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— THE 14-DAY —
PAIN FREE
DIET



Pain Killing
Spices & Teas

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Notice



This book is for reference and informational purposes only and is in no way intended as medical counseling or medical advice. The information contained herein should not be used to treat, diagnose or prevent any disease or medical condition without the advice of a competent medical professional. The dietary changes described herein are for informational purposes, and the reader should consult a physician before engaging in them. Keep in mind that most physicians may know very little about dietary prescription for treating pain. If your health professional believes food choices have nothing to do with pain, you are encouraged to seek another opinion.

Introduction

First and foremost, this is not a “supplement guide”, or a product pushing natural pills, powders, or potions. In fact, until the foundational diet is optimized by following the recommendations in *The 14-Day Pain Free Diet*, there is very little supplementation recommended, other than possibly a high quality fish oil and maybe some probiotics or digestive enzymes.

Do not misinterpret the message as “no supplements are ever needed”. Some conditions will require supplementation, but it is critical that a healthy diet remain the keystone of any successful treatment plan for long-term pain relief.

I see many patients who attempt to supplement a poor diet with multiple vitamins or supplements. This is a costly endeavor, and is much like putting a paint job on a rusty car. It does not make a whole lot of sense, unless throwing money away is something you enjoy.

Down the road we will be releasing *The Pain Free Diet Supplement Guide* loaded with evidence-based recommendations on how to supplement an anti-inflammatory diet with the best vitamins, nutraceuticals, and medicinal plant-based products.

However, in this guide, the aim is to teach you what natural spices and teas can be added to your diet to optimize a pain-killing diet, without spending a nickel on traditional supplements.

Something Old, Something New

Teas, spices, and herbs have been used to treat various ailments and diseases for thousands of years in “eastern medicine” - Asia, the Middle East, as well as several other cultures.

For a period of time in western countries, it was also fairly common for physicians and other health professionals to use medicinal herbs to treat various ailments. Mainly plant, but also animal “materials”, were extracted and made into tinctures, then dispensed with exact prescriptions to help treat certain conditions.

In the *The 14-Day Pain Free Diet*, the process for diagnosing a specific dietary injury leading to inflammation and pain was explained. The program outlined a specific and systematic approach to help pain sufferers create an exact dietary prescription for the treatment of inflammation and pain. In “the old days” this was the standard of care. In many countries, it still is.

So what happened in more industrialized countries?

Over the years, mass-produced pharmaceuticals largely replaced natural remedies as it became easier and cheaper to mass-produce consistent tinctures in the form of pills. Many of the drugs commonly used in medicine today are actually synthetic derivatives of plant-based compounds.

Spice Things Up

Morphine, the very first “pain killer”, is an alkaloid extracted from the seedpods of the poppy plant *Papaver somniferum*. It is now synthetically produced with slight chemical variations and marketed as several different powerful pain medications.

The widespread availability of pain killing medications has largely superseded the notion that dietary prescription and herbal supplementation can, and once was, used to treat inflammation, pain, and multiple symptoms and diseases. There is no question that pain medications undoubtedly need to be used at times in modern medicine, but not to what some are calling epidemic levels seen today.^{1,2}

Unfortunately, due to targeted marketing campaigns (How many pain-relieving product commercials do you see on television while watching the average sporting event?), society at large has arrived at the conclusion that the only effective way to treat pain is with a pain pill, patch, or cream.

To show how effective certain teas and spices can be for decreasing inflammation and pain, let’s go old-school for a little while, and put the pain pills aside.

I am not talking Will Ferrell streaking-through-the-quad Old School, but if that helps manage your pain, to each their own. We are not here to judge.



Using herbs and spices will make every recipe taste better, guaranteed. They work as a catalyst in your cooking experiments, multiplying not only the taste, but also the capacity of the body to maximally extract the vital nutrients in healthy foods consumed.

Tips:

- Although buying fresh and organic when available is a good idea with fruits and vegetables, dry spices may be even more potent pain killers than the fresh variety. (This will be explained below)
- Shop at a local spice store as the quality and varieties may be better than that found in many grocery stores. (Check out [Penzeys Spices](#) online if options are limited locally)
- Store all spices in air-tight glass jars in a cool, dark environment.

Spices and herbs are loaded with antioxidants that can help combat free radicals and decrease systemic inflammation.³

A few spices however, mainly those derived from the nightshade family of plants, may have the opposite effect for susceptible individuals and can actually increase systemic inflammation.



Nightshades are a group of over 2,800 plants – from the scientific order *Polemoniales*, and the *Solanaceae* families – that grow in the shade of night. Many of the nightshades species can be toxic when consumed by mammals.

They naturally contain four different alkaloid compounds (steroid, tropane, pyrrolizidine, indole) more highly concentrated in the leaves, green varieties (tomatoes, peppers), and older potatoes.

Their leaves also contain nicotine. Yes, the same nicotine as in tobacco, albeit in far less amounts (largest quantity found in eggplant and green tomatoes).

Literature on the possible link between nightshades, inflammation, and pain has been available for decades, but many health professionals are not knowledgeable on this topic, so it is probably unlikely that one has discussed this with you.

Common nightshades:

- Vegetables – potatoes (other than sweet potatoes and yams), eggplant, tomatoes, tomatillos, hot and sweet peppers, jalapeno peppers, pepino, pimento
- Fruits – ground cherries, goji berries, huckleberry, naranjillas
- Spices – paprika, cayenne pepper, chili powder
- Other - tobacco

Although the primary aim for this guide is to use spices and herbs to decrease inflammation and pain, several additional “side effects” will be experienced when incorporated more regularly into the diet:

- Blood sugar stabilization
- Increase basal metabolic rate - helpful if fat loss is a goal
- Anti-bacterial, anti-microbial, anti-viral, anti-fungal effects



The ORAC (Oxygen Radical Absorbance Capacity) unit or “ORAC score” is a method of measuring the antioxidant capacity of different foods and supplements. ORAC values are expressed in micromoles of Trolox Equivalents per 100 grams of sample, or $\mu\text{mol TE}/100\text{gm}$.⁴

Developed by scientists at the National Institutes of Health, the exact effect of high-value ORAC foods on health has not been established, but it is believed that foods with a higher ORAC value offset free radical damage caused by oxidation reactions. If free radicals can be effectively decreased, it is theorized that high-value ORAC foods can minimize some aspect of age-related changes within the tissues of the body, including joint tissue.

Theoretically, foods and spices higher in ORAC values may help decrease free radicals, inflammation, and pain.

The ORAC value will be used to evaluate the relative anti-inflammatory and pain killing capacity of specific herbs, spices, fruits and vegetables.⁵

Everyone by now has heard about the high antioxidant value of certain fruits:

- Himalayan goji berries* (ORAC 25,000)
- Raspberries (ORAC 19,220)
- Acai berries (ORAC 18,500; acai powder from pulp/skin, 102,700)
- Blueberries (ORAC 9,621)

*Although extremely potent antioxidants, they are part of the nightshade family of plants known to increase joint pain and inflammation in some people.

Raw nuts are also rich in antioxidants:

- Pecans (ORAC 17,940)
- Walnuts (ORAC 13,541)
- Hazelnuts (ORAC 9,645)
- Pistachio (ORAC 7,675).

Beans and legumes rank quite high as well:

- Red (ORAC 8,606)
- Black (ORAC 8,494)
- Pinto (ORAC 8,033)
- Lentils (ORAC 7,282)

According to weight, spices by far have the highest antioxidant value of any food. Remember though that the ORAC value is calculated based on 100 grams of the food. Most people are probably not going to chow down on nearly a quarter pound of any one spice in any recipe, but small amounts incorporated into the diet daily can still be quite potent and have a positive effect.

The Top 15 Dried Spices or Herbs

Cloves (ORAC 290,283)

- Origin - Native to Indonesia, from the flower buds of the evergreen tree family *Myrtaceae*.
- Taste: sweet, spicy, similar to cinnamon, but not as hot
- Culinary uses: combines well with allspice, cinnamon, vanilla, basil; can be added to tea, coffee or dessert dishes
- Medicinal uses: In Indian ayurvedic medicine as well as Chinese medicine, the essential oil derived from cloves is used as a potent pain killer, particularly for dental procedures.

Oregano (ORAC value 175,295)

- Origin: Native to Eurasia and the Mediterranean, part of the mint family *Lamiaceae*, a perennial herb.
- Taste: aromatic, warm, bitter, spicy
- Culinary uses: Italian dishes, soups
- Medicinal Uses: It is a potent antioxidant due to a high concentration of flavonoids and phenolic acid.⁶ The essential oil derived from oregano shows antiseptic, anti-viral, anti-bacterial, and anti-fungal qualities.^{7,8} In some cultures it is still used for treatment of stomach and respiratory ailments, and even parasites.

Rosemary (ORAC 165,280)

- Origin: Native to the Mediterranean region, part of the mint family *Lamiaceae*, a perennial herb.
- Taste: highly aromatic, bitter, astringent
- Culinary Uses: stuffing, roast meats
- Medicinal uses: Has been shown to help concentration, improve mood, and have a positive impact on memory.⁹ Can also be effective for muscle soreness and headaches.
- Other effects: Marinating meats in liquid mixtures containing rosemary and other herbs/spices can dramatically help to reduce HCA's (heterocyclic amines), which are carcinogenic compounds that can form when meats are grilled.¹⁰
- Caution: Large amounts can stimulate bile production and should be avoided if there is a history of gallstones.

Thyme (ORAC 157,380)

- Origin: Thought to be native to the French and Italian Riviera now multiple regions, from the family *Thymus*, most commonly *Thymus Vulgaris*.
- Taste: lemon, pepper, mint
- Culinary Uses: savory dishes like stews and soups
- Medicinal Uses: The essential oil derived from thyme is thymol, an ingredient commonly used in commercially made mouthwashes and alcohol-free hand sanitizers.¹¹ Can also

be used for mild indigestion.

- Other Effects: Greek mythology shows that thyme was burned as incense, and was thought to be a source of courage before battle.

Cinnamon (ORAC 131,420)

- Origin: Native to Bangladesh, India, and Nepal, from the inner bark of the evergreen family *Lauraceae*.
- Taste: bitter, spicy, hot
- Culinary Uses: desserts, tea, coffee
- Medicinal Uses: Due to the potent anti-inflammatory effect, used daily it can help with joint pain, stiffness and inflammation. Has been shown to help regulate blood sugar in Type II diabetics, as well as improve LDL cholesterol and triglycerides.¹² It is also thought to be antimicrobial and research is ongoing using cinnamon as a natural food preservative, rather than the harmful chemicals commonly used.¹³ Researchers have also show that cinnamon extract may have a powerful effect on memory and cognitive dysfunction in Alzheimer's dementia.¹⁴

Turmeric (ORAC 127,068)

- Origin: Native to tropical south Asia, from the family *Zingiberaceae*, member of the ginger family.
- Taste: mild aromatic, earthy, bitter, ginger, pepper
- Culinary uses: used to impart a yellow color to foods, commonly used in combination with other spices such as curry or cumin
- Medicinal uses: The active ingredient, curcumin is tied to the anti-inflammatory effect, and why turmeric is felt to significantly ease pain and inflammation from osteoarthritis.¹⁵ Has also shown promise in the treatment of Alzheimer's dementia.¹⁶
- Caution: Although it can be a remedy for irritable and inflammatory bowel disease, it can have the opposite effect causing nausea and diarrhea. Large amounts can stimulate bile production and gallbladder contractions so may want to be avoided if there is a history of gallstones.

Sage (ORAC 119,929)

- Origin: Native to the Mediterranean region, also called *Salvia Officianales*, is a perennial evergreen of the mint family *Lamiaceae*.
- Taste: strong aromatic, earthy, woody, bitter
- Culinary Uses: soups and stuffing
- Medicinal Uses: Found effective to treat some symptoms from Alzheimer's dementia.¹⁷ The essential oil may have a positive effect on lowering triglycerides.

Parsley (ORAC 73,670)

- Origin: Native to the central Mediterranean region, a biennial or annual herb depending on where it is grown, species of *Petroselinum*, and the family *Apiaceae*.
- Taste: bitter, grassy
- Culinary Uses: widely used as a garnish, but also used in stocks, soups, and sauces.
- Medicinal Uses: Anti-inflammatory and supports immune function.

Nutmeg, ground (ORAC 69,640)

- Origin: An evergreen tree of the species *Myristica fragrans*, indigenous to the Banda Islands, or Spice Islands, of Indonesia
- Taste: nutty, earthy
- Culinary Uses: Used in many sweet and savory Indian dishes. A key ingredient for the Scottish dish haggis. Commonly added to the holiday beverage eggnog.
- Medicinal Uses: Although used as a folk remedy for a number of ailments, it has no proven medicinal benefit. But given the ORAC value, it is a potent anti-inflammatory.

Basil (ORAC 61,063)

- Origin: Native to India, a hardy annual plant of the mint family *Lamiaceae*.
- Taste: sweet, pepper, mint, hay
- Culinary Uses: A key ingredient in pesto sauces.

- **Medicinal Uses:** Used in Ayurvedic medicine as a treatment for asthma, diabetes, and stress.

Cocoa, dry, unsweetened (ORAC 55,653)

- **Origin:** Native to the tropical Americas, from the evergreen cacao tree, in the family *Malvaceae*.
- **Taste:** bitter, chocolate
- **Culinary Uses:** Add to desserts, coffee, smoothies.
- **Medicinal Uses:** Cocoa is very high in antioxidants due to the abundance of flavonoids, specifically epicatechin. This substance is known to increase brain perfusion, and also induce positive effects on mood.¹⁸ This is why you feel so good when eating chocolate. It has also been shown to have blood pressure lowering effects and to improve endothelial cell function.¹⁹
- **Caution:** All cocoa is not created equal. To get the positive health benefits, look for varieties of chocolate with at least 70%, preferably 85% cocoa by content.

Cumin (ORAC 50,372)

- **Origin:** Native to the east Mediterranean and India, from the seeds of the flowering plant family *Apiaceae*, also in the parsley family.
- **Taste:** bitter, spicy, warm
- **Culinary Uses:** Commonly used in South Asian and Latin American food in stews, soups, chili, and seasoning meat. A traditional ingredient in Indian masalas.
- **Medicinal Uses:** Due to a high anti-inflammatory and antioxidant capacity, it can be used as a complementary treatment in joint pain and inflammation from osteoarthritis and rheumatoid arthritis.²⁰ May also be beneficial in blood sugar stabilization.

Curry (ORAC 48,504)

- **Origin:** Curry powder is not a singular spice or herb, but rather a mixture of spices of widely varying composition depending on the country of origin. The yellow varieties typically contain a blend of turmeric, coriander, cumin, and fenugreek. Red curry

varieties additionally usually contain red pepper.

- Taste: strong, pungent aromatic, sweet, spicy
- Culinary Uses: Curry dishes
- Medicinal Uses: Hotter varieties are thought to release endorphins, or endogenous pain killing substances.
- Caution: If sensitive to the nightshade family of plants, be very careful to select varieties that do not contain red pepper, cayenne, or paprika.

Ginger, ground (39,041)

- Origin: Native to South Asia, from the plant family *Zingiberaceae*. Other notable members of this plant family are turmeric and cardamom.
- Taste: hot, fragrant, spicier than the fresh version
- Culinary Uses: To spice tea or coffee
- Medicinal Uses: Tied more closely to the fresh variety (see below)

Black pepper (34,053)

- Origin: Native to Southeast Asia and India derived from the peppercorn fruit from the flowering vine family *Piperaceae*.
- Taste: spicy
- Culinary Uses: Versatile spice that can be used in nearly any recipe
- Medicinal Uses: Widely used in Indian medicine and as a home remedy for relief of common cold symptoms.

The Top 5 Fresh Spices and Herbs

Sage (ORAC 32,004)

Thyme (ORAC 27,246)

Tarragon (ORAC 15,542)

- Origin: Native to Central Asia, a perennial herb in the family *Asteraceae*.
- Taste: aromatic, mint, licorice, pine and pepper.
- Culinary Uses: Used in chicken, fish, and egg dishes. A key ingredient in Bernaise sauce, usually in the form of tarragon vinegar.
- Medicinal Uses: Researchers at the Pennington Biomedical Research Institute at Louisiana State University are investigating the positive effect on symptoms of peripheral neuropathy of pre-Diabetes and obesity.²¹ Positive effect on blood sugar and lipid profiles, and may also have a role in cardiovascular disease by decreasing platelet adhesion and blood coagulation.

Ginger Root (ORAC 14,840)

- Origin: Native to South Asia, from the plant family *Zingiberaceae*. Other notable members of this plant family are turmeric and cardamom.
- Taste: pungent, aromatic
- Culinary Uses: The pickled variety is commonly served with sushi. In many cultures it is brewed into ginger beer or tea.
- Medicinal Uses: Used for centuries in Chinese medicine as a remedy to decrease muscular soreness and joint pain.²² Fresh and dried ginger demonstrates anti-viral activity against the common cold virus, human respiratory syncytial virus (HSV).²³ Can be used as a mild digestive to combat nausea, vomiting, and motion sickness.
- Caution: Known to be a weak blood thinner. Can lower blood pressure and also add to the effect of some diabetic medications. Large amounts can stimulate bile production and gallbladder contractions so may want to be avoided if there is a history of gallstones.

Oregano (ORAC 13,970)

Other Honorable Mentions

- Garlic, fresh (ORAC 5,708)
- Basil, fresh (ORAC 4,805)
- Dill Weed, fresh (ORAC 4,392)

Tea It Up When You Tear It Up

After water, tea is the second most popular beverage in the world.²⁴

Native to tropical and subtropical climates, from the evergreen plant species *Camellia Sinesis*. Many of the high quality varieties grow above 1500 meters, where the plants grow more slowly, and as a result the taste is felt to be better.²⁵ An average of three years is needed for a plant to mature, as it is only the top 1-2 inches of the plant leaves that are harvested.

“Herbal teas” on the other hand, do not usually contain any tea leaves, but rather fruit, herbs, or plants, such as rosehip, rooibos, or chamomile.

Most teas come from two main varieties:

- Chinese tea (*Camellia sinensis variety sinensis*) – the chief variety found in China, Japan, and Taiwan
- Assam tea (*Camellia sinensis variety assamica*) – the variety used for Indian teas

The method of processing is primarily responsible for the types of tea:

- White
- Yellow
- Green
- Oolong
- Post fermented teas - Pu-erh
- Black

The most common types consumed are white, green, oolong and black. After processing, much like wines, they can be blended to achieve certain taste characteristics.

Once harvested leaves begin to oxidize immediately, causing the breakdown of chlorophyll and the release of tannins, making the leaves darker. The final color is determined primarily by the amount of oxidation, or fermentation that is allowed to take place. Application of dry or steam heat is used to dry the leaves and halt the oxidation process to produce the desired type and color of tea.

Teas are rich in antioxidants, specifically catechins, comprising approximately 30% of the dry weight. Catechins tend to be more concentrated in white or green teas, less so in black teas due to the longer oxidation process.²⁶ The ORAC value of teas can vary dramatically depending on the type and origin of plan, but typically range between 1100-1300. Most traditional teas also have a caffeine content of 3-4% of the dry weight, ranging from 30-90 mg per cup depending on the brand and steeping time.²⁷

Tea Preparation Methods

The most common ways of brewing tea are through infusion or decoction.

Infusion (steeping)

- Typically used to prepare tea from tea leaves
- Boiling water is poured over tea leaves and allowed to steep
- Recommended steeping times vary but usually between 3-5 minutes is ideal for most varieties.
- Longer steeping times will increase the caffeine content of the tea

Decoction

- Often used for tougher plant matter such as bark, roots, or berries, or matter with a smaller surface area.
- The matter is added to cool water, brought to a boil until approximately 2/3 of the water has boiled off, and then put through a strainer.
- This process releases more essential oils and flavor from the tougher plant matter

All Teas Are Not Created Equal

Like any food source, the quality of tea can vary depending on the country of origin, the method of production, and the distributor. Criteria have been established for grading of tea, specifically black tea varieties, and are essential in order to assign monetary values to tea for export to other countries. Green and Oolong teas are graded much like wines, and depend on the variety of the tea leaves, the region and country of origin, and final taste characteristics.

Most teas are graded on two main factors:

- Size of the leaves
- Method of manufacturing – hand-picked versus mechanical

Further grading classifications depend on the size of leaves.²⁸

- **Dust (D)** – This is the lowest grade in the classification of black tea and what is found in most mass-produced tea bags. Consists of small pieces of tea leaves and tea dust. Essentially what is swept off the floor after the larger leaves are packed for distribution.
- **Fanning (F)** – Consists mainly of pieces of tea leaves.
- **Broken Orange Pekoe (BOP)** – Medium grade. Consists of small tea leaves or pieces of larger leaves.
- **Orange Pekoe (OP)** – Consists of large, whole tea leaves picked without the flower bud of the tea plant.
- **Flowery Orange Pekoe (FOP)** – Highest grade. The whole tea leaves together with the flowering tea plant.

Tea “Prescription” Recipes

Ginger Tea

Diagnosis/Symptoms: Ginger teas have been used as common remedy in Chinese medicine and other cultures to treat sore muscles and joints.

- Finely chop one inch of ginger root.
- Steep in 4 cups of water for at least 20 minutes
- Can add honey or lemon if desired

To combat the fatigue that accompanies hard training or physical rehabilitation, and to stoke the fat-burning furnace, the following two recipes are borrowed from *Meals that Heal Inflammation*, by Julie Daniluk, R.H.N.²⁹.

Ginseng

Diagnosis/Symptoms: Fatigue

Helps restore proper hormone balance and can naturally increase mental focus and energy more safely than stimulant drinks or supplements.

- Slice around ten dime-size ginseng slices
- Steep in 4 cups of water for at least 20 minutes.
- Strain

Burdock

Rich in inulin, a hormone that also helps support a fat-burning environment

- Slice around 10 dime-size pieces
- Steep in 4 cups of water x 20 minutes

Licorice Tea

Diagnosis/Symptoms: adrenal fatigue

Contains the potent anti-inflammatory Glycyrrhizin and glycyrrhizic acid.

- Place two one-inch pieces of licorice root in 4 cups of water, bring to a boil, and then simmer for 10-15 minutes.
- Strain
- Add lemon and sweeten to taste

Nettle Green Tea

Diagnosis/Symptoms: This form of green tea is helpful for detoxification of the kidneys.

- Place 1 tbsp. of dried leaves into a cup and steep in 4 cups of boiling water for 15-20 minutes.
- Add lemon and sweeten to taste

Chamomile and Tulsi (Holy Basil)

Chamomile is not a tea, but a flowering plant in the daisy family *Asteraceae*.

Tulsi is an aromatic plant from the family *Lamiaceae*.

Diagnosis/Symptoms: Helpful for soothing muscle pain and stress.

- Place 2 tsp. of dried tulsi leaves and 2 tsp. of chamomile flowers (or 2 tea bags) into 6 cups of boiling water
- Steep for at least 20 minutes covered.

Chamomile tea alone is commonly used as a natural sleep aid.

The following recipes are from *Ayurvedic Cooking for Self-Healing* by Dr. Vincent Lad, a well-known Ayurvedic medicine practitioner.³⁰ They are safe for all doshas – or the dynamic genetic, emotional, and mental makeup that govern the body, mind, and consciousness.

Breakfast Tea

- ½ teaspoon fresh ginger, grated
- ½ teaspoon cinnamon
- ½ teaspoon cardamom
- 1 cup water

Boil the water and then add spices. Cover, remove from heat, and let stand for 5 minutes.

Lunch Tea

- 1/3 teaspoon cumin seeds
- 1/3 teaspoon coriander seeds
- 1/3 teaspoon fennel seeds
- 1 cup water

Boil the water and then add spices. Cover, remove from heat, and let stand for 5 minutes.

Dinner Tea

- 1/3 teaspoon cinnamon
- 1/3 teaspoon chamomile
- 1/8 teaspoon fennel seeds
- 1 cup water

Boil the water and then add spices. Cover, remove from heat, and let stand for 5 minutes.

The Best Homemade Chai

- 4 cloves
- 1/3 teaspoon ground nutmeg
- 1/3 teaspoon ground cinnamon
- 1/3 teaspoon cardamom
- ½ inch of dices ginger
- 1 teaspoon black tea
- 3 cups water
- 1 cup non-dairy milk of choice (can use dairy if tolerant)

Boil the water, add spices and boil for 2 minutes. Add tea and simmer for 2 minutes. Add the milk and heat until hot but not boiling. Sweeten to taste.

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