

Stress-relieving Acupuncture

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People of all ages and walks of life experience acute and chronic stress that result in anxiety, depression, pain, and somatic complaints. Acute stress affects the cardiovascular, nervous and endocrine systems. Chronic stress eventually burdens physiologic coping mechanisms. It takes time to recover from chronic stress, which is like getting farther and farther behind on the physiological rent or mortgage payment. We may not have the same insight into our chronic stress as we do into our acute stress.

Stress affects brain centers that regulate response to external and internal stimuli, mood, and personality. Digestive function is also affected- the “*Rest and Digest*” mode put on hold by the “*Fight or Flight*” mode. The immune and anti-inflammatory systems also slow down. Stress management means regulating these important physiological functions.

Stress is an inherent part of life, such that chronic stress management is multifaceted and ongoing. It aims for better digestion and elimination; daytime alertness and sounder sleep; mood stability, optimal cognition, and decision making; reduction in chronic pain and somatic complaints; ameliorating cravings and addictions etc.

Stress management is called “Cultivating Yin” in Chinese Medicine, which begins with Right Thinking (spirituality and mindfulness) and ends with nurturing relationship with self, others, and community. In between the two are such things as acupuncture/ acupressure, gentle exercises and breathing movements, herbal therapies, food-as-medicine, and bodywork.

In Chinese medical theory, stress has been defined as the “unfulfilled desire” to gravitate towards something safe or pleasant, while on guard against something threatening or distasteful. When the struggle between the two is overwhelming, the result is something called Liver Depression with Qi Stagnation, which is frequently at the root of disharmonies such as fatigue, vague aches and pains, irritability, restlessness, dyspepsia, insomnia, panic, weepiness, hysteria, dysmenorrhea, addictions etc.

By regulating the general response to physiologic, emotional, or mental stressors, Chinese medicine inherently links seemingly unrelated complaints when it comes to stress. Research studies show that acupuncture has the potential to lower required doses of medications for anxiety or pain. In other studies, combining acupuncture with lower doses of antidepressant medication was more effective at lifting depression than higher doses of the medication alone.

Feelings of stress, anxiety, or depression may also be related to Western medical diagnosis (e.g. thyroid dysfunction, infection, nutrient deficiencies, hormone imbalance, drug interactions or side effects etc). It may or may not be feasible, desirable, or possible to rely upon acupuncture alone for optimal outcomes.

It is interesting to note that while there are other causes of anxiety and depression in Chinese Medicine, I rarely see Liver Depression with Qi Stagnation in Clayton NM (compared to urban areas). Most clients report very low stress! This may say something about the lifestyle and/or core values in Clayton America.

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The Sunshine Vitamin

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Are you getting adequate amounts of vitamin D from sunshine and diet? If not, are you taking the proper dose of a vitamin D supplement?

These are good questions to ask given the emerging role vitamin D potentially plays in health maintenance, and disease prevention. This includes improving bone mass density, enhancing immunity against respiratory infection; decreasing the risk for diabetes, certain cancers, and cardiovascular disease; preventing bone spurs in osteoarthritis etc.

Sunshine is the main source of vitamin D. Skin converts UV rays to cholecalciferol, a preliminary form of vitamin D (most efficiently when sweating). The liver and kidneys convert cholecalciferol to 25-hydroxy-cholecalciferol [25(OH)D], and ultimately to *the active form of vitamin D*. The skin starts the cascades of events by producing anywhere from 6,100 to 25,000 IU of cholecalciferol after only a few minutes of sun exposure.

However, many other factors come into play such as skin pigmentation, skin integrity and age; as well as the amount of skin exposed to the sun. Such things as sunscreen use, strength of UV rays, and topography are considerations. In general, there is likelihood of suboptimal vitamin D levels if you are darker skinned, and/or do not spend much time in the sun. The risk for clinical vitamin D deficiency increases with kidney disease; alcoholic or non alcoholic liver, gall-bladder or bile duct disease; gastric bypass, malabsorption, or inflammatory bowel diseases. In all these instances, supplementation may be advised.

Average to optimal vitamin D status is based upon a blood 25(OH)D level ranging from 20 to 100 ng/mL depending on whom you ask. And different sources suggest that adults supplement with anywhere from 400 to 10,000 IU of vitamin D daily. *To make things a bit clearer*, healthcare providers consider the 25(OH)D blood level, *plus* environmental and lifestyle factors, health status, and contraindications. Then recommend dietary sources of vitamin D, or supplementation with standardized or calculated doses. (D3 is preferred to D2).

The Recommended Daily Allowance (RDA) of vitamin D is 600 to 800 IU, a standardized dose originally declared by the Institute of Medicine in 2010. Fatty fish (salmon, tuna, sardines etc.) are rich sources of the RDA, providing up to 560 IU per serving. *Note that the RDA is currently under scrutiny as underestimated.*

A maintenance-dose, based upon weight may be more reflective of individual needs. For example, a person weighing 150 pounds starts with a baseline dose of 4,070 IU ($150 \times \text{a factor of } 27 = 4,070$). Adjustments are then made for type of sunlight, duration of exposure, percent-age of skin exposed etc. There are Apps that will calculate this.

Another dosing regimen, for *an established deficiency*, is based upon the expected rise in 25(OH)D level for every 1000 IU of vitamin D3 taken. A pilot study found that the more deficient a person was, the greater the rise in 25(OH)D. The median dose to correct a moderate deficiency was 4000 IU of D3 daily: 9000 IU daily to correct a severe deficiency.

In this study, the closer to optimal a person's blood 25(OH)D level became, the smaller the rise with each subsequent dose. *Meaning, more was not better.* And according to the National Institute of Health (NIH), animal-based vitamin D is five times more potent than a D3 supplement in raising 25(OH)D levels.

Excess amounts of vitamin D3 are believed to damage the heart, blood vessels, kidneys, and pancreas due to increased blood levels of calcium. Naturopathic and Functional medicine practitioners may prescribe the higher doses of D3 in combination with vitamin K2 in order to facilitate the transport of calcium from the blood into bones.

How much D3 is considered excessive vs. toxic also varies. The Tolerable Upper Intakes range from 4,000 to 10,000 IU daily for adults. While toxicity thresholds range from 10,000 to 40,000 IU daily, and/or a serum 25(OH)D level ranging from >100 to >240 ng/mL. In general, the NIH reports that hazard is unlikely with daily intakes below 10,000 IU.

Classic signs of vitamin D deficiency are osteomalacia (in adults), and rickets (in children). However, others signs may be weakness, decreased vitality, premature aging, muscles spasms etc. Contraindication to D3 supplementation may include certain cardiovascular, renal, or parathyroid diseases.

Sources

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Vitamin D Status	25-OHD ng/ mL
Severe Deficiency	< 10
Deficient	11-20
Insufficient	21-32
Adequate	33-49
Optimal	50-65
High, not toxic	66-100
Toxic	>100