



## Herbs and Nutrition for Stay Healthy Aging

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**Abstract:** Nutrition and herbs plays an important role in attenuating some of the detrimental effects of aging. Aging in humans is associated with chronic and systemic low-grade inflammation as well as a decline in mobility, joint problems, weakened muscles and bones, reduced lean body mass, cancer, increased dermatological problems, decline in cognitive ability, reduced energy, decreased immune function, decreased renal function, and urinary incontinence. Strategies to reduce inappropriate chronic inflammation have included dietary modification and the use of herbal extracts in the diet or as supplements. Canines also have general aging-associated health conditions that are similar to those in humans. The underlying causes of detrimental health in aging are likely to be many, but each condition is also associated with an increase in circulating pro-inflammatory markers.

**Keywords:** Herbs, Nutrition, Healthy, Aging.

### I. Introduction

The population of North America and Europe is aging. Currently one in ten people in the United States is over 65. By the year 2050, it is estimated that one in five Americans will be over 65. Our life expectancy is higher than ever before and most of us want to live a long and healthy life. While many of us want to live to be 85 or 90, the reality is that what we really want is to be 35 or 40 years old and physically stay that age for another 50 or 60 years. Perhaps someday science fiction dreams (or nightmares) of cloning new organs, 20-something octogenarians, and cellular regeneration may be a reality, but in the present we are stuck with the reality of growing old. As we reach our 60's, 70's, and 80's, we heal more slowly, our bones become more brittle, our skin sags, our energy is not what it once was. No one has discovered Ponce de Leon's Fountain of Youth, but we do know that herbs, diet, lifestyle, and supplements can slow aging, enhance memory, help prevent cancer and heart disease, and keep us as healthy as possible throughout our lives. In this talk we will focus on common conditions associated with aging and examine a range of herbal and nutritional therapies that can help you, your loved ones, or your patients.

### The Circulatory System

**Alzheimer's Disease** – the cause of Alzheimer's is still unknown, but many studies have shown that regular mental exercise and the use of dietary/herbal antioxidants and circulatory stimulants may reduce the risk of developing this terrible disease and slow its onset if it develops. Nutritional deficiencies, impaired digestion, poor circulation, insulin resistance, smoking, and chronic stress all can contribute to diminished cerebral function and may be part of the Alzheimer's puzzle.

Herbs for enhanced cerebral circulation (nootropics):

Sage herb (*Salvia officinalis*)

Rosemary herb (*Rosmarinus officinalis*)

Ginkgo standardized extract (*Ginkgo biloba*)

Holy Basil herb (*Ocimum sanctum*)

Periwinkle herb (*Vinca minor*)

Chinese Polygala root (*Polygala tenuifolia*)

Lemon Balm herb (*Melissa officinalis*)

Bacopa herb (*Bacopa monnieri*)

Blueberry Solid Extract (*Vaccinium spp.*)

Lavender flower (*Lavendula angustifolia*)

Gotu Kola herb (*Centella asiatica*)



Some supplements including Phosphatidyl Serine (PS), DHA (from fish oil), B-complex and Acetyl-carnitine have all shown benefits for enhancing memory and cognitive function. A new study found low levels of vitamin D were associated with increased dementia and cognitive decline.

**Atherosclerosis** - for many years Atherosclerosis was seen as a disease caused by excessive consumption of saturated fats. A low fat diet was seen as a way to lower LDL & VLDL cholesterol and prevent deposition of fatty plaques on the arterial walls. We now know that poor quality fats (trans-fatty acids, fried foods, rancid fats) do play a role, but systemic inflammation, insulin resistance, oxidation of fats, and low grade infections play equal if not greater roles in this condition. We also recognize that good fats, especially Omega 3 fatty acids, as well as dietary antioxidants and nutrients (Vitamin A, C, D, E, zinc, selenium. Alpha lipoic acid, grape seed extract, CoQ10), are very important for maintaining cardiovascular health and preventing arterial disease.

Herbs for preventing and treating atherosclerosis:

Hawthorn berry/flower ( <i>Crataegus spp.</i> )	Lycium fruit ( <i>Lycium barbata</i> )
Gum Guggul gum ( <i>Commiphora mukul</i> )	Garlic bulb ( <i>Allium sativum</i> )
Linden Flower ( <i>Tilia spp.</i> )	Rosemary herb ( <i>Rosmarinus officinalis</i> )
Dan Shen root ( <i>Salvia miltiorrhiza</i> )	Turmeric rhizome ( <i>Curcuma longa</i> )
Blueberry Solid Extract ( <i>Vaccinium spp.</i> )	Cinnamon bark ( <i>Cinnamomum spp.</i> )
Pomegranate ( <i>Punica granatum</i> )	Sage herb ( <i>Salvia officinalis</i> )

**Hypertension** – has become increasingly common over the last 50 years. Stress, obesity, insulin resistance, atherosclerosis, diabetes, magnesium and calcium deficiency, and excess sodium are all contributing factors. A study done in 2002 (ALLHAT) found that simple diuretics were as effective as the more expensive beta blockers, ACE inhibitors, and calcium channel blockers for treating mild to moderate hypertension. Not only was the therapy much less expensive, adverse effects were significantly reduced as well. For mild to moderate hypertension and white coat hypertension, herbs, diet, supplements (Co-Q-10, magnesium) and lifestyle changes are an appropriate and usually effective treatment protocol.

Herbs for hypertension:

Linden Flower ( <i>Tilia platyphyllos</i> )	Hawthorn berry/flower ( <i>Crataegus spp.</i> )
Motherwort herb ( <i>Leonurus cardica</i> )	Olive leaf ( <i>Olea europaea</i> )
*Mistletoe herb ( <i>Viscum album</i> )	Chrysanthemum flower ( <i>Chrysanthemum morifolium</i> )
Dandelion leaf ( <i>Taraxacum officinale</i> )	Garlic bulb ( <i>Allium sativum</i> )
Du Zhong bark ( <i>Eucommia ulmoides</i> )	– tea only Black Haw bark ( <i>Viburnum prunifolium</i> )
Huang Qin root ( <i>Scutellaria baicalensis</i> )	Gou Teng hooks ( <i>Uncaria sinensis</i> )
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### The Digestive System

**Bowel Function – Constipation** – as digestive function diminishes, a lack of HCL and bile salts creates a tendency towards slow transit time and constipation. A diet rich in soluble fiber, bitters, and adequate water help to offset this problem. One to three bowel movements per day are normal and average transit time is 12-24 hours. Many medications can also contribute to constipation (iron supplements, morphine, sedatives) and dysbiosis (antibiotics)



of the GI tract. Avoid using stimulant laxatives on a regular basis as they can cause bowel dependence (this includes Senna, Cascara Sagrada, Buckthorn bark, and Rhubarb root).

Herbal aperients and mild laxatives:

Culvers root ( <i>Veronicastrum virginicum</i> )	Dandelion root ( <i>Taraxacum officinale</i> )
Butternut bark ( <i>Juglans cineria</i> )	Triphala – Ayurvedic bowel tonic
Artichoke leaf ( <i>Cynara scolymus</i> )	Red Alder bark ( <i>Alnus rubra</i> )

Bulk laxatives – Psyllium seed, Flax seed, Slippery Elm, Marshmallow, Agar, Pectin, Chia seed, Guar gum. Always be sure to drink plenty of fluids when taking bulk laxatives.

### The Endocrine System

**Fatigue** – is a common side effect of aging. Elders have increased sleep problems, often less exercise, and age-related diseases such as osteoarthritis can cause pain and interfere with good rest. Endocrine dysfunction (Hypothyroidism, adrenal exhaustion, HPA depletion) all decrease vitality and energy and impaired digestion can lead to nutritional deficiencies that cause or exacerbate fatigue as well.

Many elders are also on many pharmaceutical medications which can cause drug/drug interactions and some medications interfere with sleep, cause nutritional deficiencies (statin drugs inhibit synthesis of CO-Q-10), and cause feelings of fatigue and mental fog. Adaptogens and herbal stimulants (in small amounts), can increase energy and feelings of vitality. Nervines and nootropics can reduce stress, mental fog, and help improve sleep.

#### Adaptogens

#### Nervines

#### CNS Stimulants

American Ginseng root ( <i>Panax quinquefolium</i> )	Fresh Oat ( <i>Avena sativa</i> )	Cola nut ( <i>Cola acuminata</i> )
Ashwagandha root ( <i>Withania somnifera</i> )	Mimosa bark ( <i>Albizia julibrissin</i> )	Green Tea ( <i>Camellia sinensis</i> )
Asian Ginseng root ( <i>Panax ginseng</i> )	Lemon Balm herb ( <i>Melissa officinalis</i> )	
Cordyceps fungus ( <i>Cordyceps sinensis</i> )	St. John’s wort herb ( <i>Hypericum perforatum</i> )	
Dang Shen root ( <i>Codonopsis pilosula</i> )	Linden flower ( <i>Tilia spp.</i> )	
Eleuthero root ( <i>Eleutherococcus senticosus</i> )	Damiana herb ( <i>Turnera diffusa</i> )	<b>Cerebral Stimulants (Nootropics)</b>
Holy Basil herb ( <i>Ocimum sanctum</i> )		Bacopa herb ( <i>Bacopa monnieri</i> )
Rhodiola root ( <i>Rhodiola rosea</i> )		Gotu Kola herb ( <i>Centella asiatica</i> )
Schisandra berry ( <i>Schisandra chinensis</i> )		Ginkgo standardized extract ( <i>Ginkgo biloba</i> ) Rosemary herb ( <i>Rosmarinus</i> )



*officinalis)*

**Decreased Immunity** – as we age, our thymus gland shrinks, our immune systems work less efficiently, and we become increasingly susceptible to viruses, bacterial infections, and cancer. Supporting essential body systems (digestion, circulation, elimination, sleep) helps to optimize the immune system, as does stress reduction. Herbs, diet, and supplements can dramatically enhance our ability to ward off colds, flu, pneumonia, and cancer.

**Immune stimulants/antivirals/antibacterials:**

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| Elderberry berries ( <i>Sambucus nigra</i> )              | Lomatium root ( <i>Lomatium dissectum</i> )                 |
| Andrographis herb ( <i>Andrographis aniculata</i> )       | Echinacea root ( <i>Echinacea angustifolia</i> )            |
| Honeysuckle flower ( <i>Lonicera japonica</i> )           | Boneset herb ( <i>Eupatorium perfoliatum</i> )              |
| Forsythia/Lian Qiao fruit ( <i>Forsythia uspensia</i> )   | Isatis leaf/root ( <i>isatis indigotica, I. tinctoria</i> ) |
| Houttuynia/Yu Xing Cao leaf ( <i>Houttuynia cordata</i> ) | Thyme herb ( <i>Thymus spp.</i> )                           |
| Yarrow herb ( <i>Achillea millefolium</i> )               | Osha root ( <i>Ligusticum porterii</i> )                    |

**Immune modulators:**

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| Maitake mushroom ( <i>Grifola frondosa</i> )       | Ligustrum berry ( <i>Ligustrum lucidum</i> )             |
| Cordyceps mushroom ( <i>Cordyceps sinensis</i> )   | Chaga mushroom ( <i>Inonotus obliquus</i> )              |
| Licorice rhizome ( <i>Glycyrrhiza glabra</i> )     | Eleuthero root ( <i>Eleutherococcus senticosus</i> )     |
| Reishi mushroom ( <i>Ganoderma lucidum</i> )       | Cat’s Claw/Una de Gato bark ( <i>Uncaria tomentosa</i> ) |
| Astragalus root ( <i>Astragalus membranaceus</i> ) |  |

**The Nervous System**

**Depression** – is a common emotional/physical condition that can strike at any age. In the elderly, the combination of age-related illness and depression can be devastating. There are several theories as to the cause of depression, with the serotonin deficiency model as the primary focus. While SSRI’s temporarily increase serotonin levels and, in many cases, relieve some or all of the symptoms of depression, they are not curative. Depression is unlikely to have only one cause and simplistic treatments are likely to have only partial success.

When I am treating depression I look at stress, family and social integration, digestion and bowel health (much of the body’s serotonin is manufactured in the gut), emotional and spiritual beliefs, sleep patterns, hormonal issues, and age, as all can contribute to depression. The nutritional supplement SAME can be very effective as a general antidepressant; do not use it in patients who have bi-polar disorder. Adequate vitamin D levels are necessary to help prevent seasonal affective disorder (SAD) and fish oil has been shown to help relieve bi-polar conditions.

**Herbal antidepressants:**

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| St. John’s wort flowering tops ( <i>Hypericum perforatum</i> ) | Lemon Balm herb ( <i>Melissa officinalis</i> ) – use with Hypericum for SAD |
| Lavender flower ( <i>Lavendula angustifolia</i> )              | Linden Flower ( <i>Tilia spp.</i> )   |



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| Damiana herb ( <i>Turnera diffusa</i> )            | Black Cohosh root ( <i>Cimicifuga racemosa</i> )                |
| Mimosa bark ( <i>Albizia julibrissin</i> )         | Holy Basil herb ( <i>Ocimum sanctum</i> )                       |
| Rosemary herb ( <i>Rosmarinus officinalis</i> )    | Night Blooming Cereus stem ( <i>Selenicereus grandiflorus</i> ) |
| Evening Primrose herb ( <i>Oenothera biennis</i> ) |   |

**Adaptogens which are useful for depression:**

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| Rhodiola root ( <i>Rhodiola rosea</i> )          | Eleuthero root ( <i>Eleutherococcus senticosus</i> ) |
| Schisandra berry ( <i>Schisandra chinensis</i> ) | Holy Basil herb ( <i>Ocimum sanctum</i> )            |
| Asian Ginseng root ( <i>Panax ginseng</i> )      |  |

**Anxiety** – Can range from a mild uneasiness to a crippling state of fear and uncertainty. Mild anxiety is normal when we confront an unknown situation or problem. Chronic anxiety is associated with stress, but like depression, it has no definite organic cause. It can be exacerbated by insomnia (it can also cause insomnia), excess caffeine, stimulant medications, chronic fear, Alzheimer’s and cardiovascular disease. Severe anxiety attacks (panic disorders) may require medication, especially in the early stages of treatment.

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| Motherwort herb ( <i>Leonurus cardica</i> )          | Blue Vervain herb ( <i>Verbena hastata</i> )        |
| Fresh Milky Oat ( <i>Avena sativa</i> )              | *Pulsatilla herb ( <i>Anemone spp.</i> )            |
| Kava root ( <i>Piper methysticum</i> )               | Chamomile flower ( <i>Matricaria recutita</i> )     |
| Chinese Polygala root ( <i>Polygala tenuifolia</i> ) | Bacopa herb ( <i>Bacopa monnieri</i> )              |
| Skullcap herb ( <i>Scutellaria lateriflora</i> )     | Passion Flower herb ( <i>Passiflora incarnata</i> ) |

**Insomnia** – can affect people of all ages, but can become worse in the elderly. Increased sleep latency (difficulty falling asleep) and difficulty staying asleep are all associated with aging. Anxiety, depression, diabetes, pharmaceutical medications, BPH, menopause, pain, muscle spasms, nutritional deficiencies, and irritable bowel or bladder can easily affect sleep. The inability to get good quality sleep affects mood, overall health, and physical function. Lack of sleep can cause or exacerbate anxiety, depression, heart disease, muscle pain, impaired cognitive function, and immuno-suppression. Helping to restore normal sleep to an ill patient should be one of a clinician’s first priorities.

**Herbal sedatives and nervines:**

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| Lavender flower ( <i>Lavendula angustifolia</i> )  | Skullcap herb ( <i>Scutellaria lateriflora</i> )-<br>insomnia<br>with anxiety and muscle tension |
| Chamomile flower ( <i>Matricaria recutita</i> )  |  |
| Hops strobiles ( <i>Humulus lupulus</i> )  | Zizyphus seed ( <i>Zizyphus spinosa</i> )  |
| Passion Flower herb ( <i>Passiflora incarnata</i> ) -<br>insomnia with circular thinking | Lemon Balm herb ( <i>Melissa officinalis</i> )   |
|  | California Poppy herb/root ( <i>Eschscholzia californica</i> )                                   |
| Corydalis tuber ( <i>Corydalis yanhusuo</i> ) –<br>insomnia                              | Linden flower ( <i>Tilia spp.</i> )  |



with pain

### The Musculoskeletal System

**Arthritis** – can have several causes. The most common form of arthritis is osteoarthritis, associated with age related “wear and tear” or trauma. Other forms of arthritis include rheumatoid arthritis (autoimmune), gouty arthritis (excess uric acid), and psoriatic arthritis (an autoimmune arthralgia). Osteoarthritis is the most likely condition associated with old age. Orthodox therapy is palliative - it includes NSAID’s, therapeutic exercise, rest, and hot or cold applications. Herbal/nutritional treatment can also offer medications with anti-inflammatory and pain relieving qualities. Hydrotherapy, acupuncture, magnet therapy, and supplements (glycosamine and MSM) can be helpful for relieving arthritis pain. In addition, by treating the whole person, their digestion, elimination, circulation, immune systems, etc., we can often provide more complete and effective treatment with few if any side effects for arthritis.

Turmeric rhizome ( <i>Curcuma longa</i> )	Meadowsweet herb ( <i>Filipendula ulmaria</i> )
Ginger root ( <i>Zingiber officinale</i> )	Ox-Knee root ( <i>Achyranthes bidentata</i> )
Devil’s Claw tuber ( <i>Harpogophytum procumbens</i> )	Teasel root ( <i>Dipsacus asper</i> , <i>D. japonicus</i> )
Yucca root ( <i>Yucca spp.</i> )	Boswellia gum/resin ( <i>Boswellia serrulata</i> )
Willow bark ( <i>Salix spp.</i> )	Black Cohosh root ( <i>Cimicifuga racemosa</i> )
Celery Seed ( <i>Apium graveolens</i> ) – especially Drynaria root/Gu Sui Bu ( <i>Drynaria fortunei</i> )	Magnolia bark ( <i>Magnolia spp.</i> )
Sarsaparilla rhizome ( <i>Smilax spp.</i> )	Topical applications: Hypericum oil, trauma oil

**Osteoporosis** – is most often associated with menopausal and post-menopausal women. Men can develop osteoporosis, but it is less common. Loss of bone density and bone loss actually start well before menopause. An old folk saying was that for every child you bear, you lose a tooth. A lifetime of poor nutrition (lack of calcium, magnesium, boron, essential fatty acids, Vitamin D, C, and K, and excess phosphorus, protein, and saturated fat), lack of exercise, smoking, excessive alcohol consumption, hyperthyroidism, and long-term use of corticosteroids all are significant risk factors for osteoporosis. The real key is prevention, rather than taking Fosamax after bone loss has occurred.

Horsetail herb ( <i>Equisetum arvense</i> )	Teasel root ( <i>Dipsacus asper</i> , <i>D. japonicus</i> )
Alfalfa herb ( <i>Medicago sativa</i> )	Nettle leaf ( <i>Urtica dioica</i> )
Oat Straw ( <i>Avena sativa</i> )	Processed Rehmannia root ( <i>Rehmannia glutinosa</i> )
Amla fruit ( <i>Emblica officinalis</i> )	Drynaria root/Gu Sui Bu ( <i>Drynaria fortunei</i> )

Supplements such as soy isoflavones (as well as isoflavones extracted from Kudzu and Red Clover) and resveratrol have shown the ability to improve bone density and prevent osteoporosis.

**Sciatica** – is a painful inflammation of the sciatic nerve. The pain usually is felt from the buttocks (right or left), down the inside or back of the thigh. The pain is severe and worse with motion. The majority of cases resolve within 6 weeks and chiropractic, acupuncture, heating pads, indirect massage, and herbs can offer pain relief and speed the healing process.

St. John's wort flowering tops ( <i>Hypericum perforatum</i> )	Horse Chestnut seed ( <i>Aesculus hippocastanum</i> ) – for dull, throbbing pain, tissue is edematous
Prickly Ash bark ( <i>Zanthoxylum spp.</i> )	Sweet Melilot herb ( <i>Melilotus officinalis</i> ) - sharp,
Teasel Root ( <i>Dipsacus asper, D. japonicus</i> )	stabbing pain
Ox-knee root ( <i>Achyranthes bidentata</i> )	Topical application – Trauma oil (contains Arnica, Lobelia seed, Hypericum, and essential oil of Black Birch)

## II. Conclusion

The optimal nutrition and a healthy lifespan is apparent that they are related, most likely with the former affecting maximal length and achieving a lessening of the "...decline or loss of adaptation with increasing age." Although the nine subject-matter experts provided their insights and in some cases, laboratory-derived data points applicable to healthy ageing, it is also evident that the surface has been barely scratched and that many additional definitions, end-points, markers of ageing can be proposed, and that there are likely many well-conceived possible lifestyle options that can be modified to achieve improved health and optimize the lifespan. One theme that resonates through this entire report is that ageing is NOT a disease. The phrase "successful ageing" does not do justice to the inclusive opportunity that drive an individual to achieve their optimal lifespan. Quality is equally important to the quantity of life years deemed appropriate for each individual, given both controllable and uncontrollable impacting parameters. Most of the presenters either called out terms such as functional ability and intrinsic capacity, or in their oral and written contributions drew tangential points to the health-related attributes that enable a lifespan value option affected by the underlying physiological and psychosocial factors, health and lifestyle-related behaviours and the presence/absence of disease and rapidly-developing decrements. Finally, the mental picture of a life course can be intuitively described with adjustments in internal (genetics) and external (environment) elements over the lifespan affecting the slope and trajectory of a life, a progress towards death that is overlaid by debilitating life stages associated with perceptions of unhealthy and unforgiving "old age".

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