



How to Look and Feel Younger Longer

A Handbook of
10 Powerful Lifestyle Tips
Backed by Proven
Research

[The information in this ebook should not be viewed as medical advice as we are not medical professionals. We are sharing information and recommendations from and based on scientific publications and studies that are enumerated in the article's endnotes. This ebook is also intended to provide a basic list of tips but in no way is meant to indicate this list is definitive. As always, when beginning any new program dedicated to health and which is new for you, be sure to first consult your physician.]

1. Posture

As we advance in years we're faced with a set of physical, mental and emotional challenges that are quite different from those we encountered in our younger years. It is, unfortunately, accepted by most people that deterioration of health is an unavoidable part of aging. This belief has been proven **largely untrue** by people like **Dan Buettner**, National Geographic Fellow and New York Times bestselling author who coined the phrase **Blue Zone** to describe areas of the world where people live much longer than average. "Blue Zone" first appeared in Buettner's November 2005 National Geographic magazine cover story, "The Secrets of a Long Life."

If we don't live in a Blue Zone there are still a number of key areas in our lives which we can consciously address not just from time to time but everyday in order to ensure a wonderful quality of life that can have us running circles around younger people!

There are several keys for thriving with a wonderful quality of life as we advance in years. In this article we are focusing on the first key, a set of interrelated conditions: Posture, Strength, Flexibility, Agility, and Stability, to name only a few.

An erect posture makes us not only look beautiful but feel beautiful and confident in our bodies. Unfortunately, many older peoples' postures have become compromised over time. There are reasons for posture degeneration as we advance in life.

Osteoporosis, the loss of bone mass and osteomalacia, softening of the bones, are major contributors. Spinal surgery may also cause curvature of the spine and imbalance. As we get older bones may lose some of their minerals and become less dense (a condition called osteopenia in the early stages and osteoporosis in the later stages). Older adults often lose height because of osteoporosis when bones become weak and fracture resulting in loss of height. Older adults also can lose lean muscle mass while gaining fat, a condition called sarcopenia causing weakness and frailty and a decrease in height. You can help prevent height and stature loss by following a healthy diet, staying physically active, and preventing and treating bone loss.



“Dietary intake is an important modifiable factor for bone health. Inadequate intake of nutrients important to bone increases the risk for bone loss and subsequent osteoporosis. The process of bone formation requires an adequate and constant supply of nutrients, such as calcium, protein, magnesium, phosphorus, vitamin D, potassium, and fluoride. However, there are several other vitamins and minerals needed for metabolic processes related to bone, including manganese, copper, boron, iron, zinc, vitamin A, vitamin K, vitamin C, and the B vitamins.”

— Cristina Palacios in "The Role of Nutrients in Bone Health, From A to Z

Women more than men tend to experience what is commonly called hunchback or age-related postural hyperkyphosis. It impairs mobility and increases the risk of falls and fractures. All the exact causes of hyperkyphosis are not exactly established but experts believe it generally develops from either muscle weakness and degenerative disc disease (causing vertebral fractures and worsening hyperkyphosis), or from vertebral fractures that occur first in the spine and then precipitate development of a hunched over back.

As soon as we become aware that our posture is not what it should be, no matter what age that is, we should create a program for ourselves to mitigate or reverse poor posture. Along with a diet rich in dark leafy greens to enrich our bone density and health, we should include a weight resistance exercise program and a regimen of stretching exercises (or yoga). Both of these will not only strengthen our musculature but nourish our skeletal system as well.

A good set of consistently practiced core-strengthening exercises must be the foundation of any exercise program. It is a strong core that holds the body up, not the bones or spine. A six-pack set of abs is not the goal although it will probably happen over time. What we are really after is developing the abdominals underneath the surface abdominals (transverse abdominis).

Often, the mere act of getting in to the gym and working out consistently improves our self-image so much that our posture naturally rises. In addition, directing our awareness to our chest area and imagining a string pulling our heart center upward can assist us to be more vigilant with and consciously correct our posture.

Weight resistance training is also very grounding causing us to feel like we're in our bodies fully. This palpable feeling leads to greater agility and stability. We will fall less, if at all, and seriously reduce, if not nearly eliminate, our risk of bone fractures from falling.

The more flexible the spine is, the greater our health tends to be. Weight bearing and resistance programs should include flexibility exercises for the spine specifically and flexibility in many other areas of the body generally. Many gyms offer equipment to help us improve spinal flexibility and strength. Blending a sensible yoga or stretching practice with weight resistance workouts will synergistically create the heightened level of flexibility we are looking for.

Endnotes for this article:

- Katzman, Wendy B, et al. “Age-Related Hyperkyphosis: Its Causes, Consequences, and Management.” The Journal of Orthopaedic and Sports Physical Therapy, U.S. National Library of Medicine, June 2010, www.ncbi.nlm.nih.gov/pmc/articles/PMC2907357/
- Zamon, Rebecca. “Want To Improve Your Posture? Walk Around Barefoot.” HuffPost Canada, HuffPost Canada, 23 Nov. 2015, www.huffingtonpost.ca/2015/11/23/barefoot-walking-benefits_n_8629098.html
- Palacios, Cristina. “The Role of Nutrients in Bone Health, from A to Z.” Critical Reviews in Food Science and Nutrition, U.S. National Library of Medicine, 2006, www.ncbi.nlm.nih.gov/pubmed/17092827.

2. Lean Body Mass

Aging is associated with a decline in: 1) food and water intake, 2) lean body mass, and 3) physical activity and the ability to perform even normal activities of daily life. Are these declines simply the result of the aging process or are they the result of a more sedentary life associated with aging? In our previous blog post we discussed how good posture (Tip #1) is important for vitality in advancing years. In this article, we discuss Look and Feel Younger Longer Tip #2: Lean Body Mass – how to get it and why we would want to.

“Studies in elderly people who have been active all their life such as the Lapps* in Finland and Sweden show no decline in functions until the date they sell their reindeer and sit down, whereafter they quickly decline to the level of other people of the same age.”

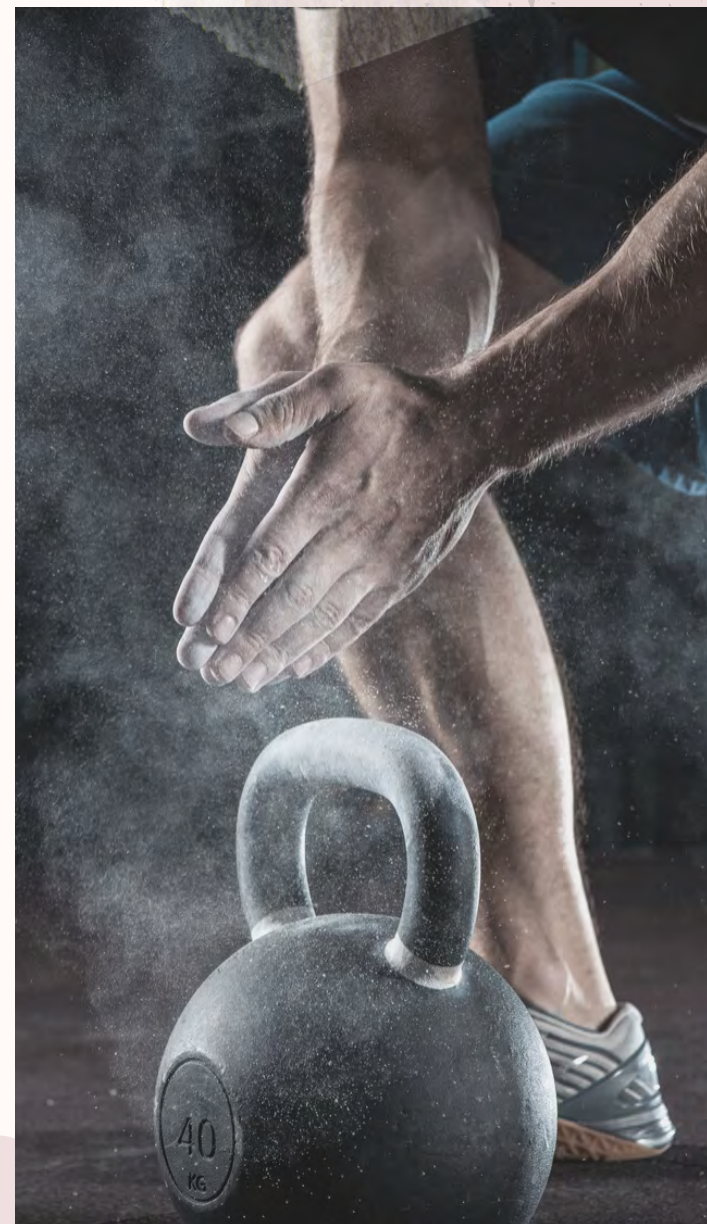
—Mikael Fogelholm in Physical Activity: A Part of Healthy Eating? Report from a Nordic Seminar

The human body is made up of fat, lean tissue (muscles and organs), bones, and water. After age 30 our bodies slowly begin the process of atrophy – the loss of lean tissue – where our muscles, liver, kidney, and other organs may lose some of their cells. We lose lean tissue and take on body fat. In fact, older people tend to have one-third more fat than they had when they were young.

Men generally tend to gain weight until about age 55 and then begin the process of weight loss later in life caused by a drop in the male sex hormone testosterone.

Women generally tend to gain weight until age 65 and then begin to lose weight. A great deal of this excess weight localizes in the girth around the internal organs and, unfortunately, this is not all muscle. Hormonal and lifestyle changes are often the cause of weight gain but not always.

Weight loss later in life, especially in non-active seniors, occurs partly because fat replaces lean muscle tissue and fat weighs less than muscle.





Without a healthy proportion of muscle in the legs combined with a tendency to stiffer joints the ability to move with ease becomes more of a challenge compromising our balance and making the possibility of falls more likely.

Our lifestyle choices affect how rapidly the aging process progresses and can even affect atrophy in very advanced age. Physical training in older people has proven very positive for increasing lean body mass and work capacity in older people including the very elderly. Weight resistance training is key for improving work capacity for an independent lifestyle.

“A training intervention study in 85 year old women, including endurance training, showed that a 10 month training program was able to rejuvenate their work capacity by 10 years.”

—Mikael Fogelholm in Physical Activity: A Part of Healthy Eating?
Report from a Nordic Seminar

We cannot emphasize enough the degree to which our lifestyle choices affect how rapidly the aging process progresses.

We want to build lean muscle mass with weight resistance exercise in order to help reduce fat and weakness, but it is important to do so wisely by gradually building up a workout program with plenty of rest between workout sessions combined with a good nutrition plan to support our exercise regimen.

Here is where a prudent diet focusing on much much less animal fat and more physical exercise can be successful in getting lean and spry once again. Fats from vegetables and nuts and seeds are usually a better alternative and actually very beneficial for health. The fact is this: **If you curb the offenders in your diet and add a consistent weight resistance and flexibility program, you will begin noticing results very quickly and lose that extra fat and weight incrementally over time.** You will not need cool sculpting as advertised on television or liposuction from a plastic surgeon and your weight loss will be accomplished organically giving you an awesome mental boost in the process.

Losing the fluff and gaining muscle firmness and tone will create in you the kind of leanness that creates a strong body that is able to meet various physical challenges. Lower lean body mass means decreased strength, function and mobility. Lean body mass is a key determinant of survival in the context of critical illness where people typically lose 1% of muscle protein for each day of illness so it's vitally important to build up a healthy store of lean body tissue.

“A smaller lean body mass may mean that many older people lack the physical reserve to withstand a prolonged period of critical illness, where more than 1% of body protein may be lost each day even when adequate energy and protein are being provided.”

—Nancy Bernhardt et al in "Nutrition for the Middle Aged and Elderly"

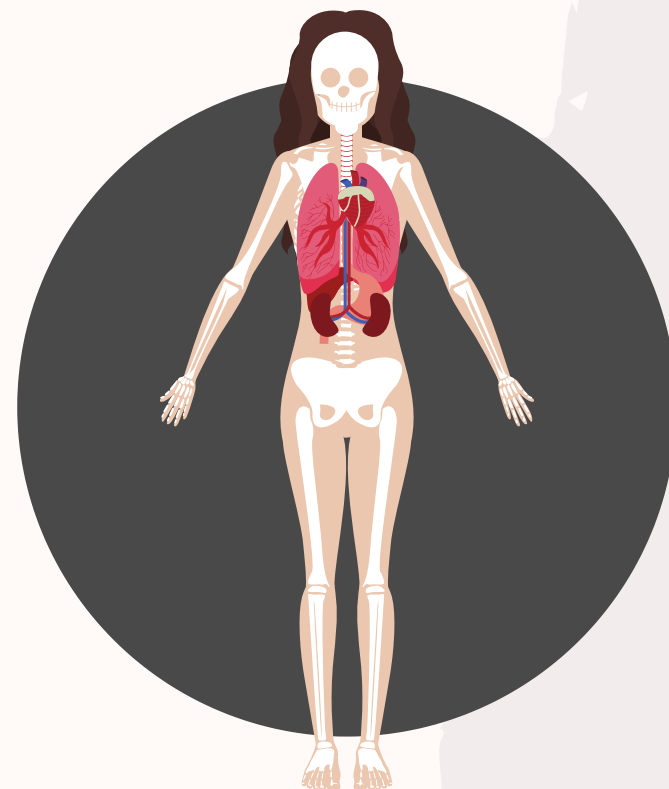
Lean body mass is also important for:

- Respiratory muscle strength
- Improved circulation of blood to the organs which keeps them healthy and able to rid the body of toxins
- The ability to fight diabetes because muscles store glycogen for a readily available energy source when needed
- Improved bone strength and density; although exercise targets muscles it also strengthens the bones because bones, like muscle, react to the demands we place on them.

An interesting fact about calorie burning is that muscles burn two to three times as many calories as the same amount of fat, therefore the more muscle you have the more calories you'll burn and the less calories will be available to be converted into fat. And if you consume less calories than you need to burn on a daily basis, your body will actually convert your fat cells into energy and burn them instead. When you build lean muscle mass you naturally decrease your body fat percentage.

In addition, once your muscle mass begins to increase while fat decreases, you'll notice you have the greatest prize of all – more energy.

Acquiring and maintaining lean body mass, especially in older age, is vitally important for health and quality of life. We just can't emphasize this enough. It gives us the ability to undertake daily activities with confidence and to mitigate and slow the aging process. Our body shape and weight changes naturally as we age but many people prove every day that we can alter that process with our lifestyle choices.



Endnotes for this article:

- Tallis, Raymond, et al. Brocklehurst's Textbook of Geriatric Medicine. Churchill Livingstone, 2003.
- Bernhardt, Nancy E., and Artur M. Kasko. Nutrition for the Middle Aged and Elderly. Nova Science, 2008.
- Fogelholm, Mikael. Physical Activity: A Part of Healthy Eating?: Report from a Nordic Seminar, Lahti, Finland, February 2000. Nordic Council of Ministers, 2001.
- TodayShow. “Can Exercise Detox Your Body? It's Not about the Sweat.” TODAY.com, 17 Dec. 2012, www.today.com/health/can-exercise-detox-your-body-its-not-about-sweat-1C7634616.

3. Get Grounded

Getting literally grounded (living in contact with the Earth's natural surface charge) by absorbing earth's electrons into your body can rebalance the body and restore you to greater levels of health and vitality. The practice is called grounding or earthing and its health benefits are myriad and proven. It reduces chronic inflammation and free radicals in the body both of which lead to chronic diseases and acceleration of the aging process. You can get grounded by walking barefoot on the earth (see our recent blog on these and other [benefits of going barefoot here](#)), by wearing earthing shoes, socks and wristbands, and by sleeping on earthing bedsheets.

Our bodies are being constantly bombarded by electrical fields most of which happens right inside our homes. Many people report becoming chronically ill from the constant insult of these frequencies. Earthing actually reduces such electric fields imposed on the body.

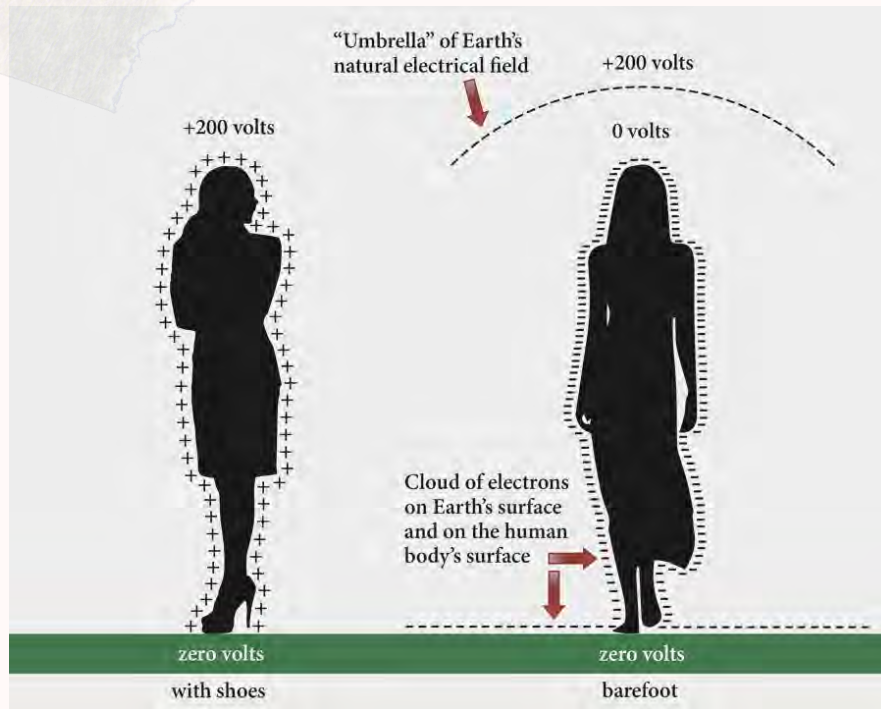
One scientific experiment* found that grounding during a single night of sleep reduces the primary indicators of osteoporosis. Another experiment performed by the same scientists led to the discovery that earthing helps regulate thyroid function which is significant because thyroid hormones affect almost every physiological process in the body. Still a third study found that earthing accelerates the immune response in humans.

The surface of the earth radiates an abundance of electrons that gives it a negative electrical charge. If you are standing outside on a sunny day and wearing shoes you are receiving approximately 200 volts between the Earth and the top of your head. On the other hand, if you are standing on bare earth on that same sunny day your whole body is in electrical contact with the Earth's surface: your skin and the Earth's surface make a continuous charged surface both with the same electrical potential; the charged area is pushed up and away from your head creating a protective shielding effect where you are literally standing beneath an "umbrella" of Earth's natural electrical field. *See illustration, next page.*



To understand how earthing works consider the household outlet that contains a ground wire—the third prong/semi-circular hole beneath the other two prongs: In the event of a short circuit, the ground wire will provide a path for the electrical current to be absorbed into the ground; without grounding, if you were to touch a device powered by electricity such as your refrigerator your body might complete the ground path causing an electric shock or even electrocution.

Grounding for our bodies works the same way as grounding works for our electrical appliances. Without consistent grounding our bodies are short-circuiting showing up in physical, emotional, and mental disorders.



To understand how earthing works consider the household outlet that contains a ground wire—the third prong/semi-circular hole beneath the other two prongs: In the event of a short circuit, the ground wire will provide a path for the electrical current to be absorbed into the ground; without grounding, if you were to touch a device powered by electricity such as your refrigerator your body might complete the ground path causing an electric shock or even electrocution.

Grounding for our bodies works the same way as grounding works for our electrical appliances. Without consistent grounding our bodies are short-circuiting showing up in physical, emotional, and mental disorders. When we regularly connect to the Earth for grounding we are able to achieve a re-balancing of our electrical system as described here by biophysicist James Oschman:

“The moment your foot touches the Earth, or you connect to the Earth through a wire, your physiology changes. An immediate normalization begins. And an anti-inflammatory switch is turned on. People stay inflamed because they never connect with the Earth, the source of free electrons which can neutralize the free radicals in the body that cause disease and cellular destruction. Earthing is the easiest and most profound lifestyle change anyone can make.”

—James Oschman in "Energy Medicine: The Scientific Basis"

“And forget not that the earth delights to feel your bare feet and the winds long to play with your hair.”

— Kahlil Gibran

When we are grounded we feel centered, solid, strong and balanced—like we’re really and firmly in our bodies. If you feel like a leaf blowing in the wind, shaky, spacey, always at loose ends, less present or fragile, you’ve lost touch with the ground, nature and your natural essence and you probably need to get grounded.

Though there are a number of grounding devices available today (mentioned at the outset of this article) the easiest way to get grounded is to practice mindful walking barefoot or to simply stand on the bare earth, grass, stones, or sand. Stand in one place, walk, or lay down for at least 20 minutes at a time, preferably twice a day. You might want to practice the art of standing like a tree also known as Zhan zhuang or shinrin-yoku (forest bathing). See our blog post at our [sister site here](#) for more information and tips on receiving grounding from trees.

Reduce inflammation, free radicals and other physiological conflicts in your body with the simplest, most natural healing device known to man. Clear your energy every day and notice how much more balanced and alive you feel in every way.

Grounding provides a number of physiological and mental benefits. A number, if not, all of these can help mitigate sickness and the symptoms of aging.

- a clearer mind and thinking process
- more balanced emotions
- elevated energy
- better managed pain
- improved sleep
- reduced stress reaction
- boosted immunity
- lessened inflammation
- improved circulation

Endnotes for this article:

* Discussed in: Rosch, Paul J. Bioelectromagnetic and Subtle Energy Medicine. CRC Press, 2015.

- Oschman, James L. Energy Medicine: the Scientific Basis. Elsevier, 2016.
- Ober, C. et al. Earthing: The Most Important Health Discovery Ever. Basic Health Publications, Second Edition. 2014





4. Walk for Cardiovascular Vitality

Heart disease, which tends to manifest its symptoms as people grow older, can seriously affect quality of life including how youthful, strong and mobile we feel. Compromised cardiovascular health is a result of various high risk factors for heart disease. These factors most often build up over time and include high blood pressure, high cholesterol, smoking, diabetes, overweight and obesity, poor nutrition, physical inactivity, excessive alcohol use, vascular stiffness and inflammation, and mental stress. Both the disease and the added stress of knowing that this long-term illness may result in a cardiac event such as heart attack or stroke make a direct and negative impact on the aging process. Let's explore anti-aging tip #4 (which is also closely related to tip #3 on building lean body mass), walking for cardiovascular vitality.

Heart disease caused by plaque buildup causes impaired blood flow which may result in swelling of legs, feet, ankles or belly and even stroke, and it also deprives necessary oxygen supply for the heart and the rest of the body. This causes chest pain (angina) and impaired cellular function. Shortness of breath, fatigue and weakness may also result. Plaque may break off and cause a blocked artery resulting in a heart attack.

There are things we can do to delay, lower, or possibly avoid or reverse your risk of heart disease. Similar to our other muscles, it's quite possible to strengthen the heart and even reverse some of the heart's aging symptoms. One solution is regular cardio exercise.

"Research continues to show that exercise is the best way to slow your heart's aging process," says Dr. Aaron Baggish, Director of the Cardiovascular Performance Program at Harvard-affiliated Massachusetts General Hospital. Increasing exercise and physical activity are often cardiovascular physicians' first prescription for improving overall heart health. This is because the exertion caused by physical exercise forces the heart to pump more blood throughout the body to the muscles and lungs. This process relaxes blood vessels over time causing the heart to function more efficiently. Both relaxing the blood vessels and creating greater ease of blood flow help keep blood pressure low.



Cardio workouts from beginner to advanced levels can be enjoyed at your gym on the treadmill or bicycle or just by walking consistently in your neighborhood. Fitness sources say you want to aim to walk briskly for a total of approximately 150 minutes per week. Many sources urge 5,000 to 7,000 steps a week however if you are just beginning to endurance walk, take it easy and build up to it. Perhaps walking to the end of your driveway or to your street corner is all you can do today. Tomorrow you will be able to take several more steps and every day you go out will build on the previous day's accomplishment. Remember and live by the old adage: "By the yard it's hard. By the inch it's a cinch."

Walking flat out improves cardiac risk factors.

"When comparing the results of the most recent National Runners' Health Study with the National Walkers' Health Study, researchers found that the energy used for moderate-intensity walking and vigorous-intensity running resulted in similar reductions in risk for high blood pressure, high cholesterol, diabetes and heart disease over the study's six year period."

— Elaine Murtagh et al in "Walking: the First Steps in Cardiovascular Disease Prevention"

A study published in the British Journal of Sports Medicine found that those who consistently engaged in a walking program demonstrated significant improvements in blood pressure, slowing of resting heart rate, reduction of body fat and body weight, reduced cholesterol and increased physical endurance. Realizing a better quality of life as a result of walking for heart health they also showed improved depression scores.

Walking is a perfect fitness prescription for inactive individuals because it is easily accessible to men and women of all ages and social groups posing little risk of injury.

“In a report that included findings from multiple well done studies, researchers found that walking reduced the risk of cardiovascular events by 31% cut the risk of dying by 32%. These benefits were equally robust in men and women. Protection was evident even at distances of just 5½ miles per week and at a pace as casual as about 2 miles per hour. The people who walked longer distances, walked at a faster pace, or both enjoyed the greatest protection.”
— "Walking: Your Steps to Health. Exciting benefits of walking for heart health, including lower risk of heart attack and stroke, Harvard Men's Health Watch"

Ultimately, our level of health can be determined by how long we can walk without getting winded. More specifically, endurance walking is one indicator of cardiovascular vitality.

Elevated cardiovascular vitality caused by consistently walking as briskly as possible also creates improvements in blood pressure and cholesterol levels, overweight and obesity, and even mental stress all of which are risk factors for heart disease.

Endnotes for this article:

- Harvard Health Publishing. “Get Moving to Slow Cardiovascular Aging.” Harvard Health, www.health.harvard.edu/heart-health/get-moving-to-slow-cardiovascular-aging.
- <https://www.nia.nih.gov/health/heart-health-and-aging>
- Steinhilber, Brianna. “Why Walking Is the Most Underrated Form of Exercise.” NBCNews.com, NBCUniversal News Group, 4 May 2018, www.nbcnews.com/better/health/why-walking-most-underrated-form-exercise-ncna797271.
- Hanson, Sarah, and Andy Jones. “Is There Evidence That Walking Groups Have Health Benefits? A Systematic Review and Meta-Analysis.” British Journal of Sports Medicine, BMJ Publishing Group Ltd and British Association of Sport and Exercise Medicine, 1 June 2015, bjsm.bmj.com/content/49/11/710.
- Murtagh, Elaine M, et al. “Walking: the First Steps in Cardiovascular Disease Prevention.” Current Opinion in Cardiology, U.S. National Library of Medicine, Sept. 2010, www.ncbi.nlm.nih.gov/pmc/articles/PMC3098122/.



5. Keep the Lymph Moving

Lymph is a colorless fluid containing white blood cells that bathes the tissues and drains through the lymphatic system* into the bloodstream. Impaired flow of lymph accelerates the aging process and compromises the immune system. On the other side of the coin, the intensity of the aging process itself affects the functionality and dynamics of lymph flow. Facilitating movement of lymph fluid in the body is look and feel younger longer tip #5.

The role of lymphatic vessels (thin-walled vessels structured like blood vessels that carry lymph) is to transport fluid, soluble molecules, and immune cells to the lymph nodes tasked with draining lymph. The consensus in the literature is that the function and capacity of the lymphatic system gets sluggish with age because of decreased lymphatic contractile pressure (the muscles that help circulate lymph lose mass and weaken) and pumping frequency (a decrease in lung capacity). Increased oxidative stress and reduced antioxidant activity associated with aging may also be factors. (Journal of Lymphoedema, 2017, Vol. 2, No. 2)

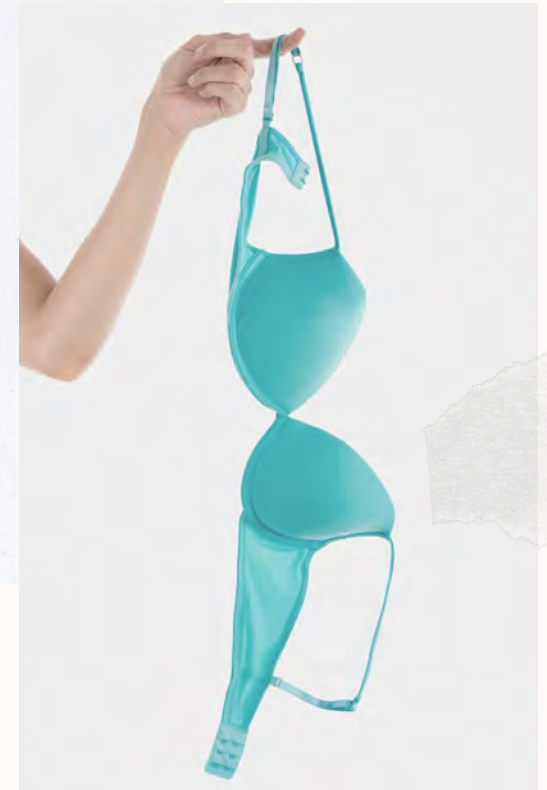
Lymphoedema occurs when fluid is retained in a localized part of the body and the tissue swells. It can be caused by a lymphatic system that has been compromised most frequently as but not limited to a complication of cancer treatment or parasitic infection. The lymphatic system is a critical element of the body's immune system and returns interstitial fluid to the bloodstream. Lymphoedema is incurable and progressive but its symptoms of swelling and discomfort or pain can be somewhat lessened by a number of treatments including lymphatic massage and wearing compression clothing.

YOU CAN KEEP YOUR LYMPHATIC SYSTEM FUNCTIONING PROPERLY BY:

- exercising and building and maintaining muscle strength and lean body mass; muscle contraction forces tiny one-way valves of the lymphatic system to open and close and push the fluid through the system;
- walking (or rebounding); as a weight-bearing activity each step you take lightly pounding the ground, floor or pavement, creates pump-like gravitational pulls on the lymphatic system;
- practicing yoga or stretching helps direct lymph through the deep channels of the chest;
- practicing deep breathing; the act of breathing creates a lymphatic pump in itself helping to direct lymph through the chest; deeper more mindful breathing is the most important facilitator of lymphatic function while consistent shallow breathing leads to lymphatic congestion (for help with a proper breathing exercise, check out our [blog on Six Breaths a Minute to Slow Aging and Its Causes here](#));
- receiving a manual lymphatic massage from a licensed lymphatic massage therapist or receiving a facial** and full body drainage treatment performed by a PHYTO5 trained professional using the [Biorhythmic Drainer](#);
 - PHYTO5's award-winning technology, the Biorhythmic Drainer, mechanically, rhythmically, and precisely reproduces the gentle movement of a manual massage focused on moving energy and fluids that are otherwise stagnant;
 - the well-known Japanese cosmetics company, Shiseido, found in 2015 that impaired dermal lymphatic vessels are an integral cause of sagging skin** rather than collagen loss;
- staying hydrated to help prevent lymphatic stagnation; lymph gets thicker and more sludgy when you're dehydrated but will flow well when hydrated (*list continues next page*);



- avoiding processed foods and bad fats; these can cause inflammation and lead to lymphatic system congestion;
- eating lots of fresh fruits and vegetables especially green vegetables because chlorophyll not only purifies the blood, it purifies lymph;
- avoiding chemical laden skin and body care products, cleaning products and pesticides which impede the body from immediate detoxification ([Ageless La Cure](#) by PHYTO5 skincare is a pure choice);
- learning how to resiliently respond to stress; the waste products of stress-fighting hormones are acidic and acidity leads to lymph congestion;
- refraining from wearing tight fitting clothing including underwear and underwire bras because both restrict the flow of lymph;
- avoiding unhealthy habits like smoking.



Endnotes for this article:

*the network of vessels through which lymph drains from the tissues into the blood

**In 2015, the well-known Japanese cosmetics company, Shiseido, found impaired dermal lymphatic vessels to be an integral cause of sagging skin. Before 2016, sagging skin was mainly attributed to collagen loss. Their press release states:

“Shiseido Co., Ltd., through joint research with Professor Nobuyuki Takakura of the Research Institute for Microbial Diseases, Osaka University, has revealed for the first time that impaired function of dermal lymphatic vessels lead to accumulation of subcutaneous fat, which ultimately causes ‘sagging’ of the skin.”

- Zolla, Valerio, et al. “Aging-Related Anatomical and Biochemical Changes in Lymphatic Collectors Impair Lymph Transport, Fluid Homeostasis, and Pathogen Clearance.” *Aging Cell*, John Wiley & Sons, Ltd, Aug. 2015, www.ncbi.nlm.nih.gov/pmc/articles/PMC4531072/.
- Dr. Baumann, Leslie. “The Connection Between Lymph and How You Look.” *Miami Herald*, July 21, 2014. www.miamiherald.com/living/health-fitness/skin-deep/article1976385.html.

6. Mineralize Skin and Body

An alarmingly low state of nutrition awareness prevails in the U.S. As a population we generally fail to make a direct correlation between our diets and our state of health and well-being. Many of us often deliberately choose denial over proactively learning about core simple issues that, if embraced, could alleviate a great deal of physical suffering, including the acceleration of our aging process. Minerals are one component of very necessary human nutrition, but how often do we think of minerals for skin health?

We all lose minerals as we age or live in stressful environmental conditions. Certain minerals are needed to hold hydration in the skin. Without them, creams won't help. Skin can't be properly hydrated without a sufficient mineral delivery system. Certain minerals and trace minerals play an enormous role in maintaining the day-to-day health of our skin as well as providing therapeutic benefits for various skin conditions.

CHROMIUM

One of the most destructive influences on skin health and aging is continual blood sugar spikes caused by eating foods that release sugar into our bloodstream very fast. If excess sugar reaches the dermis, it quickly begins to bond with collagen and elastin and then continues to create cross links between fibers causing the collagen lattice to become stiff. This leads to a loss of youthful elasticity of the skin and acceleration of the process of skin's aging.

The trace mineral chromium helps stabilize blood sugar levels meaning there will be less likelihood that sugar will be deposited in the collagen matrix of the skin. Broccoli, brewer's yeast, barley, oats, green beans, tomatoes, romaine lettuce, and black pepper are good dietary sources of chromium.



SELENIUM

The trace mineral selenium is a key player in longterm skin health mostly because of its powerful antioxidant activity. Selenium is a cofactor (a substance required for the production of another substance) in the production of another extremely powerful antioxidant known as glutathione peroxidase. Glutathione plays a significant and very vital role in protecting cells and tissues from damage caused by mutated cells or free radicals which are responsible for aging. Selenium is also anti-inflammatory for the body and skin. Get selenium by eating brazil nuts, shiitake mushrooms, sunflower seeds, whole grains, potatoes, prawns, tuna, oysters and salmon.

SILICA

Silica activates certain enzymes involved in the production of collagen. It rests inside collagen acting like glue between connective tissues. It helps prevent wrinkles, provides a lifting effect, and strengthens and regenerates skin and bone tissues. Silica is a strong carrier of oxygen which helps to give skin a healthy glow. It also assists red blood cells to carry more oxygen throughout the body which, in turn, helps improve skin hydration. It is imperative for healthy youthful skin. We can derive silica from the horsetail plant as an excellent source and also from cucumbers, watermelon, echinacea root, alfalfa, kelp, bell peppers, leeks, green beans, wheatgrass, apples, berries, onions, almonds, sunflower seeds and grapes.

SULPHUR

Sulphur, the beauty mineral, is one of the most important nutrients for the structure of the skin. It is a key component of proteins and essential for healthy skin. Deficiency symptoms of sulphur are dry scalp, eczema, rashes and acne. Get sulphur in eggs, meats, fish, garlic, onions, dairy, beans, greens, dandelion greens, celery, cabbage, kale, soybeans and asparagus.

IODINE

Iodine assists in healing skin infections, increases oxygen consumption and the metabolic rate in the skin. It also, importantly, helps prevent roughness and premature wrinkling, and contributes to skin tone. Consume iodine by eating blue-green algae, kelp, barley grass, sunflower seeds, and sea salt.

ZINC

Zinc is a trace mineral, anti-inflammatory and antioxidant that stimulates the synthesis of collagen and elastin. It is very beneficial for the alleviation of acne and it's naturally photo-protective. It accelerates wound healing, cell growth and immunity. Zinc can be found in pumpkin, seeds, legumes, mushrooms, spinach, shellfish, nuts, grains, kale, and eggs, to name a few. Zinc is also delivered to the skin, in particular, when using PHYTO5's [Oligo 5 Mineral Spray](#). In addition, PHYTO5's [Earth Element \(night\) Cream](#) also contains zinc in an appropriate level.

MANGANESE

Manganese is a trace mineral or salt important for everyday skin health as it plays a significant role in collagen production. Manganese is involved in the synthesis of vitamin B1. It acts against free radicals and has soothing, calming and protective properties. It aids in protection of the skin against oxygen related and damages caused as a result of exposure to ultraviolet light by functioning as an antioxidant. Manganese is an ingredient in Ageless La Cure's [Five Secrets Serum and Cream Duo for a 3-Week Cure](#) and in PHYTO5's [Oligo 5 Mineral Spray](#). We also formulate our Wood [Element \(night\) Cream](#) with manganese which can be found at our sister site here. Manganese can be found in nuts, beans, legumes, whole grains, green leafy vegetable, pineapple, açai and dark chocolate.

MAGNESIUM

Magnesium is a trace mineral that has the ability to cleanse the skin and detoxify the epidermis. It is quite effective in treating the areas of the skin that are prone to allergic reaction. Magnesium is very effective in reducing wrinkles and fine lines.

Manganese helps to combat acne and skin breakouts. It acts on cellular renewal and on the production of energy within cells, because it contributes to glucose transport. It is very beneficial for people who are tired and overworked. As a cellular protectant, it fosters the restoration of cellular magnesium levels, facilitates effective and safe detoxification, provides pain relief, relieves aches, and encourages healthy skin tissue growth.

We'll want to eat avocados, nuts, seeds, whole grains, legumes, tofu, and dark chocolate to ensure we get magnesium into our bodies and skin. Also get magnesium in PHYTO5's [Oligo 5 Mineral Spray](#). PHYTO5's [Metal Element \(night\) Cream](#) is also fortified with magnesium.



COBALT

Cobalt is part of vitamin B12, the vitamin essential for producing red blood cells and maintaining the nervous system. The cobalt ion allows the cells to manufacture B-complex vitamins. A cellular deficiency is linked to pernicious anemia among other blood disorders. Together with sulfur, cobalt helps to maintain and repair the myelin sheath,* transport glucose from the blood into body cells, and manufacture/absorb B-complex vitamins. Cobalt is essential to health and the human cell.

When taken in small amounts such as in a liquid colloidal suspension, cobalt may help ease inflammation and provide antioxidation of free radicals to help counteract symptoms of aging. Too much intake of cobalt may cause enlargement of the thyroid gland (goiter). It can also reduce the activity of the thyroid. Cobalt may also increase blood sugar levels.

“The human health-supporting properties of dietary cobalt are under-appreciated,” say Dr. Michael Glade, clinical nutritionist and Dr. Michael Meguide, professor emeritus of surgery, neuroscience, and nutrition at the Upstate Medical University in Syracuse, New York.

Get the right amount of cobalt to help counteract signs of aging by using PHYTO5's [Oligo 5 Mineral Spray](#). PHYTO5's [Fire Element \(night\) Cream](#) also includes cobalt as a key ingredient. Trace amounts of cobalt are also found in vitamin B12 rich foods like fish, nuts, leafy green vegetables, and cereals.

COPPER

Copper promotes healthy skin, supports healthy cartilage and tendon regeneration, and assists the body in the absorption of iron.

Copper may also assist with antioxidation function so necessary for slowing and mitigating signs of aging. Copper is also required for normal iron metabolism and red blood cell formation.

Copper activates many enzymes, including lysyl oxidase responsible for increasing the production of elastin and collagen. Using a topical solution on the skin which includes copper like PHYTO5's [Oligo 5 Mineral Spray](#) can help replenish supplies of collagen and elastin, in turn reducing wrinkles. Copper is also an important ingredient in PHYTO5's [Water Element \(night\) Cream](#) which can be found at our sister site here.



Playing an important role in the production of melanin, copper is also important for hair and skin pigment and we wrote a blog article on the topic of the use of copper (among other remedies) for grey hair [here](#).

Get copper by eating beef liver, avocados, buckwheat, olives, sunflower seeds, lentils, almonds, dark chocolate and asparagus.

SUMMARY

A good mineral intake is important at any age and the optimum way to achieve this is through a whole foods diet rich in fresh fruits and vegetables and other plant-based produce. Rather than worry about what to eat or what not to eat to make sure we're getting all we need to look and feel younger longer, make consuming a rainbow diet with foods from each of the seven colors of the rainbow the foundation of your meals and snacks and build around that always making the most sensible choices we know intuitively are best for us.

Endnotes for this article:

**Myelin is a lipid-rich (fatty) substance that surrounds nerve cell axons (the nervous system's wires) to insulate them and increase the rate at which information (encoded as electrical impulses) is passed along the axon.*

- Pinnock, Dale. The Clear Skin Cookbook: the Vital Vitamins and Magic Minerals You Need for Smooth, Blemish-Free, Younger-Looking Skin. Seven Dials, 2018.
- Null, Gary. Get Healthy Now! with Gary Null: a Complete Guide to Prevention, Treatment and Healthy Living. Seven Stories Press, 2006.
- “Cobalt, the Forgotten Mineral, Found to Offer Anti-Inflammatory and Antioxidant Health Benefits.” NaturalNews.com, 7 Feb. 2019, www.naturalnews.com/2019-02-07-cobalt-anti-inflammatory-antioxidant.html.



7. Stay Hydrated: Here's How

Approximately 75 million Americans are dehydrated and most don't even realize it. Aside from thirst, symptoms of dehydration include headache, weakness, dizziness, fatigue, lethargy with symptoms scaling up to more serious warning signs of dry mouth, skin or eyes, little or no urine output, sluggishness, rapid heartbeat, fever and loss of skin elasticity. The body is approximately 70% water (even the bones are 30% made up of water) so it makes perfect sense to keep the body optimally hydrated for not just health but youth.

Dehydration causes our emotions to become unbalanced, our kidneys' health and function suffers and our elimination becomes compromised when we are dehydrated. Research reveals compelling information about our requirements for drinking water especially as we age and the influence of hydration on a wide range of body systems including bones. Lack of water is a contributor to brittle bones making many more senior adults more susceptible to dangerous bone fractures.

Traditional Chinese medicine (TCM) tells us that in the fifth and last of the five fifteen-year phases of life, after 60 years of age, we begin to experience a tendency to stiffen and to dehydrate causing loss of skin tone. There is also a loss of collagen with yang energy at its lowest point. For these and other reasons, proper absorbable hydration is critical. (For more info. on the Five Element Theory of Chinese Medicine and how it applies to you, please visit our site at phyto5.us.)

But for older adults, it isn't always as simple as merely drinking water. Many experience a decrease in receptor sensitivity (osmo- and baroreceptors) which detect the fluid within and around cells. This causes them to not feel thirsty when, in fact, their bodies are definitely requiring more water. For this vitally important reason, it's more important than ever for older adults to drink several glasses of water daily even if not thirsty. In fact, adding lots of fresh high water content fruits and vegetables can provide additional very absorbable hydration.



Our skin and body tissues require enormous amounts of water. The brain requires the greatest amount to function because water facilitates the electrical functions that basically command the entire body. The largest portion of water supplied throughout the body comes from what we drink, and the rest from food and leftover cellular metabolism. We lose 80% of our fluids through our urine and 20% through perspiration through the skin or respiratory system.

Water runs through our veins, arteries, glands and organs in order to feed, pump, and transport fluid. It's important to note that even gentle workouts or walking for exercise actually help disperse water through the body. When you move your connective tissue through exercise, it facilitates the movement of water throughout the body.

Water also regulates body temperature which explains why dehydrated elderly cannot tolerate hot temperatures and often perish.

"We may not get enough water into our cells, where it's crucial for metabolism and countless other functions," says Dana Cohen, MD, author of *Quench: Beat Fatigue, Drop Weight and Heal Your Body Through the New Science of Optimum Hydration*.

Consuming processed foods and even our heated homes can interfere with our body's water absorption, but groundbreaking research from Harvard and Cornell Universities has found that the water in our cells and in plant cells is not H₂O but H₃O₂ — a gel-like structured water charged by electrolytes acting as fuel "for every action of every cell," notes [Gerald Pollack, PhD](#),* head of the University of Washington's [Pollack Water Lab](#). Colloquially called "gel water," it comes from sources like fruits, vegetables, cacti, chia seeds, and collagen. What these findings about water and hydration indicate is that we must take a much closer look at our diets and not just water intake. [Certain studies](#) have indicated that liquid water alone is not sufficient for hydration — as demonstrated in cases where subjects couldn't achieve hydration despite actually over-drinking water.

Dr. Pollack believes "gel water" primes our cells for optimal function — that it's actually more hydrating than simple liquid water. This living water is a newly identified phase of water that's not quite liquid, vapor, or ice, identified by an extra hydrogen and oxygen atom.

"Weight loss becomes easier than we ever thought possible. We also think better, move better, sleep better, age better," says Cohen. Increasing gel water in the body "is one of the best things you can do for your body. I've seen amazing results in hundreds of patients."

European research shows that consuming plants rich in "gel water" (most fruits and vegetables) is up to twice as hydrating as drinking water because it passes more readily into our cells, is denser and is less likely to leak out of damaged or aging cells.

Tips for Consuming "Gel Water"

- The way to consume "gel water" is simple. Just keep drinking plain water that has been further improved with a slice of citrus, for example.
- Another way is to sip water while consuming foods rich in potassium like bananas and broccoli or rich in magnesium like avocado and dark chocolate.
- You can add a pinch of Himalayan salt to your water to add electrolytes which will transform your regular water into "gel water."
- Consume six servings of gel-water-rich foods daily and for every dehydrating grain-based food you eat, add an extra portion.

Tips continued next page



"Gel water" tips continued

- Always avoid processed foods because they siphon off fluid during digestion.
- Eat plant-based healthy fats. "Water enters cells through an oil-guarded membrane," author Cohen says. "Good fats, especially omega-3s, keep membranes supple, increasing absorption."
- Add a teaspoon of crushed chia seeds to your smoothies. When the blender crushes the seeds more gel is created.
- Cook with bone broth. It's full of collagen and gel water.
- Cook with coconut oil or ghee both of which are full of gel water and electrolytes.
- If you have access to an infrared sauna, know that the light waves in the red wave spectrum range will reach the water molecules in your body and split them into positive and negative charges, thus shifting their molecular structure and creating "gel water."
- The sun also does exactly the same as the infrared sauna mentioned above. Modest exposure to the sun is nature's way of purifying and charging water. In theory, the subtle electrical charge of the planet could help split the water molecules around us and inside us as well, so [earthing](#) discussed in Look and Feel Younger Longer Tip #3 and getting grounded just may be another way to increase hydration.

Endnotes for this article:

*Jerry Pollack (Department of Bioengineering, University of Washington) is a scientist recognized worldwide as a dynamic speaker and author, whose passion lies in plumbing the depths of natural truths. The Pollack Lab is best known for our work with water, but its interests are diverse—including energy, health, and fundamental physics. Pollack discovered and published the first research on "gel water" in 2009. He received the 1st Emoto Peace Prize and is a recipient of the University of Washington's highest honor, the Annual Faculty Lecturer Award. He is founding Editor-in-Chief of the research journal WATER and Director of the Institute for Venture Science. Dr. Pollack's (award-winning) books include: The Fourth Phase of Water (2013), and Cells, Gels, and the Engines of Life (2001).

- "You've Been Doing It Wrong: Why You're Still Dehydrated." Goop, 17 Jan. 2019, goop.com/wellness/health/structured-water-youve-been-doing-it-wrong-why-youre-still-dehydrated/.
- Alnuweiri, Tamim. "What Is Gel Water?" Well+Good, Well+Good, 1 July 2017, www.wellandgood.com/good-advice/what-is-gel-structured-water/.
- Staff, Editorial. "Simple 'Gel-Water Diet' Is the Weight-Loss Solution That Improves Sleep and Fights Brain Fog." Woman's World, Woman's World, 2 Aug. 2019, www.womansworld.com/posts/h3o2-gel-water-diet-168246.
- "Consequences of Dehydration." European Hydration Institute, www.europeanhydrationinstitute.org/consequences_of_dehydration/.
- Popkin, Barry M, et al. "Water, Hydration, and Health." Nutrition Reviews, U.S. National Library of Medicine, Aug. 2010, www.ncbi.nlm.nih.gov/pmc/articles/PMC2908954/.



8. Antioxidation

It is now a well-established fact that antioxidants slow the aging process. Researchers estimate that 80 to 90 percent of all degenerative diseases involve free radical activity. Antioxidants lessen free radical damage and [Ageless La Cure skincare](#) is formulated with all sorts of very efficient plant-based antioxidants which combat mutating cells that cause signs of aging of the skin.

It is proven that antioxidants help prevent the onset of disease. They are also proven to slow or even reverse the progress of disease already established. This truly is not an understatement of the potential of naturally occurring antioxidants.

Free radicals are incomplete, unstable molecules. They can be looked at as waste products from various chemical reactions in our bodies' cells that when built up, harm the cells of the body.

Here's how it works.

Electrons hold molecules together. Normal molecules have pairs of electrons. When a molecule loses one in a pair of electrons, the molecule becomes a free radical. This causes the free radical molecule to become unbalanced and extremely reactive with other molecules. Electrons are compelled to be in pairs so they scavenge the body in search of another electron in order to become a pair once again. This behavior causes damage to cells, proteins and DNA resulting in eventual disease and symptoms of aging.

The Huntington's Outreach Project for Education at Stanford University says that substances generating free radicals in the body are found in the food we eat, the medicines we take, the air we breathe and the water we drink. Just a few examples of such substances are fried foods, alcohol, tobacco smoke, pesticides and air pollutants.



In the 2010 article, [Methods of Molecular Biology](#), the researchers report there are no officially recognized symptoms of oxidative stress, but it is generally recognized that symptoms may include fatigue, headaches, noise sensitivity, memory loss and brain fog, muscle and joint pain, [wrinkles](#) and [gray hair](#), compromised vision and lowered immunity.

There are probably thousands of substances that can act as antioxidants. The most familiar ones are vitamins C and E, beta-carotene, and other related carotenoids, along with the minerals selenium and manganese. All of these antioxidants are found in various [Ageless La Cure](#) skincare products. Both the [Metal](#) and [Water](#) element lines of PHYTO5 skincare are proven anti-aging lines which include antioxidation as integral to their missions.

It is widely observed and accepted that a plant-based diet based on a high intake of fruits, vegetables, and other nutrient-rich plant foods may reduce the risk of oxidative stress-related diseases and aging symptoms.

In what is probably the most comprehensive Antioxidant Food Database published we learn that plant-based foods introduce significantly more antioxidants into the human diet than do non-plant-based foods.

“A plant-based diet protects against chronic oxidative stress-related diseases. Dietary plants contain variable chemical families and amounts of antioxidants. It has been hypothesized that plant antioxidants may contribute to the beneficial health effects of dietary plants.”— Monica Carlsen et al, The Total Antioxidant Content of More than 3100 Foods, Beverages, Spices, Herbs and Supplements Used Worldwide

The study goes on to report:

“The results demonstrate that there are several thousand-fold differences in antioxidant content of foods. Spices, herbs and supplements include the most antioxidant rich products in our study, some exceptionally high. Berries, fruits, nuts, chocolate, vegetables and products thereof constitute common foods and beverages with high antioxidant values.”



EXAMPLES OF ANTIOXIDANT SOURCES

- Allium sulphur compounds: leeks, onions, garlic
- Anthocyanins: blue and blue-black foods like eggplant, grapes, blueberries, blackberries, forbidden rice, black lentils, black currants. (Read our blog post at our principal site on this topic [here](#).)
- Beta carotene: pumpkin, mangoes, carrots, apricots, spinach, parsley
- Catechins: matcha green tea (read about matcha at our sister site [here](#)), other teas, red wine, cocoa, coffee*
- Copper: beef liver, avocados, buckwheat, olives, sunflower seeds, lentils, almonds, dark chocolate and asparagus



Specific antioxidant superstars

Glutathione is comprised of three amino acids cysteine, glutamic acid, and glycine, and it is known as the master antioxidant of the body. It is present in most mammalian tissue and is synthesized within the body. Glutathione directly scavenges diverse oxidants and catalytically detoxifies a host of toxins. It also protects cells from oxidants by recycling vitamins C and E. The “reduced” glutathione supplement has a direct reputation for supporting efforts toward anti-aging and skin brightening and can be taken to supplement your diet. Clinical tests demonstrate the effectiveness of oral glutathione. A Penn State College of Medicine study shows oral supplementation is bioavailable and effective in enhancing the body's stores of this vital nutrient.

Hydroxytyrosol (found in olive leaf and olive oil) is the superstar of antioxidants – and just may be the most powerful discovered to date. It has an ORAC value*** of 68,576 – which is considered to be 15 times higher than that of green tea and three times higher than CoQ10. It is quite bioavailable and several assays show significant results related to cardiovascular diseases, cancer, and acquired immunodeficiency syndrome (AIDS). Along with being a potent antioxidant, it has significant anti-inflammatory effects, among others.

Alpha lipoic acid has gained a great deal of attention in recent years. It’s an organic compound that acts as a powerful antioxidant in the body. The human body produces alpha lipoic acid naturally, but it is also found in a variety of foods and as a dietary supplement. Research suggests that it may play a role in weight loss, diabetes, lowered blood sugar levels, reduced inflammation, improved nerve function (such as for dealing with neuropathy) and slowed aging of the skin. Humans only produce alpha lipoic acid in small amounts which is why many turn to certain foods or supplements to optimize their intake which may pack up to 1,000 times more alpha lipoic acid than found in food sources.

Animal products like red meat and organ meats are good sources of alpha lipoic acid, but plant foods like broccoli, tomatoes, spinach, and brussels sprouts also contain fairly good amounts of alpha lipoic acid.

Endnotes for this article:

** Coffee is a potent source of healthful antioxidants showing more antioxidant activity than green tea and cocoa, two antioxidant superstars. Chlorogenic acid, an important antioxidant found almost exclusively in coffee, is also thought to help prevent cardiovascular disease. Note: while green coffee beans have high levels of antioxidants, roasting is necessary to destroy the harmful compound acrylamide present in green coffee beans.*

*** a blue, violet, or red flavonoid pigment found in plants*

**** Oxygen Radical Absorbance Capacity – its ability to absorb cell-damaging free radicals*

- Carlsen, Monica H, et al. “The Total Antioxidant Content of More than 3100 Foods, Beverages, Spices, Herbs and Supplements Used Worldwide.” Nutrition Journal, BioMed Central, 22 Jan. 2010, www.ncbi.nlm.nih.gov/pmc/articles/PMC2841576/.
- Miller, Dr. Bruce. Antioxidants: Your Answer To Over 60 Degenerative Diseases Involving Free Radical Activity. Oak Enterprise Publications, 2015.
- Palmieri, Beniamino, and Valeriana Sblendorio. “Current Status of Measuring Oxidative Stress.” Methods in Molecular Biology (Clifton, N.J.), U.S. National Library of Medicine, 2010, www.ncbi.nlm.nih.gov/pubmed/20072906.
- Yashin, Alexander, et al. “Antioxidant and Antiradical Activity of Coffee.” Antioxidants (Basel, Switzerland), MDPI, 15 Oct. 2013, www.ncbi.nlm.nih.gov/pmc/articles/PMC4665516/.
- Watanabe, Fumiko, et al. “Skin-Whitening and Skin-Condition-Improving Effects of Topical Oxidized Glutathione: a Double-Blind and Placebo-Controlled Clinical Trial in Healthy Women.” Clinical, Cosmetic and Investigational Dermatology, Dove Medical Press, 17 Oct. 2014, www.ncbi.nlm.nih.gov/pmc/articles/PMC4207440/.
- <https://pdfs.semanticscholar.org/cf75/f70fd56fc31c55081ba2018217139eee575e.pdf>
- Vilaplana-Pérez, Cristina, et al. “Hydroxytyrosol and Potential Uses in Cardiovascular Diseases, Cancer, and AIDS.” Frontiers in Nutrition, Frontiers Media S.A., 27 Oct. 2014, www.ncbi.nlm.nih.gov/pmc/articles/PMC4428486/.



9. Keep the Brain Healthy



Of all the unwanted changes in health associated with aging, one of the most devastating is the decline in cognitive function. The one disease that is feared more than all others (including cancer) is Alzheimer's. People dread the loss of independence arising from declining mental capacity even more than they dread declining physical ability. Without question, our brain is our single greatest asset because our health and vitality actually begins in the brain—the “control tower” responsible for directing the operations of our entire body so it is easy to see how the health of our brain is every bit as important as the health of our heart. All healthcare should take a “head-first” approach yet it so often is the very last place we look, if at all. Unless we find a way to grow new brain cells to replace those that are dying, we can't enjoy a long life.

Factors that underlie and lead to the loss of brain tissue include oxidative stress, chronic inflammation, mitochondrial dysfunction,* hormone deficiency, impaired microcirculation to the brain, and toxic protein aggregates (amyloid-beta and tau) that build up around the brain's synapses preventing the vital flow of neurotransmitters. An aggressive and comprehensive approach with a doctor who specializes in holistic healing approaches to cognitive function may give you the ability to help repair a deteriorating brain.

There is an increasing awareness of the importance of nutrition, particularly omega-3 polyunsaturated fatty acids (n-3 PUFA), for optimal brain development and function. Nutrition plays a critical role in mental health since the brain relies on both macro- and micronutrients for development and functioning. A lack of these fatty acids has been implicated in a number of mental health conditions over the lifespan, from developmental disorders and mental retardation in childhood, to depression, bipolar disorder, schizophrenia and borderline personality disorder, stress, hostility and aggression in adulthood, and cognitive decline, dementia and Alzheimer's disease in late adulthood.

Omega-3s are important components of the membranes that surround each cell in your body. Some—but not all—research shows that people who consume more Omega-3s from food such as fish, fish oil, flaxseed and Omega-3 dietary supplements may have a lower risk of developing Alzheimer's disease, dementia, and other problems with cognitive function.

There are three main types of Omega-3 fatty acids: alpha-linolenic acid (ALA), eicosapentaenoic acid (EPA), and docosahexaenoic acid (DHA). ALA is found mainly in plant oils like flaxseed, soybean, and canola. DHA and EPA are found in fish and other seafood.

ALA is an essential fatty acid meaning that your body can't manufacture it so you must get it from the foods and beverages you consume. Your body is able to convert some ALA into EPA and then to DHA but only in very small amounts, therefore getting EPA and DHA from foods (and dietary supplements) is the only practical way to increase levels of these Omega-3 fatty acids in your body.

DHA levels are especially high in the retina of the eye, the brain, and sperm cells. Omega-3s also provide calories to give your body energy and have many functions in your heart, blood vessels, lungs, immune and endocrine systems (the network of hormone-producing glands).

Walking and other forms of exercise encourage your brain to release endorphins—a neurochemical that boosts mental health, decreases your sensitivity to stress and pain, and even sometimes induces a state of euphoria. Getting the body moving can help lower the incidence of depression and improve overall cognitive function.

Walking releases the protein known as BDNF. Science Daily explains that Brain-Derived Neurotrophic Factor (BDNF) is a protein "essential for neuronal development and survival, synaptic plasticity, and cognitive function." Impairment of BDNF is actually associated with neurodegenerative disorders like Alzheimer's Disease.

One study published in January 2018 found that walking for thirty minutes at a moderate rate [increased the production of BDNF](#) in the brains of post-stroke patients which may indicate that walking somewhat briskly could be key to maintaining a healthy brain and mind.

Walking has been shown to clear up cognitive haze. NPR reported that going for a walk, even briefly, can [increase the size of your hippocampus](#)—the region of your brain that plays a critical role in forming and storing memories and the associated feelings that pair up with those memories.



Walking increases blood flow to the brain and improves creativity. A 2014 Stanford University study found that walking [increased a person's "creative output"](#) by an average of 60 percent.

In addition to keeping the brain lubricated with essential fatty acids, nourishing the brain and body with lots of plant-based and healthy foods, exercising the body with adequate amounts and types of exercises, we can directly exercise the brain to help it stay sharp and bright.

HOW TO KEEP THE BRAIN HEALTHY AND SHARP

Learn to play a musical instrument, learn a new language or review or relearn algebra no matter what age you are. Researchers have found that learning to play a musical instrument can enhance verbal memory, spatial reasoning and literacy skills. Playing an instrument makes you use both sides of your brain, thereby strengthening memory power. The fine motor skills required to play an instrument stimulate activity throughout the brain.

Get your brain used to learning moderately complicated software on your computer. See it as a challenge!

Practice Tai Chi regardless of age. Tai Chi is a gentle, low impact ancient Chinese flowing form of meditative movement and mind-body exercise. It improves balance, strength, and flexibility and reduces stress and anxiety. A [study](#) published in the Journal of Neuroimaging proves that Tai Chi may promote neuroplasticity, the generation of new neurons, or protect neurons from the normal process of aging.

Get meditating to strengthen the neuroplasticity** of your brain. It may help create the growth of new connections and neurons. The study referenced below showed alterations in patterns of brain function which were scientifically assessed using functional magnetic resonance imaging (fMRI). Meditation was found to have a positive impact on attention. The researchers were able to measure alterations in amplitude and synchrony of high frequency oscillations in the brain indicating that meditation plays an important role in connectivity among the widespread circuitry in the brain.

“In a recent visit to the United States, the Dalai Lama gave a speech at the Society for Neuroscience’s annual meeting in Washington, D.C. Over the past several years, he has helped recruit Tibetan Buddhist monks for, and directly encouraged research on the brain and meditation in the Waisman Laboratory for Brain Imaging and Behavior at the University of Wisconsin-Madison. The findings from studies in this unusual sample as well as related research efforts, suggest that, over the course of meditating for tens of thousands of hours, the long-term practitioners had actually altered the structure and function of their brains.”

— Richard Davidson and Antoine Lutz in "Buddha Brain: Neuroplasticity and Meditation"

Like with anything, if we don’t use it, we lose it. We can’t just expect any “muscle” of our body to stay in shape without putting it through its paces, so to speak. Stay engaged in life. As we advance in age, we have a whole treasure trove of wisdom and knowledge to share. It’s the very time we should be contributing and sharing that knowledge rather than withdrawing from life and withering in stature, health and cognitive function.

Endnotes for this article:

* dysfunction of the organelles (specialized subunits within a cell that have a specific function) that generate energy for the cell. Mitochondria are found in every cell of the human body except red blood cells, and convert the energy of food molecules into the ATP (Adenosine triphosphate: a complex organic chemical that provides energy to drive many processes in living cells, e.g. muscle contraction, nerve impulse propagation, and chemical synthesis) that powers most cell functions.

** a term that is used to describe the brain changes that occur in response to experience

- Davidson, Richard J, and Antoine Lutz. "Buddha's Brain: Neuroplasticity and Meditation." IEEE Signal Processing Magazine, U.S. National Library of Medicine, 1 Jan. 2008, www.ncbi.nlm.nih.gov/pmc/articles/PMC2944261/.
- Sinn, Natalie, et al. "Oiling the Brain: a Review of Randomized Controlled Trials of Omega-3 Fatty Acids in Psychopathology across the Lifespan." Nutrients, Molecular Diversity Preservation International, Feb. 2010, www.ncbi.nlm.nih.gov/pmc/articles/PMC3257637/.
- "Office of Dietary Supplements - Omega-3 Fatty Acids." NIH Office of Dietary Supplements, U.S. Department of Health and Human Services, ods.od.nih.gov/factsheets/Omega3FattyAcids-Consumer/.
- Stansfield, Kirstie H, et al. "Dysregulation of BDNF-TrkB Signaling in Developing Hippocampal Neurons by Pb(2+): Implications for an Environmental Basis of Neurodevelopmental Disorders." Toxicological Sciences : an Official Journal of the Society of Toxicology, Oxford University Press, May 2012, www.ncbi.nlm.nih.gov/pubmed/22345308.
- Morais, Viviane Aparecida Carvalho de, et al. "A Single Session of Moderate Intensity Walking Increases Brain-Derived Neurotrophic Factor (BDNF) in the Chronic Post-Stroke Patients." Topics in Stroke Rehabilitation, U.S. National Library of Medicine, Jan. 2018, www.ncbi.nlm.nih.gov/pubmed/29078742.
- "Tai Chi May Improve Brain Health and Muscle Recovery." Psychology Today, Sussex Publishers, www.psychologytoday.com/us/blog/urban-survival/201804/tai-chi-may-improve-brain-health-and-muscle-recovery.
- Stanford University. "Stanford Study Finds Walking Improves Creativity." Stanford News, 24 Apr. 2014, news.stanford.edu/2014/04/24/walking-vs-sitting-042414/.



10. Work with the Phases of Life and Elevate Your Attitude

Over the previous nine articles in this ebook we have been providing research-proven holistic tips for feeling and looking younger longer. Along the way, we've even shared what some people might call [miracle stories](#) where people in advanced age have not only slowed down physical deterioration but, in fact, turned it around by embracing simple lifestyle practices that cost little or no money. In this spirit, and with this our final and tenth tip, we focus on the power of the mind and attitude and how we may harness it for more uplifting, vitality filled lives no matter what age we are.

In our Tip #7 blog on staying hydrated where we reveal the little known facts concerning gel-like structured water that exceptionally optimizes our ability to hydrate our bodies, we discussed traditional Chinese medicine (TCM) and TCM's Five Element Theory. We pointed most especially to emotions associated with each of the five fifteen-year phases of life and, in particular, the fifth phase. The ancient Chinese made these and other very astute and interrelated observations about human health and how it is well regulated and guided by the forces of nature and the universe when we live in harmony with them. Conversely, TCM has chronicled as has now been well proven how we experience accelerated decline when we live in such a disharmonious way with the forces of nature as to create imbalance in our bodies, minds and emotions. Left ignored, this imbalance can be the precursor to serious sickness and disease later on.

The age ranges of the five phases of human life based on the ancient Chinese observation of a 75-year lifespan are divided into five 15-year segments. For example, phase 1, the WOOD element was determined to run from birth to age 15; phase 2, the FIRE element, from age 15 to 30. The next three phases of Earth, Metal and Water each add another 15 years to the previous age span arriving at age 75.



But today the average life expectancy in the U. S. is significantly greater than 75 years of age with many people living to age 90 or more. Today's children are not having to assuming adult roles in adolescence and many of them are, by choice, postponing taking on mature responsibilities that their counterparts of decades and centuries ago were forced to bear. Because of such factors, we should probably add up to three years to each of the five phases of human life with each phase running approximately 18 years.

Each of these five phases are associated with an emotion (anger, joy, overthinking/ruminating, worry and fear).* Though we may perceive four of the emotions to be positive and one to be negative, all four emotions, in fact, serve us to survive, live and thrive quite well if they are kept in healthy balance. None of these should necessarily be viewed as either positive or negative.



Fear, for example, when not allowed to run wild, can help to keep us protected and safe. Joy, for example, that does not allow room for its contrasting emotions can deprive us of opportunities to learn and grow. A life without contrast isn't really life.

Moreover, no person is one emotion through and through. We express ourselves as a blend of all five major emotions though one or two may be more dominant than others. When we are in excess or lack of an emotion, that emotion is out of balance.

Looking back on our lives it is easy to see how we may have roughly lived out the emotions associated with each phase.



- The emotion of the **Wood phase** (birth to age 15 –18) is anger. Children and budding teens can be quick to anger and frustration when things don't go their way. It is challenging for a pure, unlimited, unabashed child to begin living in accordance with the rigors and confines of earth's third dimensional life. Anger is a default tendency when not in control (balanced), but it can also be a positive in a child's life since it can help provide an adolescent boy or girl a sense of ascertaining his or her own self.

- The emotion of the **Fire phase** of life (age 15–18 to 30–36) is joy. It is a chapter of our lives when we tend to experience more of the excitement and blossoming of life. The wonder of new adventures and self-discovery can be joyous.



- For the **Earth phase** of life (age 30–36 to 45–54) we begin to become overwhelmed by the challenges and strains of life and family. We overthink and analyze which causes us to feel stuck and stagnant. On the flip side, when we focus on achieving balance we instinctively look for ways to rise above it. We tend to seek out ways to “improve” our characters and our lives.

- The following **Metal phase** (age 45–54 to 60–72) is associated with grief and worry. More mature people in this age group may notice an upswing in worry, anxiety and a frequent looking back, often regretting many choices we have made. This happens at the very time our society preaches to us to begin preparing for the ending of our lives! Worry is a default tendency when not in control or balanced, but when it is in balance it simply arises from anticipating some possible negative outcomes of life. Worry becomes out of balance when one is not mindful of possibilities and potential positive outcomes. Out of balance or in excess, this emotional tendency becomes negative and psychologically detrimental. It can result in a self-destructive mindset if allowed to grow unchecked.

In Esther Hicks’ Law of Attraction teachings, she and the entity Abraham say this:

“The majority have been programmed from their past experience to expect physical decline. And while it is something they don’t want, they are programmed to expect it. And so, they’re going to get what they expect. It’s not that what they expect is the reality that everyone lives, but that everyone lives the reality of what they expect.”

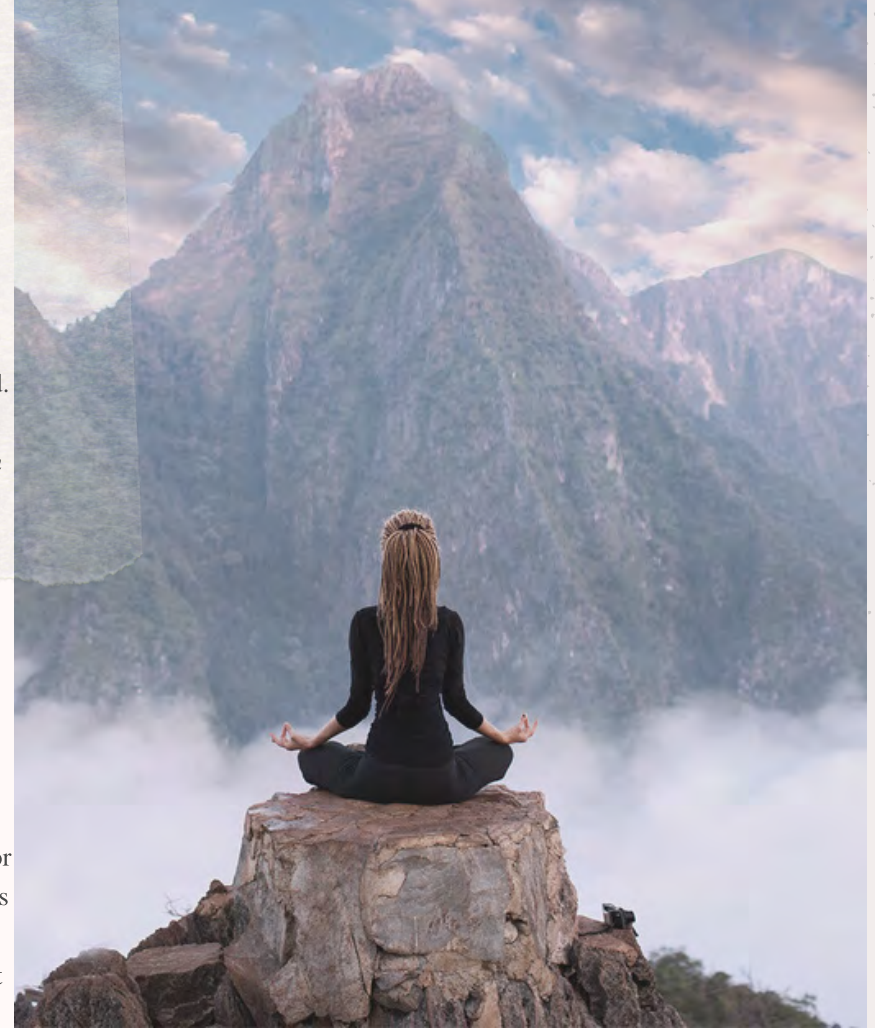
Finally, the emotion for the last **Water element phase** (age 60–72+) is fear. Now our anxiety and worry have morphed into fear—fear of the now, fear of the future, fear of getting sick, fear of falling, fear of not being able to survive financially, fear of dying. On the other hand, fear can be a great motivator. It pushes us to make good life decisions we might not have made otherwise. Fear is the world’s default tendency and for many, regardless of age, fear is a dominant emotion. Now, however, at this stage of life more than any other, it is important to temper fear with the wisdom acquired over many decades of living.

The emotions of these five phases are all very natural to human beings but with our awareness we can strive for emotional balance, turning the negative emotions inside out. The opposite of all of the four negative emotions (the Fire phase joy emotion is positive) combine to create a happy, rewarding, contented life.

It is our choice how we wish to live no matter our phase of life. All of the negative emotions (anger, overthinking, sadness and fear) can be mostly, if not, completely reversed.

We truly can create a happy, confident, contented, long wonderful life by making certain lifestyle and conscious awareness choices such as these calming, soothing practices that surround and fill us with LIFE:

- Meditating daily
- Practicing yoga, qi gong, or tai chi several times a week
- Regularly exercising in a way that resonates with us and that we can enjoy
- Frequently immersing ourselves in nature such as taking meditation walks, hiking or forest bathing, gardening, moon gazing, and communing with nature, literally
- [Walking barefoot](#) on the earth as much as possible
- Living in harmony with the [five elements/seasons](#). Be sure to visit our [sister site's blog](#) for all sorts of tips for each season in alignment with TCM. Tips include decorating with colors of the season, eating the foods of the season, practicing certain exercises, and more.
- Eating well. We can make quality non-processed food choices our priority and learn what that is if we're unsure.
- Making reinventing ourselves and self-care exciting priorities in life. Enjoy new [body scrubs](#), [massage oils](#), musical artists, restaurants dedicated to healthy delicious food, style of dressing, hairstyle, and past-times.
- Slowing and deepening our breathing. Focus on taking [six longevity creating breaths a minute](#).
- Allowing plants and flowers to share their [vital force energy](#) with us for greater life and vitality. Treat your skin to high quality essential oil skincare such as [Ageless La Cure](#).
- Sharing our lives with a pet who loves us. And they all do!
- Keeping art and beauty in our lives. Don't buy it or bring it inside if it isn't beautiful and life-affirming.



Mind methods for creating happiness in life (it can be done):

- Cultivating the habit of appreciating every small or big thing you love even a little bit. Eventually, it becomes second nature and you'll be smiling involuntarily!
- [Developing enriching relationships](#). Read any of our blog series on Wei Chi at our [sister site](#) by typing "wei chi" in the "search" bar top left or, in particular, read [this blog post](#) on the topic.



- Being in selfless service to others. Volunteer at your local food bank, assisted living facility or homeless shelter. Teach adults to read and write, plant trees, give of your time and talent at your town's arts or political organization.
- Continuing to create through work you love with no goal of retirement. Maybe you're not the type to retire. You don't have to just because others are doing it. Besides, you've developed the most contributable skills and know-how at this point in your life. Contemplate the following quote and read more about it here.

“Studies in elderly people who have been active all their life such as the Lapps* in Finland and Sweden show no decline in functions until the date they sell their reindeer and sit down, whereafter they quickly decline to the level of other people of the same age.”

— Mikael Fogelholm in Physical Activity: A Part of Healthy Eating? Report from a Nordic Seminar

- Letting go. The urgency we've been programmed to believe in and accept is not totally necessary. Someone else benefits from that, not you. Relax. Slow down. Savor and enjoy.

Have you noticed how many of the baby boomers and older are living quality lives and longer? Like these “forever young” people, don't just accept what commercials and mass marketing say about age. The whole world is built on our buying in to the so-called rules and expectations of aging. Take on the mantle of your confident radiant self. By now, you're a master of many good and constructive things to offer this world. Maybe you can choose what those are and which ones you'll share with people coming up behind you. You just may end up being an example of what's TRULY possible.

#####

* In addition to emotion, each phase is associated with a skin condition, organs, color, smell, taste, personality, wind direction, and more.



11. Keep Your Intestinal Flora Healthy and Balanced

An inner environmental ecosystem composed of an estimated 100 trillion friendly and unfriendly flora, also known as human gastrointestinal microbiota or probiotics, live and thrive in the human digestive tract. This microbial community of the intestine consists of more than 500 species, most of which have not been cultivated with many yet to be identified. A diverse microbiota is a healthy one because the more species of bacteria you have the more your body is able, with the assistance of this [microflora population, to combat sickness, disease and decline](#).

Over a lifespan, our inner bacterial population slowly shifts towards disease-promoting rather than disease-preventing. Our flora balance may impact how our body rids itself of toxins, how we metabolize calories, how our bodies handle insulin production, and how our brain functions including how that function affects our behavior.

Our intestinal tract is so packed with bacteria that half of the stool is not leftover food—it's microbial biomass. And just as quickly as they are excreted, they multiply to replenish their numbers. The intestinal tract contains more chemical detection and signaling molecules than any other organ. Probiotics can help restore our body's natural intestinal protection against all kinds of diseases that are non-intestinal and they work to shield us from diseases associated with aging when in healthy numbers.

Probiotics also help reduce inflammation which has the potential to trigger certain skin conditions. For example, studies are showing that probiotics hold promise for treating skin conditions like acne, rosacea and eczema.

Some evidence exists suggesting that probiotics may help to build collagen, the main protein in skin that affects the texture and tone of the skin. These same studies indicate that increased numbers of friendly flora in the body may also support better hydration of aging skin, reduce sun damage and lessen the appearance of fine lines and wrinkles. Probiotics can restore acidic skin pH, alleviate oxidative stress, attenuate photoaging (skin damage caused by UVA and UVB exposure), improve skin barrier function and enhance quality of the hair.

Epidemiological researchers have recently proven there is a **direct link between gut and skin health**.

New York city dermatologist Whitney Bowe advocates for a gut-changing diet in her book, "The Beauty of Dirty Skin." This diet is primarily based on low-glycemic index foods combined with bacteria-rich fermented ones and is intended to alter the trillions-strong population of intestinal flora, reduce inflammation including skin-related outbreaks. Fixing the gut microbiome has been linked to a wide range of other health benefits and studies show it may help lower the occurrence of cancer, strokes and obesity.

Scientists call the relationship between intestinal flora and skin the gut-skin axis. Justin Sonnenburg, associate professor of microbiology and immunology at Stanford University School of Medicine illustrates this relationship when he says:

"It is certainly true that what happens in the gut isn't confined to the gut, he said—that it's part of the integrated system that is you. Your gastrointestinal microorganisms affect metabolism, immune response, stress. Change something in the gut microbiome—diet is one of the most powerful levers for that—and the effects ripple outward, potentially to the skin."

Skin can be improved from within when given the right nutritional building blocks including probiotics. Because each person's gut microbiome, skin microbiome (a distinct community of microorganisms that exist within the skin), and immune system are different, simply taking a probiotic supplement with the intention of propagating a flourishing intestinal flora population is a bit dicey. Dermatologist Bowe encourages taking a probiotics supplement but only in conjunction with following a smart well-balanced diet.

At least 70% of the strength of our immune system resides in the gut and the makeup of our intestinal bacteria. Scientists have discovered that our intestinal good and bad bacteria are thrown out of balance by practices such as the use of antibiotics, consumption of the Western diet, receiving certain modern medical treatments, and living with obesity. This imbalance contributes to chronic conditions like autoimmune disorders, metabolic syndrome, diabetes, chronic fatigue syndrome, nonalcoholic fatty liver disease, obesity, and more.

One of the best ways to support our microflora population is through the foods we consume.

- Eat a diverse diet rich in whole foods.
- Eat plenty of fruits, vegetables, legumes and beans which are the best sources of nutrients for a healthy microbiota. These are all high in fiber which can't be digested by your body can be digested by certain bacteria in the gut which stimulates growth of friendly flora.
- Consume fermented foods and beverages. The fermentation process uses microbes such as bacteria and yeast to preserve foods. These beneficial microorganisms eat sugars and can support intestinal health. Fermented foods are shown to provide actions in the body that are anticancer, antiobesity, anticonstipation, and which promote colorectal health, probiotic properties, cholesterol reduction, a fibrolytic effect, antioxidative and anti-aging properties, brain health, immune system fortification, and greater overall skin health.



Fermented foods include:

- yogurt (People who eat a lot of yogurt appear to have more lactobacilli in their intestines and have fewer Enterobacteriaceae, a bacteria associated with inflammation and a number of chronic diseases.)
- kefir (a fermented dairy product similar to yogurt)
- kimchi
- sauerkraut
- pickles
- miso
- tempeh
- fermented tofu
- tamari
- kombucha
- apple cider vinegar.

Consume prebiotic foods. These are foods that promote the growth of beneficial microbes in the small intestine. They are mainly fiber or complex carbs that can't be digested by human cells but can be digested by certain species of bacteria which use them for fuel.

Eat whole grains which contain lots of fiber and non-digestible carbs. These carbs are not absorbed in the small intestine and instead travel to the large intestine where they are broken down by the microbiota thereby promoting the growth of certain beneficial bacteria.

Consume polyphenol-rich foods. These are plant compounds that can't always be digested by human cells and consequently make their way to the colon where they can be digested by intestinal flora. ***Examples of health-enriching polyphenol-rich foods include:***

- cocoa and dark chocolate
- red wine
- green tea
- almonds
- onions
- blueberries
- broccoli

Refrain from using artificial sweeteners. A number of studies show they can negatively affect the gut microbiota

Take a quality probiotic supplement. Consult with your favorite health food store for their feedback on top quality probiotics or with your holistic practitioner who may have scientific data to share and who may also know what strains of probiotics may work best for you.

#####

Endnotes:

Rubin, Courtney. "Keep Your Gut Healthy and Your Skin May Follow." The New York Times, The New York Times, 27 Aug. 2018, www.nytimes.com/2018/08/27/style/gut-health-skin.html.

Sharma, Divya, et al. "Anti-Aging Effects of Probiotics." Journal of Drugs in Dermatology : JDD, U.S. National Library of Medicine, Jan. 2016, www.ncbi.nlm.nih.gov/pubmed/26741377.

Park, Kun-Young, et al. "Health Benefits of Kimchi (Korean Fermented Vegetables) as a Probiotic Food." Journal of Medicinal Food, U.S. National Library of Medicine, Jan. 2014, www.ncbi.nlm.nih.gov/pubmed/24456350.

Klatz, Ronald, and Bob Goldman. The Official Anti-Aging Revolution: Stop the Clock--Time Is on Your Side for a Younger, Stronger, Happier You. Accessible Publishing Systems Pty Ltd., 2008.

S., Robert, et al. "Is There a Role for Probiotics in Liver Disease?" The Scientific World Journal, Hindawi, 11 Nov. 2014, www.hindawi.com/journals/tswj/2014/874768/.

Bowe, Whitney, and Kristin Loberg. The Beauty of Dirty Skin: the Surprising Science to Looking and Feeling Radiant from the inside Out. Little, Brown and Company, 2018.



