 study showing that germ-free mice (genetically homogeneous laboratory mice, birthed and raised in an antiseptic environment) showed an exaggerated HPA axis response to stress compared to non-GF laboratory mice.  

Wang, Y; Kasper, LH (May 2014).

The gut harbors 100 million neurons, more than the spinal cord, and produces 95 percent of the body’s serotonin, one of the neurotransmitters, whose levels are connected to depression.  

Super Genes (2015)
Inflammation is the enemy to Microbiome

- Fatty, high carbohydrate foods promote inflammatory substances in the bloodstream
- Endotoxins and other harmful molecules released by certain bacteria break through the intestinal wall
- With GI leakage immune response is triggers inflammation
Mind-Body Medicine

- Inflammation disturbs blood sugar levels and the insulin response
- Inflammation may result in obesity even on a normal calorie diet
- Many researchers now link gut-inflammation to diabetes, hypertension, heart disease and cancer
- Your microbiome is your second genome

*Super Genes* Chopra and Tanzi
Telomeres

- At the end of each chromosome there is a section of DNA called a telomere which protects the chromosome from unraveling.
- As we age, our telomeres get shorter with every new division of a cell.
- After dozens of divisions the protective telomeres become so short that the cell becomes senescent and unable to divide anymore.
- Cell death follows.
Mind-Body Medicine

Lifestyle Choices for Radical Well Being

- Diet
- Stress
- Exercise
- Meditation
- Sleep
- Emotions
Diet (easy)

- Add prebiotics with soluble fiber to your breakfast (oatmeal, pulpy orange juice, bran cereal)
- Eat a side salad with lunch and dinner
- Add anti-inflammatory foods to your diet
- Consume probiotic foods once a day (yogurt, sauerkraut, kimchi)
- Switch to whole grain bread and cereals
- Eat fatty fish at least twice per week
- Reduce alcohol to one beer or glass of wine per day with a meal
- Take a daily probiotic supplement and a multivitamin pill with half an aspirin (or baby ASA)
- Reduce snacking by eating only one measured portion in a bowl (do not eat from the bag)
- Share dessert when in a restaurant
Diet (hard)

- Switch to organic foods including chicken and meat from animals not raised on hormones
- Limit or eliminate red meat from your diet
- Switch to “pastured” eggs high in Omega-3 fatty acids
- Become a vegetarian
- Cut out refined white sugar
- Dramatically reduce packaged foods
- Eliminate alcohol
- Stop eating fast foods
- Stop buying and eating processed foods
- Stop eating when you are not hungry
Diet (experimental)

- Adopt a gluten free diet
- Become a vegan
- Eliminate wheat entirely
- Have only fruit and cheese instead of dessert
- Adopt a Mediterranean diet
<table>
<thead>
<tr>
<th>Foods that Fight Inflammation</th>
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<tbody>
<tr>
<td>- Fatty Fish</td>
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<tr>
<td>- Berries</td>
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<tr>
<td>- Tree Nuts</td>
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<tr>
<td>- Seeds</td>
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<tr>
<td>- Whole Grains</td>
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<tr>
<td>- Dark Leafy Greens</td>
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<tr>
<td>- Soy (includes soy milk and tofu)</td>
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<tr>
<td>- Tempeh</td>
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<tr>
<td>- Mycoprotein (from mushrooms and other fungi)</td>
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<tr>
<td>- Low-fat dairy products</td>
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<tr>
<td>- Peppers (bell peppers, various chilis)</td>
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<tr>
<td>- Tomatoes</td>
</tr>
<tr>
<td>- Beets</td>
</tr>
<tr>
<td>- Tart Cherries</td>
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<tr>
<td>- Ginger and Turmeric</td>
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<tr>
<td>- Garlic</td>
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<tr>
<td>- Olive Oil</td>
</tr>
<tr>
<td>- Cocoa and Dark Chocolate</td>
</tr>
<tr>
<td>- Basil and many other herbs</td>
</tr>
<tr>
<td>- Mediterranean Diet</td>
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</tbody>
</table>
At UCSF in a study with mice, they were fed a vegan diet then abruptly switched to a high animal fat diet the intestinal microbes (as measured in their feces) changed within three days.

A study in Gambia of pregnant women and their babies showed the difference between birth weights of those born in the dry season (famine) and those born in the rainy season (harvest). Pregnant women during famine showed lower vitamin B and folic acid levels in their blood. Babies were born in famine with lower birth weights and a greater likelihood of insulin resistance and type 2 diabetes. These results were correlated with epigenetic changes between groups.
Stress (easy)

- Meditate every day
- Decrease background noise and distractions at work
- Avoid multitasking, deal with one thing at a time
- Stop being the cause of someone else's stress
- Vary your daily activity, including time out and down time
- Leave work on time at least three times per week
- Stop unloading your stress on your family and friends
- Avoid people who are sources of pressure and conflict
- Be in contact with people who are meaningful to you
- Decrease boring and repetitive work
Stress

Easy
• Reduce alcohol to one beer or glass of wine taken with a meal
• Take up a hobby
• Retreat from stressful situations quickly
• Find a physical outlet to unwind from daily stress.

Hard
• Seek the most meaningful work you can find
• Be a manager instead of a worker
• Seek job security over money
• Save for the future. Be fully insured
• Become more accepting
• As much as you can stop resisting
Stress (hard)

- Stop taking on too much responsibility
- Stop bringing work home. Leave the office at the office
- Take more days off from work
- Eliminate boring repetitive work
- Enjoy Nature every day.
- Find a close confidant
- Find a mentor
- Adopt a vision of the future
- Become a healer of stress
- Deal with your emotions---anger, fear, anxiety, self judgement, depression
Stress (Experimental)

- Become your own boss
- Work toward a higher sense of self and self esteem
- Become someone’s close confidant
- Become a mentor
- Take a course in crisis management
- Deal with long standing psychological issues through therapy
Healing Stress

- Ask others how they feel and **listen to the answer**
- Don’t insist on getting your own way
- Always show respect for everyone, Never belittling or scapegoating
- Never criticize someone in public
- Accept input from as many people as possible
- Praise and appreciate other people’s work
- Be loyal in order to win loyalty
- Do not gossip or back bite
- Wait until you are calm before addressing a situation that makes you angry
- Give coworkers and employees enough space to make their own decisions
- Be open to new ideas, no matter where they come from
- Address tension as it arises instead of denying it
- Do not be a perfectionist who can never be satisfied
- Treat both sexes equally
**Exercise (easy)**

- Get up and move around once an hour
- When taking an elevator take the stairs to the second floor before pushing the button
- Do your own housework instead of hiring a cleaner
- Take a brisk walk after dinner
- Choose the far corner of a parking lot (if it is lighted and safe)
- If you already walk your dog daily, make the walk longer and brisker
- If a destination is less than half a mile, walk instead of driving
- Buy an exercise step and use it for 15 minutes a day while watching TV or listening to music
- Go outside for 5 or 10 minutes three times a day
- Take up gardening, golf or a similar activity that you enjoy
- Set aside 5 or 10 minutes a day for calisthenics
- Do more than half the chores around your house
- Work with light weights as you watch TV
Exercise (hard)

- Acquire more active friends and join them in their activities
- Devote half of your lunch hour to exercise
- If you take children to the park, play with them instead of watching
- If you take an elevator walk to the third or fourth floor before pushing the button
- Plan a shared exercise activity with your partner or spouse twice a week
- Buy an exercise step and use it for 30 minutes a day while you watch TV or listen to music
- Resume a sport you used to love
- Do 5 or 10 minutes of calisthenics twice a day
- Walk for a total of 3 hours per week
- Do all of your own yard work
- Volunteer to help the needy with housekeeping, painting and repairs
- Take hikes every weekend in good weather
- Use a trainer at the gym
Exercise (experimental)

- Join an exercise class
- Take up yoga
- Lead a hiking group
- Train for a competitive sport and stay with it
- Find a regular exercise buddy
- Take up tennis
Meditation (easy)

- Take 10 minutes at lunchtime to sit alone with eyes closed
- Learn a simple breath meditation for use 10 minutes morning and evening
- Use a mindfulness technique several times a day
- Take up a simple mantra meditation for 10 minutes twice a day
- Find a friend to meditate with
- Take inward time whenever you find it helpful, at least once a day
Meditation (hard)

- Join an organized meditation course
- Increase your meditation to 20 minutes twice a day
- Make meditation a shared practice with your spouse or partner
- Add some simple yoga poses to precede your meditation
- Add 5 minutes of *Prananyama* (breath technique) before meditating
- Teach your children to meditate
Meditation (experimental)

- Investigate the spiritual traditions behind meditation
- Become a meditation teacher
- Explore taking meditation to the elderly
- Explore introducing meditation at a local school
Sleep (easy)

- Make your bedroom as dark as possible.
- Make your bedroom as quiet as possible.
- Make sure your bedroom is comfortably warm and draft free.
- Take a warm bath before bedtime
- Drink a glass of warm almond milk before bedtime
- Meditate for 10 minutes sitting up in bed then slide down into your sleeping position
- Avoid reading or watching TV for a half an hour before bedtime
- Take a relaxing walk before you go to sleep
- Take an aspirin an hour before bedtime to settle minor ache and pains
- No caffeinated coffee or tea three hours before bedtime
- Use the evening hours after work to relax
- Meditate in the evening after you come home from work
- Find ways to unwind from stress
Sleep (hard)

- Be regular in your sleep routine, going to bed and getting up at the same times daily
- Remove the TV from your bedroom. Keep the bedroom a place for sleeping
- Attend to signs of anxiety, worry or depression
- Don’t take work home with you
- Get a massage before bedtime from your spouse or partner
- No alcohol in the evening
- Buy a more comfortable mattress
Experiment with herbs and herbal teas traditionally associated with good sleep
Engaging in cognitive therapy which has been associated with helping insomniacs
Get tested at a sleep disorder clinic
Have a sesame oil massage
Try an Ayurvedic herbal remedy for Vata imbalance
Emotions (easy)

- Write down five specific things that make you happy. On a daily basis do one of them
- Express gratitude for at least one thing daily
- Express appreciation for one person every day
- Spend more time with people who are happy and less time with people who aren’t
- Set a “good news only” policy at mealtime
- As you go to sleep at night, take a moment to mentally review the good things that happened that day
- Fix a weekly date night with your spouse or partner
- Do one thing a week that brings someone else a moment of happiness
- Make leisure time creative, go beyond TV and the internet
Emotions (hard)

- Set a worthy long-term goal and pursue it
- Find something to be passionate about
- Cut back on exposure to bad news in the media- make do with one news program or reading one story online
- Use the positive and negative input charts every day
- When something makes you unhappy, walk away as soon as you practically can
- Do not unload your negativity on others, seek sympathy and compassion instead
- Do one thing a day that brings someone else a moment of happiness
- Learn to deal with negativity after you calm down, not in a heated or anxious moment
Emotions (experimental)

- Write down your personal vision of a higher life
- Find one self-defeating habit and write down a plan to overcome it
- Explore the time in your life when you were happiest and learn from it
- Set out to improve your emotional intelligence
Emotions-Positive Input for happiness

- Meditation
- Love and affection
- Satisfying work
- Creative outlets
- Hobbies
- Success
- Being appreciated
- Being of service
- Healthy food, water, and air
- Setting long-range goals
- Physical fitness
- Regular routine free of stress
Emotions - Negative Input damages happiness

- Stress
- Toxic relationships
- Boring unsatisfying work
- Being ignored and taken for granted
- Constant distractions during the day
- Sedentary habits
- Negative beliefs, pessimism
- Alcohol, tobacco and drugs
- Eating when you are already full
- Processed foods and “fast foods”
- Physical illness, especially if painful
- Anxiety and worry
- Depression
- Unhappy friends
Emotional High IQ Habits

- Good impulse control
- Comfortable with delayed gratification
- Able to see how someone else feels (empathy)
- Open to their own emotions (self acceptance)
- Know how emotions work and where each leads
- Successfully feel their way through life instead of thinking their way through life
- Meet their needs by linking with someone who can actually fulfill them.
Telomeres

- In multiple studies over 30 years at Ohio State University, Professor Janice Kiercoh-Glaser and her colleagues have been examining chronic stress on the immune system.
- They found evidence in the telomeres of the immune cells. Their research led them to believe that the aging of the cells of the immune system is representative to the aging of the whole cell population of the person.
- In their study they estimated that the chronic stress of those they studied accelerated aging by 4-8 years.
In their 2008 study Dr. Dean Ornish and Elizabeth Blackburn made a breakthrough by showing that gene expression was improved by lifestyle changes.

They found that telomerase, the substance that builds telomeres, increased in subjects who made lifestyle changes.

This result was also found in a pilot study of a group of 64 healthy women who were introduced to either an intensive meditation and stress relief retreat or just a vacation retreat at the Chopra Institute in a 2014 study.

During the week blood samples were collected from both groups and measured for age-related biomarkers.
In addition, any changes in psychological and spiritual wellbeing were also assessed. This assessment was continued up to 10 months after the retreat ended.

By day 5 both groups showed a “vacation effect” of improved mental health and beneficial changes in their gene activity.

Other changes occurred in the meditation group that did not occur in the control group.
Telomeres

- The Meditation group showed:
  - A two to three fold increase in gene activity associated with viral infection protection and wound healing
  - Beneficial changes in the gene activity associated with Alzheimer’s Disease
  - A dramatic increase in the anti-aging activity of telomerase.
  - These effects occurred quickly, within a few days

- These pilot study findings have now led to a project called the Self-directed Biological Transformation Initiative (SBTI) in which seven research institutions are studying the effects of diet, yoga, meditation and massage on the body, mind and spirit of their subjects.
Success is getting what you want. Happiness is wanting what you get.

Dale Carnegie
The body heals with play,
The mind heals with laughter,
And the spirit heals with joy

Proverb
Questions?