

## Alternative & Complementary Medicine: Evidence-Based Clinical Pearls

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### **Irritable Bowel Syndrome**

The following natural therapies can alleviate IBS symptoms:

- *Food Elimination Diet:*

Eliminate the following common food allergens: Dairy products, wheat, corn, eggs, citrus fruits, coffee, tea, alcohol, refined sugar, food additives, and any other food you eat more than three times a week. Allowable foods include: Cereals, grains (except wheat and corn), legumes (beans), fresh vegetables, poultry, fowl, fresh fish, nuts (except peanuts), seeds, soymilk and herbal teas.

Once the three weeks have passed, introduce one restricted food each day. Test pure sources of a food. For instance, for wheat, use a pure wheat cereal without milk, corn, sugar or other additives. Eat a sizable portion of the test food at each meal. Keep a food diary and record any adverse reactions. Allergic reactions usually appear within ten minutes to twelve hours after ingesting the test food, but they can take as long as three to four days to manifest. If symptoms develop, avoid the food. Wait until the symptoms completely disappear before testing another food. Eliminate foods that cause an allergic reaction. Vary the remaining “safe foods” by rotating the types of food you eat every day.

- *Enteric Coated Peppermint*

A DBPCT has shown that enteric coated peppermint can reduce IBS symptoms.<sup>1</sup> Take one capsule t.i.d. between meals.

### **Diabetes**

Syndrome X (insulin resistance) is characterized by android obesity, polycystic ovary syndrome, elevated LDL cholesterol and triglycerides, HT (50% of HT patients are insulin resistant)<sup>2</sup>, CAD, and elevated fasting insulin, and diabetes.

CAM remedies that improve insulin sensitivity include each of the following:

- Increase dietary fiber by eating whole vegetables and fruits. Reduce fat, sugar, and refined foods and increase unrefined starches found in legumes, whole grains, and low-glycemic vegetables<sup>3,4</sup>
- Exercise 30 minutes or more at least three times weekly.<sup>5,6</sup>
- Take Chromium picolinate 100 mcg to 600 mcg daily.<sup>7,8</sup> (food sources include brewer’s yeast, root crop vegetables, and whole grains).
- Take a high potency multivitamin. Vitamins A, C, E, magnesium, zinc, and trace minerals selenium, copper, and vanadium reduce oxidative stress and may improve insulin sensitivity.<sup>9,10,11</sup> Folate, Vit B6, and Vit B12 also improve homocysteine metabolism.<sup>12</sup>
- Take 360 to 480 mg of Evening Primrose oil or borage oil (contain gamma linolenic acid) daily.<sup>13</sup>
- Take L-arginine 1000 mg b.i.d.<sup>14,15</sup>
- Take D-*chiro*-inositol 1200 mg daily.<sup>16</sup>
- Eat foods that are rich in fructooligosaccharides (soybeans, Jerusalem artichoke, onions, asparagus, and garlic).<sup>17</sup>
- Take alpha lipoic acid 300-600mg daily.<sup>18</sup>
- Decrease stress.<sup>19</sup>
- Don’t smoke. Smoking doubles the risk of developing NIDDM.<sup>20</sup>

### **Osteoporosis**

Before reaching for your prescription pad, suggest the natural alternatives for preventing or reversing osteoporosis:

**Don’ts:**

- Smoke,<sup>21</sup> drink excessive alcohol,<sup>22</sup> drink sodas,<sup>23</sup> consume caffeinated foods or beverages,<sup>24</sup> eat excessive protein,<sup>25</sup> or eat refined sugar.<sup>26</sup>

**Do's:**

- Exercise regularly<sup>27</sup> (include both resistance and aerobic exercises), eat plenty of green leafy vegetables (high in calcium, vitamin K1, and boron),<sup>28</sup> take a high potency multivitamin (containing boron, magnesium, Ca, vitamins D,K, and C, phosphorus, copper, and zinc).<sup>29</sup>
- Substitute soy protein for animal protein.<sup>30</sup>
- Take ipriflavone 200mg t.i.d. (use with caution in patients taking theophylline, anticoagulants, and patients with liver or renal disease).<sup>31</sup>

**Menopause**

Women who wish to improve perimenopausal and menopausal symptoms, but avoid HRT, may benefit by doing the following:

- Taking a standardized extract of black cohosh (*Cimicifuga racemosa*, “squawroot”) containing 2.5% triterpene glycoside.<sup>32</sup> Remifemin® is a commercial product that is used extensively in Europe. Take one tablet b.i.d.
- Eating soy protein, limiting dietary saturated fat, and taking supplemental vitamin E 400 IU daily.<sup>33</sup>
- Taking Licorice root (*Glycyrrhiza glabra*) (avoid in hypertensive patients) solid extract (4:1) 250-500 mg t.i.d., and vitex (*Agnus castus*, “chasteberry”) solid extract (4:1) 250-500 mg t.i.d.<sup>34</sup>
- Not smoking.<sup>35</sup>
- Exercising regularly.<sup>36</sup>

**Hyperlipidemia**

Before resorting to HMG-CoA reductase inhibiting drugs, consider the following natural approach first:

- Exercising regularly.<sup>37</sup>
- Losing weight, limiting intake of saturated animal fat,<sup>38</sup> increasing soluble fiber,<sup>39</sup> eliminating alcohol,<sup>40</sup> eliminating refined sugar,<sup>41</sup> eating soy protein 25gm/day),<sup>42</sup> and using olive oil instead of margarine and other trans-fatty oils.<sup>43, 44</sup>
- Not smoking (even passive smoke).<sup>45</sup>
- Eliminating caffeinated foods and beverages.<sup>46</sup>
- Taking inositol hexanicinate 500mg. t.i.d.<sup>47</sup>
- Taking garlic supplements or eating fresh garlic daily.<sup>48</sup> The quality of garlic supplements varies. Therefore, choose one that is standardized for its allicin content (it should contain at least four thousand *micrograms* of allicin). Take four thousand *milligrams* of garlic equivalent (equal to two cloves of fresh garlic) daily.
- Using plant sterol and stanol-derived margarine spreads and salad dressings (e.g., Take Control® and Benecol®)<sup>49</sup>
- Taking beta-sitosterol 2 to 6 grams daily before meals (in addition to dietary modifications).<sup>50</sup>
- Taking Cholestin® (made from *Monascus purpureus*, red yeast rice) two 600mg capsules b.i.d. (contains 2mg lovastatin, 1mg lovastatin acid, and 1 mg. of seven other statins per capsule).<sup>51</sup> Best for cholesterol levels less than 240mg/dl.
- Taking Gugulipid (an extract of the resin from the mukul myrrh tree, *Commiphora mikul*) 25 mg of guggulsterones t.i.d. (use a product standardized for guggulsterone content).<sup>52</sup>

**Prostate Cancer**

In the year 2001, almost 200,000 men will be diagnosed with prostate cancer. That makes prostate cancer the leading cause of cancer in men. Although most of these men won't die as a result of their prostate cancer, prostate cancer still claims the lives of almost 31,000 men every year. This trend can be reversed.

To begin with, prostate cancer can be prevented. Scientists theorize that prostate cancer is a complex interplay between dietary, lifestyle, environmental, and genetic factors. The first three of these influences are under our control. Even though the last factor – our genetic make-up - can't be changed, we *can* change the expression of our genes. For instance, even though there may be an increased genetic risk of developing prostate cancer (due to a strong family history of prostate cancer), this risk can be decreased by

making healthy dietary, lifestyle, and environmental choices. In the following pages, I'll list healthy choices within each of these three areas – choices that can dramatically decrease the risk of developing prostate cancer.

In addition, these recommendations also apply to men who've already been diagnosed with or treated for prostate cancer. Scientific research suggests that healthy dietary, lifestyle, and environmental choices may prevent prostate cancer recurrence and/or spread.<sup>53</sup>

Finally, curing cancer requires more than just surgically removing the tumor or treating it with radiation. Curing cancer requires a holistic approach that treats the whole person - body, mind and spirit. Even when cancer can't be cured, a holistic approach can significantly improve the quality of life and survival of men with prostate cancer. In the following pages, I'll share some of these simple techniques with you.

## Prevention

Cancer doesn't occur overnight - it's a dynamic process. Therefore, it's potentially reversible. Cancer cells originate from normal cells that have been altered because of dietary, lifestyle, genetic, and environmental influences. Since cancer cells (like normal cells) continually adapt to changes in their local environment, it may be possible to slow down or even reverse cancer by altering these risk factors.<sup>54</sup>

### Dietary Changes

Establishing healthy eating habits is one of the best ways to prevent prostate cancer. You can immediately start lowering your risk of prostate cancer by adopting the suggestions made in each of the following categories:

- **Eliminate Fat.** Follow a low fat diet (30% or less of total calories from fat) by making the following changes:
  - Eliminate saturated fats by cutting down or eliminating red meat (men who eat red meat have twice the risk of prostate cancer<sup>55</sup> - replace red meat and poultry with cold water fish and soy protein), un-skinned poultry, whole milk and whole milk products (since dairy products are high in saturated fat, they also increase the risk of prostate cancer)<sup>56</sup>, creamy salad dressings, butter, partially hydrogenated oils (margarine, vegetable shortening), and all products made from tropical oils (palm and coconut oils).
  - Eliminate polyunsaturated vegetable oils (safflower, sunflower, corn, soy, peanut, and cottonseed).
  - Reduce total fat by eliminating deep-fried and fast foods.
  - Reduce or eliminate consumption of chips, nuts, avocados, butter, cheese and other high-fat foods.
  - Read labels and look for fat content of different foods. Don't be confused by high fat foods camouflaged under the label of "*no cholesterol*". Focus on low fat health food brands.
  - Increase consumption of omega-3 fatty acids by eating deep-water fish (yellow-fin tuna, cod or haddock). The type of fatty acid found in fish protects against prostate cancer.<sup>57</sup>
  - Use extra -virgin olive oil as your principal fat.
- **Eliminate white sugar.** Although not directly related to prostate cancer, refined sugar depresses the immune system, elevates insulin levels, and stimulates tumor growth (by increasing arachidonic acid)<sup>58</sup> Use the natural sweetener stevia (available in health food stores) in place of artificial sweeteners.
- **Eat soy protein** such as tofu, tempeh and soy milk. Rich in cancer- fighting substances called isoflavones (most notably genistein), soy protein dramatically inhibits the growth of prostate cancer cells.<sup>59</sup> Eat two helping daily (one cup of tofu, two 8 oz. Glasses of soy milk, or one half package of tempeh).
- **Increase fiber** in your diet by eating oatmeal, bran and legumes. Eliminate white flour - substitute whole grain products instead. Thirty grams of fiber a day is recommended (read package labels or consult a cookbook for the fiber content of different foods).
- **Eat fruits and vegetables.** Packed with cancer-fighting vitamins, minerals and fiber, fruits and vegetables decrease the risk of prostate cancer.<sup>60</sup> The National Cancer Institute recommends eating at least five (or better yet, nine) daily servings of fruits and vegetables.
- **Eat organic foods** whenever possible. Regular produce is often contaminated with pesticides and other chemicals. They heighten the risk of prostate cancer by causing DNA damage and altering hormone metabolism.<sup>61</sup> Finally, in addition to being high in fat, dairy and beef products are often contaminated with toxic pesticide and hormone residues.<sup>62</sup>

- **Eat garlic** - one to two cloves daily. Although the precise mechanism is unknown, garlic prevents prostate cancer by helping the liver get rid of toxins and blocking the conversion of arachidonic acid to inflammatory leucotrienes.<sup>63, 64</sup>
- **Eat tomatoes.** Harvard researchers found that eating tomatoes at least four times a week lowers the risk of prostate cancer by twenty percent. Eating ten weekly helpings of tomatoes lowers the risk by forty-five percent.<sup>65</sup>

### Vitamins, minerals and trace elements

Supplementing your diet with certain vitamins can also decrease the risk of prostate cancer. Research suggests that vitamins can decrease carcinogen formation, improve detoxification of harmful substances, decrease cancer cell growth, improve cellular communication, and control cellular differentiation and the expression of cancer.<sup>66</sup> Antioxidants work better in combination. Therefore, I recommend taking a high potency multivitamin.<sup>67</sup>

- **Take a high potency multivitamin** that is rich in antioxidants, trace elements and minerals every day with meals. (Brands such as one-a-day brand or Centrum silver do not contain sufficient amounts of the necessary vitamins, minerals and trace elements.) High potency vitamins are available in any health food store. If your multivitamin doesn't contain 400 I.U. of vitamin E and 200 micrograms of the trace mineral selenium, supplement your multivitamin so that your daily intake equals this amount.
  - \_ **Vitamin E 400 I.U.** - A number of studies have shown that vitamin E decreases prostate cancer incidence and mortality.<sup>68</sup> In fact, taking as little as 50 I.U. daily cuts the risk of prostate by a third.
  - \_ **Yeast-selenium 200 micrograms** - Men who supplement their diet with 200 micrograms of selenium reduce their risk of prostate cancer by two thirds. Selenium also decreased the promotion and progression of prostate cancer.<sup>69</sup>

### Supplements

- **Green Tea (*Camillia sinensis*).** Researchers at the University of Chicago discovered that green tea inhibits the growth of prostate tumors (in animals) and reduces the size of existing tumors.<sup>70</sup> Green tea is rich in a group of flavonoid antioxidants called catechins. One of these catechins - epigallocatechin gallate (abbreviated EGCG) - has two hundred times the antioxidant power of vitamin E.<sup>71</sup> Furthermore, EGCG kills hormone-insensitive prostate cancer cells.<sup>72</sup> I recommend taking a 100 milligram green tea supplement twice daily for prostate cancer prevention (equal to 2 cups of green tea), or 500 mg of green tea extract twice daily if prostate cancer is present.
- **Lycopene.** For those men who can't tolerate eating tomatoes, or tomato-based food products, they can still obtain the cancer-preventive benefits of tomatoes by taking supplemental lycopene. According to one study, men with prostate cancer who supplemented with thirty milligrams of lycopene daily, for three weeks prior to having their prostate removed, slowed the growth of their cancer cells.<sup>73</sup> Take a ten milligram, oil-based lycopene supplement, twice daily with meals for prevention, and three times daily, if there is a family history of prostate cancer, or if prostate cancer is present.

### Life Style Changes

- **Lose weight.** Overweight men are two and a half times more likely to develop prostate cancer and three and a half times more likely to die as a result of their cancer.<sup>74</sup> Shedding even a few pounds lowers the risk.
- **Stop Smoking.** Male smokers have a one third greater chance of developing prostate cancer.<sup>75</sup> They're also more likely to die from prostate cancer since smoking induces a more aggressive form of prostate cancer.<sup>76</sup>
- **Exercise.** According to one study, regular exercise reduces the risk of prostate cancer by forty percent.<sup>77</sup> Other investigators report that men (under the age of sixty) with the highest cardiovascular fitness were four times less likely to develop prostate cancer than those least fit.<sup>78</sup>

## Hepatitis

### *Natural Remedies To Treat Hepatitis and Prevent Medication-Induced Liver Damage*

Most drugs are metabolized in the liver. Hepatitis is a rare but dangerous side effect of prescription drug therapy. In addition to avoiding alcoholic beverages and acetaminophen, the following natural therapies may prevent drug-induced liver damage or reverse hepatitis:

- *Alpha-lipoic Acid*. This coenzyme (a substance that helps other enzymes) is vital to cellular energy production. It also works with an antioxidant called glutathione to protect the liver. Alpha-lipoic acid can even help a damaged liver repair itself.<sup>79</sup> Take one, two hundred fifty to five hundred milligrams twice daily.<sup>80</sup>
- *N-acetyl-L-cysteine*. This antioxidant amino acid restores and maintains glutathione levels in the liver. N-acetyl-L-cysteine is used to treat patients with acetaminophen liver toxicity, and hepatitis induced liver failure.<sup>81, 82</sup> Take one six hundred milligram capsule of N-Acetyl-L-cysteine three times daily.
- *High Potency Multivitamin*. A variety of vitamins, minerals, and trace elements are required for effective liver detoxification of drugs.<sup>83</sup> Follow the directions on the bottle.
- *Vitamin E*. This versatile antioxidant is also used to treat hepatitis.<sup>84</sup> Take four hundred milligrams twice daily (allowing for the amount in your multivitamin).
- *Vitamin C*. Vitamin C also protects liver function.<sup>85</sup> Take at least one gram twice daily.
- *Milk Thistle (Silybum marianum)*. Rich in antioxidants, milk thistle promotes healthy liver function.<sup>86, 87</sup> Take one hundred to two hundred milligrams three times daily of a standardized extract that contains seventy percent silymarin.<sup>88</sup>
- *Pycnogenol® (Pinus pinaster)*. Derived from pine bark, pycnogenol® contains bioflavonoids (antioxidants) that support liver function.<sup>89, 90</sup> Take fifty milligrams daily.
- *Fruits And Vegetables*. Garlic, onions, cabbage, and cruciferous vegetables (broccoli and cauliflower, for instance) protect the liver.<sup>91</sup> Add them to your daily diet.

## Congestive Heart Failure

The following natural approaches may prevent heart disease and congestive heart failure:

- Control Anger by meditating, reducing stress, engaging in psychological counseling, etc.<sup>92, 93</sup>
- Take 100mg of Coenzyme Q-10 daily.<sup>94</sup>
- Take 200-250 mg of thiamine daily.<sup>95</sup>
- Take 200-400 magnesium citrate t.i.d.<sup>96</sup>
- Take 400 IU vitamin E daily.<sup>97</sup>
- Participate in a supervised exercise program.<sup>98</sup>
- Stop smoking (smoke contains carbon monoxide).<sup>99</sup>
- Take a multiple vitamin daily (normalizes homocysteine levels; sufficient selenium is necessary for proper cardiac function).<sup>100, 101</sup>
- Learn biofeedback.<sup>102</sup>
- Take L-carnitine 500mg t.i.d.<sup>103</sup>
- Take a standardized extract (flavonoid content 2.2%, oligomeric procyanidins 18.75%, or total flavonoids adjusted to 10mg) of hawthorne (*Crataegus oxyacantha*) 160mg-900mg in divided doses (b.i.d or t.i.d.).<sup>104</sup>
- Eat fish at least twice weekly.<sup>105</sup>

## Fall Prevention in the Elderly

- Tai Chi - Thirty percent of patients over the age of 65 fall each year and 15% of the elderly fall multiple times in a year. Fifteen percent of these falls result in serious injury. In the 1990, the National Institute on Aging and the National Institute for Nursing Research implemented the *Frailty and Injuries: Cooperative Studies on Intervention Techniques* to assess

the impact of exercise and balance training on the risk of falling in elderly patients. Eight sites were involved. One site studied 180 non-hospitalized patients aged 70 or older. The groups were randomized to receive Tai Chi, individualized balance training, or a wellness discussion group for 15 weeks.<sup>106</sup>

Only the Tai Chi group experienced a significantly reduced risk of falling. Furthermore, only the Tai Chi group reported that the intervention had affected their daily living and life in general.

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The information listed below was excerpted from **Mark W. McClure**. *Smart Medicine For Your Prostate*. NY,NY, **Avery Publishing Group, Inc., 2001**.

## Probiotics and Prebiotics

### *Probiotics*

Probiotics (which means ‘for life’) are ‘friendly’ bacteria and yeast. Most of the over four hundred bacteria that populate the intestinal tract are friendly.

*Probiotic bacteria.* Strange as it may sound, friendly intestinal bacteria prevent recurrent infections by neutralizing toxins, crowding out ‘unfriendly bacteria’ (including bacteria that cause recurrent prostatitis such as *E. coli*, *Proteus vulgaris*, *Pseudomonas aeruginosa*, and *Streptococcus fecalis*), supporting the immune system, and reducing inflammation.<sup>107</sup> Certain strains of friendly bacteria (*Lactobacilli* and *Bifidobacteria*) also inhibit cancer (including bladder cancer) by inhibiting the growth or activity of cancer-promoting bacteria, and producing chemicals that inhibit cancer growth.<sup>108, 109</sup>

Unfortunately, antibiotics can wipe out friendly intestinal bacteria. As a result, unfriendly bacteria can take over and induce a variety of gastrointestinal problems including bloating, stomach pain, and diarrhea. Although physicians are familiar with these antibiotic-induced GI side effects, few doctors realize that taking friendly probiotics (such as *Lactobacillus acidophilus* -the kind found in yogurt, *Lactobacillus casei*, and *Bifidobacterium longum*) during and after a course of antibiotic therapy can prevent bothersome intestinal problems.

Give your intestinal tract a good dose of ‘culture’ by eating probiotic-containing foods such as yogurt or sauerkraut (try making your own), and taking supplements that contain friendly probiotic bacteria. Purchase a quality product that has been tested by an independent lab and guaranteed to contain between one to four billion “live, active” organisms per capsule. Also, avoid buying out-of-date products by checking the expiration date on the bottle.

Heat, moisture, and sunlight kill probiotic bacteria. Since the process of compressing probiotics into a tablet generates heat, I recommend choosing a product that has been freeze dried. Available in powder or capsules, probiotics should be stored in the refrigerator in moisture-proof containers. Even if a probiotic is stable at room temperature (many aren’t), it should be refrigerated once the container has been opened.

Take probiotics twice daily with food to buffer stomach acid or take an enteric coated brand. The average daily dosage should be between one to ten billion organisms (higher doses can cause stomach upset).<sup>110, 111</sup> Start taking a probiotic the moment you begin taking an antibiotic (but not at the same time), and continue taking it for several weeks after completing the antibiotic.

*Probiotic Yeast.* In addition to wiping out friendly bacteria, antibiotics can cause an overgrowth of intestinal yeast, which can cause the same unwanted GI side effects as unfriendly bacteria. A special type of yeast, called *Saccharomyces boulardii*, is a certified ‘yeast-buster’. Scientific research has shown that *Saccharomyces boulardii* combats intestinal yeast overgrowth and prevents antibiotic-related intestinal problems by improving gut immune function and inactivating bacterial toxins.<sup>112, 113</sup> Purchase a supplement that contains three billion live organisms, and take one capsule twice daily on an empty stomach.

### *Prebiotics*

While it may sound like double talk, *prebiotics* are different than *probiotics*. Prebiotics are nutrients that supply the friendly bacteria with ‘health food’.

*Fructooligosaccharides.* Vegetable fiber and complex sugars that are found in certain vegetables promote the growth of friendly bacteria at the expense of unfriendly bacteria. These complex sugars are called fructooligosaccharides (abbreviated *FOS*). Foods that contain *FOS* include soybeans, Jerusalem artichoke,

onions, bananas, asparagus, and garlic. A synthetic form of FOS is also available in most health food stores. Since prebiotics support the growth of friendly probiotic bacteria, I recommend taking both supplements together.

The recommended daily dose of FOS ranges between two to three thousand milligrams. I encourage patients to eat a generous portion of the foods that are rich in FOS. In addition, since the dietary intake of FOS averages only eight hundred milligrams daily, I advise patients to supplement their diets with additional FOS to make up the difference.<sup>114</sup>

FOS is available as tablets, or as a powder in bulk-form or capsules. Powdered FOS that is derived from Jerusalem artichoke has a pleasant nutty flavor. Try sprinkling one to two teaspoons over cereal, salads, or vegetables twice daily.

## Vitamins

### *What Is The Difference Between Natural And Synthetic Vitamins?*

In natural foods, vitamins are bound to proteins, lipids (fat), carbohydrates, and bioflavonoids (compounds that are found in green plants). The difference between natural and synthetic vitamins is often fuzzy unless you know how to read the fine print.

*Natural Vitamins.* Vitamins that are derived from natural foods are called *natural vitamins*. Some experts maintain that natural vitamins that are bound to proteins (such as those that are contained in whole food supplements) are better absorbed than synthetic vitamins.<sup>115</sup>

*Synthetic vitamins.* As opposed to natural vitamins, synthetic vitamins are made in the laboratory from isolated chemicals that mirror natural vitamins. The difference between the two types of vitamins is only relevant if the natural form is better absorbed or utilized differently than the synthetic form (see the discussion on vitamin E below). Normally, natural and synthetic vitamins are absorbed equally well.

*What To Look For In The Fine Print.* Despite the hype, so-called natural vitamins are usually a mixture of both natural and synthetic vitamins. The word 'natural' usually merely implies that a synthetic vitamin is not tainted with *unnatural* substances such as coal tars, artificial coloring, preservatives, sugar, starch, corn, starch, or other additives.

*Natural Versus Synthetic Vitamin E.* Certain vitamins have different molecular forms or isomers, that have different biologic activity. For instance, vitamin E has eight different isomers – alpha, beta, gamma, and delta 'tocopherols' and 'tocotrienols'. Of these isomers, the diet contains mainly *alpha* and *gamma* tocopherol.

- **Natural Vitamin E.** The *natural* form of vitamin E is the *dextro* or *d*-isomer. (The prefix 'dextro', which is Latin for right, refers to the way the molecule is turned.) 'Hence, vitamins that contain 'natural vitamin E' usually contain *d-alpha* tocopherol, *d-alpha* tocopherol acetate, or *d-alpha* tocopheryl succinate (acetate and succinate are organic salts that bind to vitamin E and aid absorption).
- **Synthetic Vitamin E.** The synthetic form of vitamin E is designated as *levo* or 'l-' ('levo' is Latin for left). Most synthetic vitamins contain *dl-alpha* tocopherol - a mixture of natural ('d') and synthetic ('l') forms.<sup>116</sup>

**Mixed tocopherols.** According to many experts, the body utilizes natural vitamin E, the kind derived from the diet, more efficiently than synthetic vitamin E. Therefore, for optimal effectiveness, purchase a brand that contains a blend of natural isomers called 'mixed tocopherols'.

### *What Do The Terms RDA, RDI, and DV mean?*

Most patients and many of their physicians are confused about the difference between these three terms. The RDA has been around for more than half a century, while the other two terms are relative new comers.

*RDA.* The term *RDA* stands for *recommended daily dietary allowance*. First established in the year 1941 by the National Academy of Sciences, the RDA is a guideline for the prevention of nutritional deficiencies such as scurvy (due to a lack of vitamin C), rickets (due to a lack of vitamin D), and pellagra (due to a lack of vitamin B3).

*RDI.* In the mid nineteen nineties, government planners devised a new guideline called the *RDI*, which stands for *recommended daily intake*. The RDI is based on a weighted average of age, gender, pregnancy, and lactation status.

*DV.* The term *DV* stands for *daily value* – the percentage of the RDI that is supplied by a recommended dose of a particular product. For instance, the recommended daily intake of vitamin E is 22 IU of natural-source vitamin E or 33 IU of synthetic vitamin E. Therefore, a vitamin or food that provides this amount of vitamin E provides one hundred percent of the DV. (The RDI and DV are based on uniform portion sizes.)<sup>117 118</sup>

*Limitations Of The RDA and RDI.* The RDA and RDI relate to groups of healthy people, not individuals. In addition, neither guideline applies for patients with special needs such as patients that are sick, elderly, taking medications, combating chronic illness, or under stress. Furthermore, neither guideline takes into consideration individual biochemical differences among patients. For instance, although the RDA and RDI for vitamin E is standardized, individual vitamin E requirements show a five-fold difference for normal, healthy adults, and even more variability among those that eat a lot of junk food.<sup>119</sup>

Taken together, the RDA and RDI don't apply for the majority of Americans, particularly for those that wish to achieve optimal health. Consequently, I tell all of my patients to take a high potency multivitamin daily.

### *How Safe Are Vitamins?*

Contrary to popular belief, regular and high potency vitamins are safe when taken as directed. As a rule, I don't recommend taking individual vitamins or minerals in addition to a high potency vitamin. There are exceptions to this rule, though. For instance, I often advise men with prostate cancer to supplement their multivitamins with selected vitamins and minerals that have been shown to prevent the progression (growth) of prostate cancer.

*Margin Of Safety.* Vitamins have a wide safety range. Scientific studies have shown that high doses of individual vitamins can be safely given to prevent or treat certain conditions without any associated serious side effects. For instance, consider the following two examples:

- **Vitamin B6.** Although the RDA for vitamin B6 is only two milligrams daily, doses one hundred times this amount have been used to treat certain conditions (carpal tunnel syndrome, for example) without reports of adverse effects.
- **Vitamin E.** While the RDA for natural vitamin E is 22 IU for adult males, doses as high as three thousand IU have been taken safely for a prolonged time without side effects.<sup>120</sup> (Just the same, I advise patients not to take more than eight hundred IUs daily. In addition, patients that take blood thinners should not take supplemental vitamin E without first checking with their physician.)

*Risk Of Toxic Reactions.* On the other hand, taking high doses of certain vitamins can create problems. This is particularly true for the following two fat-soluble vitamins:

- **Vitamin A.** The RDA for vitamin A is nine hundred micrograms for men, and 700 micrograms for women. Doses ten times the RDA can cause side effects such as headache and nausea, and doses one hundred times the RDA can have acute, reversible side effects (such as liver damage).<sup>121</sup>

**Vitamin D.** Vitamin D has an even narrower safety range. In fact, high doses of vitamin D can cause irreversible, even fatal side effects (acutely at one to three thousand IU per kilogram [one kilogram equals two point two pounds], and chronically at ten to fifty thousand IU daily).<sup>122, 123</sup> Therefore, I advise patients to limit their daily intake of Vitamin D intake to one thousand IU or less.

*Controversy Regarding Vitamins And Cancer Therapies.* Although controversial, some experts warn that vitamins and other antioxidants can interfere with the cellular damage that is wrought by chemotherapy and radiation therapy (two common cancer therapies).<sup>124</sup> On the plus side, vitamins and antioxidants prevent cellular damage to surrounding normal tissue, thereby preventing some of the nasty side effects of these cancer therapies.<sup>125</sup> On the negative side, though, they may also protect targeted cancer cells, thereby making chemotherapy and radiation therapy less effective. While opinions are divided, until there are conclusive data, check with your oncologist before taking vitamins or supplements if you are about to undergo (or are undergoing) chemotherapy or radiation therapy.

#### *Is It Safe To Take Vitamins Along With Other Medications?*

In general, the answer to this question is yes. Just the same, I advise patients to check with their pharmacist beforehand to rule out any drug-vitamin interactions. For instance, if taken together, certain minerals (calcium, iron, magnesium, and zinc) can adversely affect the absorption of antibiotics (for example, tetracycline and the quinolone, two classes of antibiotics that are frequently used to treat prostate infection).<sup>126</sup> Since multivitamins usually contain these four minerals, multivitamins should not be taken within two hours of taking tetracycline or quinolone antibiotics.

#### *Do Prescription Medications Deplete The Body Of Vitamins And Minerals?*

Yes, prescription drugs can interfere with the absorption or utilization of certain vitamins. For instance, the following prescription drugs can deprive the body of precious vitamins and minerals:

*Antibiotics.* These medications deplete the body of B vitamins, folic acid, and vitamin K.

*Heart Medications.* Digitalis, a common heart medication, depletes magnesium.

*Cholesterol-lowering Medications.* ‘Statin’ drugs deplete Coenzyme Q10, a coenzyme that supplies the cell with energy.

*Diuretics.* Thiazide diuretics (water pills) deplete magnesium, sodium, potassium, and zinc.

*Oral Diabetic Medication.* Metformin (Glucophage®), a frequently prescribed diabetic medication, depletes vitamin B12 levels.

*Anti-reflux Medications.* Medications that are used to treat heartburn, including famotidine (Pepcid®), ranitidine (Zantac®), and lansaprazole (Prevacid®), deplete vitamin B12.

### *How Do I Know If A Vitamin Manufacturer Is Reputable?*

Consumers face this dilemma every time they shop for a nutritional supplement. A good place to start is learning how to recognize a health scam (see insert). You can also protect yourself by purchasing vitamins from companies that conform to good manufacturing practices.

*Good Manufacturing Practices.* Reputable companies maintain high standards and protect their customers by adhering to the following criteria:

- Listing all of the ingredients on the bottle label or package insert.
- Assaying their products for purity and batch-to-batch consistency.
- Not making false claims.
- Listing an expiration date on their products.
- Conforming to industry standards of excellence.
- Providing a certificate of analysis upon request.

*Over-the-counter Products That I Recommend.* I suggest becoming familiar with a brand that you trust. Based upon my research and experience, I have become familiar with a group of companies that I routinely recommend. These include: Enzymatic Therapies, Nutricology, Ethical Nutrients, Solgar, Jarrow Formulas, Solaray, Nature's Way, Nature's Plus, Source Naturals, Life Extension Foundation, and Twin Labs.

*Professional-brand-only Products That I Recommend.* Some brands are only available through pharmacies or health professionals. I recommend the following brands in this category: PhytoPharmica, Metagenics, Biotics Research, Tyler Encapsulations, CVR/Ecological Formulas, Thorne Research, ARG/Allergy Research Group, Pure Encapsulations, Murdock Madaus Schwabe (MMS Pro™), Douglas Laboratories, Priority One, and American Biotics.

(NOTE: I do not have any connections, financial or otherwise, with any of the above companies.)

### *How To Recognize Health Claims That Are Too Good To Be True*

When it comes to selecting a nutritional supplement, I remind patients of the familiar Latin phrase '*caveat emptor*', which means 'let the buyer beware'. Unfortunately most junk mail, and much of the information on the Internet is nothing more than a glorified "infomercial" - impressive claims that are designed to sell a product. These claims are seldom based on solid scientific studies. Infomercials often list testimonials (personal statements based on belief, not fact), and quote scientific research without listing a source. Beware of these unsubstantiated claims. The following warning signs should also raise a red flag:

- Product claims that boast a "revolutionary scientific breakthrough", "miraculous cure"
- Testimonials from experts for whom no credentials are given, and those that contain a "secret formula" or "ancient ingredient".
- Unbelievable results that are supported by undocumented case histories.
- Products that supposedly cure a shopping list of complaints, usually within a matter of weeks.
- Manufacturers or distributors that claim that the government is conspiring to suppress their product.
- The ingredients are not listed or are called 'proprietary'.

The product claims to cure cancer.<sup>127</sup>

*How Do I Read A Vitamin Label?* Making sense of the ingredients on a vitamin label is not as complicated as it may appear. I have selected common features and displayed them below. Items in bold type are discussed in further detail. Dietary Supplement

**Serving Size:** six capsules

| Six capsules contain:       |        | %DV   |
|-----------------------------|--------|-------|
| Vitamin C . . . . .         | 1200mg | 1333% |
| Vitamin E . . . . .         | 400IU  | 1818% |
| Selenium . . . . .          | 200mcg | 363%  |
| <b>Vanadium</b> . . . . .   | 50mcg  | *     |
| <b>Bromelain</b> . . . . .  | 25mg   | *     |
| <b>L-Cysteine</b> . . . . . | 200mg  | *     |

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**\*Daily Value not established**

**Other ingredients:** cellulose, and magnesium stearate.

**Best if used by:** January 2002.

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- **Serving size** is the unit of measure (number of capsules) that contains the specified ingredients.
- **DV** stands for ‘Daily Value’ or the recommended daily amount.
- **1333%** indicates that the 1200mg of vitamin C contained in a serving (six tablets) is 13.33 times the recommended daily amount of vitamin C (ninety milligrams for non-smoking men). Although high potency multivitamins contain vitamins concentrations that are hundreds or even thousands of times greater than the DV, don’t be alarmed, they’re safe to take.<sup>128</sup> The DV (and RDA) was established to prevent nutritional disease, not promote optimal health.
- The abbreviation ‘**mg**’ stands for *milligram* (one-thousandth of a gram).
- The abbreviation ‘**mcg**’ stands for *microgram* (one-millionth of a gram).
- The statement ‘**Daily Value not established**’ is self-explanatory. Many vitamin supplements contain ingredients that don’t have an established daily requirement. These items include certain trace minerals (such as **Vanadium**), digestive enzymes, and amino acids. Digestive enzymes are identified by their word endings: Words that end in ‘*ain*’ (such as **bromelain**- a digestive enzyme made from pineapple), or ‘*ase*’ (such as lipase – a digestive pancreatic enzyme) are digestive enzymes. (The bottle should state whether the enzymes are derived from plant or animal sources.) Amino acids are identified by a ‘*L*’ or ‘*DL*’ before their name, for example **L-cysteine**.
- **Other ingredients:** Read this section carefully. Supplements often contain other ingredients that are best avoided such as artificial coloring, preservatives, flavorings, corn, soy protein, wheat gluten, sugar, yeast, and dairy products.

**Best if used by:** Signifies the expiration date.

## HERBS

### *Herbal Terminology*

For those who are unfamiliar with herbal terminology, the following glossary will prove helpful. For additional information, consult a good book on herbs (see Resources).

#### *Active Ingredient*

The chemical that presumably accounts for a herb's healing properties is called the active ingredient. For instance, the active ingredients of Ginkgo biloba (a popular herb that improves blood flow) are called *ginkgo flavonglycosides*.<sup>129</sup>

#### *Adulterant.*

Any substance other than the desired herb is called an *adulterant*. This usually refers to the wrong part of the plant or the wrong herb. When a herb is costly or is in short supply, the chance of a substitution with or addition of an adulterant increases. For instance, *Panax ginseng* is a popular tonic herb that is frequently adulterated. Studies have shown that the majority of commercial products contain only a fraction or the recommended amount of ginseng's active ingredients (ginsenosides), and a number of products contain no ginseng at all.<sup>130</sup>

Adulterants can also include heavy metals (for example, Mercury and Lead), toxic pesticides, and microbial (bacterial or fungal) contaminants.<sup>131</sup> For instance, the California Department of Health Services, Food and Drug Branch screened two hundred sixty imported Chinese medicines. Of these, eight-three (thirty-two percent) contained undeclared pharmaceuticals or heavy metals, and twenty-three had more than one adulterant.<sup>132</sup> (I'll discuss how to choose safe herbal products in the next section.)

#### *Chromatography.*

A standard laboratory test, chromatography separates individual substances from a complex mixture of substances based upon the color they generate as they adhere or adsorb (not to be confused with absorb) with reference particles. Manufacturers use chromatography for quality control to make sure that their product contains the proper herb and the proper mixture of ingredients at the desired concentration.

#### *Herbal Extract.*

A solvent is a fluid (usually water or alcohol) that is used to 'extract' (withdraw) a herb's active ingredients. Water extracts water-soluble ingredients, whereas alcohol extracts fat-soluble items such as fatty acids, sterols, and other substances that are water-insoluble.

*Extraction Process.* The extraction process takes anywhere from minutes to days depending upon the part of the herb that's being extracted and the desired strength of the final product. Ingredients from roots and bark take much longer to extract than those contained in dried leaves or flower parts.

*Herbal Extract Concentrations.* Extracts are categorized by the concentration of herb relative to the amount of solvent. *Herbal infusions, decoctions, and tinctures* contain more solvent than herb, while the reverse is true for *liquid* and *solid* herbal extracts.

### *Water Extracts.*

- **Herbal infusion.** A herbal infusion is simply a fancy name for a herbal tea. Hot water is poured over plant material, and then steeped (*'infused'*) for varying amounts of time. The weakest form of herbal extract, an infusion is used to extract active ingredients from flowers and leafy parts of plants.
- **Herbal decoction.** Compared to an infusion, a herbal decoction is a more vigorous method of extracting a plant's active ingredients. A herb is boiled, simmered, and then strained to yield a liquid decoction. Decoctions are used to extract ingredients from hard plant materials such as bark, woody stems, and roots.<sup>133</sup>

*Water And Alcohol-derived Herbal Extracts.* These extracts come in three varieties – liquid tinctures, liquid extracts, and solid extracts.

- **Herbal liquid tincture.** Most popular herbal liquid tinctures contain one part herb to five or ten parts solvent (written as 1:5 or 1:10 herbal tincture).
- **Herbal liquid extract.** A herbal liquid extract is more concentrated than a liquid tincture. A liquid extract contains at least the same amount or more herbal product than solvent. For instance, a 2:1 liquid extract contains two parts herb for every part solvent.
- **Herbal solid extract.** A herbal solid extract usually contains at least four parts herb for every part solvent (expressed 4:1 solid extract). To prepare a solid extract, any remaining solvent is evaporated, and then the residual herbal extract is dried and formulated into capsules or tablets.

### *Herbal Processing*

This term refers to the steps that are used to prepare an herb for commercial use. These steps include harvesting, drying (herbs are typically eighty percent water before drying, and fourteen percent water afterward), grinding, extraction, and formulation into liquid or solid herbal extracts.

### *Medical Herbalist*

Technically, a herbalist is an expert in the study and practice of herbal medicine. Unfortunately, there aren't standardized educational requirements for medical herbalists in this country. This means that any self-proclaimed expert on herbs can call themselves a herbalist. In England, the situation is different. The British National Institute of Medical Herbalists sets standards for medical herbalists. Although there isn't a national accrediting organization in the U.S., the American Herbalist Guild is a group professional herbalists that maintain high standards of herbal practice. Members of this guild can be identified by the initials *'AHG'* after their names. (See Resources.)

### *NF*

The initials *'NF'* stand for *National Formulary*. The National Formulary is a compendium (a concise but comprehensive summary) of drugs and herbs.

### *Plant Classification*

Plants are identified by their common name, family name, and botanical name and the part of the plant that is used. For example, let's examine the naming process for clivers, a non-irritating diuretic herb that reduces prostatic irritation and inflammation.<sup>134</sup>

*Common name.* Most plants have more than one common name. For instance, clivers has been called barweed, bedstraw, cleavers, goose grass, plus *twenty* other names!<sup>135</sup> Although twenty-four names are confusing enough, some herbs have even more aliases.

*Botanical Name.* Every herb has a botanical name that consists of two Latin names. Devised by Carolus Linnaeus (1707-78), the binominal (two name) system allows botanists throughout the world to talk the same language. The first name (spelt with a capital letter) represents the genus (plant family). The second name (spelt with a lower-case letter) refers to the plant's specific name.<sup>136</sup> For example, the botanical name for clivers is *Galium aparine*. Occasionally the specific name is followed by another name that identifies a variety of that species (abbreviated 'var.')

*Family Name.* Clivers is a member of the Rubiaceae family.

*Plant Part(s) Used.* The above ground parts of clivers (everything except the root) are used to make a liquid extract.<sup>137</sup> The bottle label should indicate which part(s) of the plant is used.

#### *Plant Structures*

A herbal remedy and its mode of preparation depend on the plant part that is being used. Plant parts that are commonly used include the following:

*Aerial parts and leaves.* These non-woody plant parts are located above ground (e.g., leaves and stems).

*Flowers.* Are a plant's reproductive organs.

*Seeds.* Come from a plant's fruit.

*Bark.* Covers tree trunks and branches.

*Underground structures.* Include roots (which lack buds), rhizomes (underground roots that have 'runners' that put up new shoots), and bulbs.

*Fruits.* Are plant organs that contain seeds.<sup>138, 139</sup>

#### *Organic Herbs*

Herbs that are grown without pesticides and commercial fertilizers are called *organic* herbs.

#### *Pharmacognosy*

The science of recognizing and studying herbs is called *pharmacognosy*.

#### *Phytonutrient*

Plant-derived substances are called phytonutrients. (The Greek word '*phyton*' means plant.)

#### *Standardized Herbs*

Herbal products that are assayed (tested in a laboratory) and guaranteed to contain a certain percentage of active ingredient(s) or an exact concentration of herb are called *standardized* herbal products. Standardized herbal products still contain hundreds of other ingredients that are extracted along with the 'active' ingredient(s).

*Standardized Active Ingredients.* Saw palmetto is a herb that is commonly used to treat prostate problems. A standardized solid extract of saw palmetto contains eighty-five to ninety-five percent *fatty acids* and *sterols*.

*Standardized Herbal Concentration.* A 1:5 standardized saw palmetto fluid extract is guaranteed to contain *one part* saw palmetto for every *five parts* solvent (exact concentration).

## USP

The abbreviation *USP* stands for *United States Pharmacopoeia*, an organization that works closely with the FDA, pharmaceutical industry, and health professionals to establish standards for drugs plus botanical and non-botanical supplements. Items that list ‘*USP*’ or ‘*NF*’ after their name must conform to the standards in the US Pharmacopoeia or National Formulary.

## Wildcrafted Herbs

Herbs that are harvested from their native environment are ‘*wildcrafted*’ (as opposed to *cultivated* herbs, which are commercially grown).

## How Do Herbal Remedies Differ From Prescription Drugs?

Although many drugs can trace their family ‘roots’ to herbs, there are fundamental differences between the two ‘branches’ of the family. Two important differences include:

*Cost.* Herbal remedies are significantly less expensive than prescription medication. Although many prescription drugs are derived from herbs, it costs more to produce a purified single-ingredient product than it does to extract a herbal remedy that contain hundreds of different ingredients.

*Safety Issues.* While prescription drugs are more potent and have a more rapid onset of action than herbal remedies, they also have a narrower safety range than herbal products. Therefore, prescription drugs are more likely to cause serious side effects, even fatal ones. In fact, prescription drugs cause over two million adverse drug reactions and more than a hundred thousand deaths in hospitalized patients every year.<sup>140</sup> In contrast, over a five-year period from 1993 through 1998, the Food and Drug Administration (abbreviated *FDA*) received only two thousand six hundred twenty-one reports of serious herbal-induced side effects. Just the same, herbs should be treated with respect: One hundred one of these side effects were fatal.<sup>141</sup>

## How Do I Select A Quality Herbal Product?

Choosing a quality herbal product is not as difficult as it may seem. Experts in the field of herbal medicine suggest the following guidelines:<sup>142, 143</sup>

*Become Knowledgeable.* Do your homework. For instance, read a reputable book on herbs, talk with your doctor, or consult a medical herbalist. Watchdog organizations also provide free information about nutritional and herbal supplements ([www.consumerlabs.com](http://www.consumerlabs.com)).

*Select The Most Effective Form.* Choose a standardized herbal product if one is available. However, be advised that standardization doesn’t guarantee potency or quality. A product is only as good as the raw ingredients and the quality of the manufacturing process. Bulk herbs that are stored in open bins have often lost most of their potency, and powdered herbs are subject to adulteration. Liquid and solid herbal

extracts offer the best buy for the money. Finally, avoid ‘shotgun therapy’ by choosing single herb products whenever possible. In order jazz-up their product, manufacturers often concoct a product that contains a potpourri of herbs (including the latest ‘herb-of-the-month’). More is not necessarily better.

*Buy From Reputable Companies.* I recommend purchasing herbs from companies that have an established reputation (not to be confused with companies that advertise the most). Select a company that adheres to Good Manufacturing Practices. For the asking, these companies should offer a detailed certificate of analysis that verifies that the product contains the right herb, at the right concentration, without harmful adulterants.

- **Precautions.** Beware of companies that make unsubstantiated claims. Furthermore, avoid companies that cite scientific data that is based on a different formation of the herb (for example, a more purified or concentrated preparation) than the herbal formulation contained in their product.

**Recommendations.** Companies that I trust include the Eclectic Institute, herbalist & Alchemist, Inc., GAIA Herbs, Inc., plus the companies that I listed earlier as reputable sources of vitamins.

#### *What Are Common Herbal Measurements?*

Knowledge of the following herbal measurements is important to ensure proper dosing:

##### *Liquid measurements.*

- One cubic centimeter (abbreviated *cc.*) = one milliliter (abbreviated *ml.*)
- Twenty drops from a medicine dropper = one cc.
- One teaspoon = five ccs.
- One tablespoon = fifteen ccs.
- One ounce = thirty ccs.
- One cup = two hundred and forty ccs. (eight fluid ounces)

##### *Solid measurements.*

One heaping teaspoon of dried herb averages between one to four and half grams (flowers average one gram, bark averages four and a half grams, and the remaining herbal parts weigh somewhere in between).<sup>144</sup>

## **RESOURCES**

### **Alternative Medicine:**

General Resources –

#### *Organizations*

- National Center for Complementary And Alternative Medicine Clearing House, P. O. Box 8218, Silver Springs, MD 20907-8218, (888) 644-6226
- American College of Advancement in Medicine, 23121 Verdugo Drive, Suite 204, Laguna Hills, CA, 92653 (800) 532-3688
- American Holistic Medical Society, 6728 Old McLean Village Drive, McLean, VA, 22101-3906, (703) 556-9245.

### Books

- James S. Gordon, *Manifesto for A New Medicine* (NY: Addison-Wesley Publishing, Inc., 1996).
- Elliott S. Dacher, *Whole Healing* (NY: Penguin Books, 1996).
- Leo Galland, *Power Healing*, (NY:Random House, NY, 1997).
- Andrew Weil, *Natural Health, Natural Medicine* (Boston: Houghton Mifflin Co., 1998).
- Burton Goldberg, *Alternative Medicine* (Fife, WA: Future Medicine Publishing, Inc., 1994).
- Michael Murray and Joseph Pizzorno, *Encyclopedia of Natural Medicine*, second edition (Rocklin, CA: Prima Publishing, 1998).
- Michael T. Murray and Joseph E. Pizzorno, Jr., *Textbook of Natural Medicine*, second edition (NY: Churchill Livingstone, 1999).
- Rudolph Ballentine, *Radical Healing* (NY: Three Rivers Press, 1999)
- Larry Dossey, *Reinventing Medicine* (NY: Harper San Francisco, 1999)

### Medical Journals

- *Alternative Therapies in Health and Medicine*, Innovision Communications, 101 Columbia, Aliso Viejo, CA, 92656, (800) 899-1712
- *The Journal of Alternative and Complementary Medicine*, Mary Ann Liebert, Inc., 2 Madison Av., Larchmont, NY, (914) 834-3100
- *International Journal Of Integrative Medicine*, IMPAKT Communications, P.O. Box 830430, Birmingham, AL, 35283-0430 (800) 633-4931

### Newsletters

- *Dr. Andrew Weil's Self Healing*, Thorne Communications, Inc., 42 Pleasant St., Watertown, MA, 02172, (617) 926-0200.
- *Alternative Medicine Alert*, American Health Consultants, (800) 688-2421 (twenty hours of category one CME credits yearly)
- *Clinical Pearls News*, 9801 Old Winery Way, Sacramento, CA, 95827, (916) 483-1085

### Audiotapes

- *Functional Medicine Update*, Health Communications, P.O. Box 1729, Gig Harbor, WA 98335, (800) 843-9660
- *Practical Reviews in Complementary and Alternative Medicine, An evidence-Based Approach*, Oakstone Medical Publishing, 6801 Cahaba Valley Road, Birmingham, AL 35242, (800) 633-4743 (thirty-six hours of category one CME credits yearly)

### Internet Websites

- National Center for Complementary and Alternative Medicine @ [www.nccam.nih.gov](http://www.nccam.nih.gov)
- American Holistic Medical Association @ [www.holisticmedicine.org](http://www.holisticmedicine.org)
- Ask Dr. Weil @ [www.drweil.com](http://www.drweil.com)
- HealthComm International, Inc. @ [www.healthcomm.com](http://www.healthcomm.com)
- American College For The Advancement Of Medicine @ [www.acam.org](http://www.acam.org)

### Specific Resources

## Alternative Cancer Therapies

### *Books.*

- Michael Lerner, *Choices in Healing* (Cambridge, MA: MIT Press, 1994).
- Burton Goldberg, *Definitive Guide to Cancer* (Fife, WA: Future Medicine Publishing, Inc., 1997).
- John Boik, *Cancer & Natural Medicine, A Textbook of Basic Science and Clinical Research* (Princeton, MN: Oregon Medical Press, 1995).
- Ralph W. Moss, *Herbs Against Cancer* (NY: Brooklyn, NY: Equinox Press, 1998).
- Charles B. Simone, *Cancer & Nutrition* (Garden City Park, NY: Avery Publishing Group, Inc., 1994).
- Kedar N. Prasad, *Vitamins in Cancer Prevention and Treatment* (Rochester, VT: Healing Arts Press, 1994).
- James Lewis, Jr., *the Herbal Remedy for Prostate Cancer* (Westbury, NY: Health Education Literary Publisher, 1999).
- Patrick Quillin with Noreen Quillin, *Beating Cancer With Nutrition* (Tulsa: The Nutrition Times Press, Inc., 1994).

### *Internet Websites*

- National Center for Complementary and Alternative Medicine @ [www.nccam.nih.gov](http://www.nccam.nih.gov)
- FDA Guide to Choosing Medical Treatments @ [www.fda.gov/oashi/aids/fdaguide.html](http://www.fda.gov/oashi/aids/fdaguide.html)
- Internet Resources on Cancer @ [www.cpmcnet.columbia.edu/dept/rosenthal/guide6.html](http://www.cpmcnet.columbia.edu/dept/rosenthal/guide6.html)

## Art Therapy

### *Organization*

- American Art Therapy Association, 1202 Allanson Road, Mundelein, IL, 60060-3808, (888) 290-0878

### *Journal*

- American Journal Of Art Therapy, Vermont College of Norwich University, Montpelier, VT, 050602, (802) 828-8540

### *Internet Website*

- American Art Therapy Association @ [www.arttherapy.org/](http://www.arttherapy.org/)

## Biofeedback

### *Organization*

- Association for Applied Psychophysiology and Biofeedback, 10200 West 44<sup>th</sup> Avenue, Suite 304, Wheat Ridge, Colorado, 80033

### *Internet Websites*

- The Biofeedback Network @ [www.Biofeedback.net](http://www.Biofeedback.net)
- Association for Applied Psychophysiology and Biofeedback @ [www.aapb.org](http://www.aapb.org)

## Guided Imagery

### *Organization*

- The Academy for Guided Imagery, P.O. Box 2070, Mill Valley, CA, 94942, (800) 726-2070

### *Book*

- Martin L. Rossman, *Healing Yourself: A Step-by-Step Program for Better Health through Imagery* (NY: Pocket Books, 1989).

### *Internet Website*

- The Academy for Guided Imagery @ [www.interactiveimagery.com/](http://www.interactiveimagery.com/)

## Herbal Medicine

### *Organizations*

- American Botanical Council, P.O. Box 144345, Austin, TX, (512) 926-4900
- The American Herbalists Guild, 1931 Gaddis Road, Canton, GA, 30115, (770) 751-6021

### *Books.*

- James A. Duke, *The Green Pharmacy* (Emmaus, PA: Rodale Press, 1997).
- Michael T. Murray, *The Healing Power of Herbs* (Rocklin, CA: Prima Publishing, 1995).
- *PDR® for Herbal Medicines*, Medical Economics Co., Montvale, NJ, 2000
- *Pharmacist's Letter/Prescriber's Letter Natural Medicines Comprehensive Database*, Therapeutic Research Faculty, 3120 W. March Lane, P.O. Box 8190, Stockton, CA, (209) 472-2244.
- *The Complete German Commission E Monographs*, (Austin, TX: American Botanical Council, 1998).
- Melvyn R. Werbach and Michael T. Murray, *Botanical Influences on Illness* (Tarzana, CA: Third Line Press, Inc., 1994).
- Simon Y. Mills, *The Essential Book Of Herbal Medicine* (New York: the Penguin Group, 1991).
- Penelope Ody, *The Complete Medicinal Herbal* (New York: DK Publishing, Inc., 1993).
- Varro E. Tyler, *Herbs Of Choice: The Therapeutic Use of Phytomedicinals* (Binghamton, NY: Pharmaceutical Products Press, Inc., 1994).
- Joe Graedon and Teresa Graedon, *The People's Pharmacy® Guide To Home And Herbal Remedies* (NY: St. Martin's Griffin, 1999).

### *Journal*

- *HerbalGram*, American Botanical Council, P.O. Box 201660, Austin, TX, 78720, (512) 331-8868. Published quarterly.

### *Internet Websites*

- Phytochemical and Ethnobotanical Databases @ [www.grin.gov/duke/](http://www.grin.gov/duke/)
- American Botanical Council @ [www.HerbalresearchFoundationherbalgram.org](http://www.HerbalresearchFoundationherbalgram.org)
- Joe Graedon and Teresa Graedon's, *The People's Pharmacy®* @ [www.peoplespharmacy.com](http://www.peoplespharmacy.com)
- U.S. Pharmacopoeia @ [www.usp.org](http://www.usp.org)
- The American Herbalists Guild @ [healthy.net/herbalists](http://healthy.net/herbalists)

## **Mind Body Medicine**

### *Organizations*

- The Center for Mind/Body Studies, 5225 Connecticut Avenue, Northwest, Suite 414, Washington, D.C., 20015, (202) 9666-7338.
- Mind-Body Clinic, New Deaconess Hospital, Harvard Medical School, 185 Pilgrim Road, Cambridge, MS, 02215 (617) 632-9530.

### *Books.*

- Daniel Coleman and Joe L. Gurin, *Mind-Body Medicine* (Yonkers, NY: Consumer Reports Books, 1993).
- Joan Borysenko, *Minding the Body, Mending the Mind* (NY: Bantam Books, 1988).

## **Music Therapy**

### *Journals*

- *The Journal Of Music Therapy*, American Music Therapy Association, 8455 Colesville Road, Suite 1000, Silver Springs, MD, 20910, 1-301-589-3300
- *Music Therapy Perspectives*, American Music Therapy Association, 8455 Colesville Road, Suite 1000, Silver Springs, MD, 20910, 1-301-589-3300

### *Internet Website*

- American Music Therapy Association @ [www.musictherapy.org](http://www.musictherapy.org).

## **Nutritional Supplements**

### *Books*

- Michael T. Murray, *Encyclopedia of Nutritional Supplements* (Rocklin, CA: Prima Publishing, 1996).

- Melvyn R. Werbach and Michael T. Murray, *Nutritional Influences on Illness*, (Tarzana, CA: Third Line Press, Inc., 1994).
- Michael T. Murray, *Natural Alternatives to Over-the-counter and Prescription Drugs* (NY: William Morrow & Co., 1994)

*Internet Website*

U.S. Pharmacopoeia @ [www.usp.org](http://www.usp.org)

**Traditional Chinese Medicine**

*Books.*

- Harriett Beinfield, and Efrem Korngold, *Between Heaven and Earth* ( NY: Ballantine Books, 1991).
- Ted J. Kaptchuk, *The Web That Has No Weaver: Understanding Chinese Medicine* (Chicago: Contemporary Publishing Group, Inc., 2000)
- Y. Liu, *The Essential Book of Traditional Chinese Medicine*, volumes 1 and 2 (NY: Columbia University Press, 1988).

*Organization*

- American Association of Oriental Medicine, 433 Front Street, Catasauqua, PA, 18032, (610) 266-1433

**Stress Reduction**

*Books*

- Martha Davis, Elizabeth Robbins Eshelman, and Matthew McKay, *The Relaxation & Stress Reduction Workbook* (Oakland, CA: New Harbinger Publications, Inc., 1995).
- Herbert Benson, *The Relaxation Response* (NY: Outlet Books, Inc., 1993).

*Internet Website*

- *National Association of Cognitive-Behavioral Therapists @ [www.nacbt.org](http://www.nacbt.org)*

**Yoga**

*Organization*

- International Association of Yoga Therapists, P.O. Box 1386, Locuer Lake, CA, 951457, (707) 928-9898

*Books*

- Swami Vishnudevananda, *The Complete Illustrated Book Of Yoga* (NY: Harmony Books, 1980).
- B.K.S. Iyengar, *Light On Yoga* (NY: Schocken Books, 1979)
- Georg Feureer and Larry Payne, *Yoga For Dummies* (NY: IDG Books Worldwide, Inc., 1999)

*Internet Website*

- International Association of Yoga Therapists @ [www.yrec.org](http://www.yrec.org)

**FOOD**

**Macrobiotics**

### *Books*

- Michio Kushi, *The Macrobiotic Way* (Garden City, NY: Avery Publishing Group, 1993)
- Michio Kushi and Aveline Kushi, *Macrobiotic Diet* (Tokyo: Japan Publishers, Inc., 1993)

### *Internet Website*

- Macrobiotics Online @ [www.macrobiotics.org/](http://www.macrobiotics.org/)

### **Organic Food**

#### *Books*

- Jeanne Heifetz, *Green Groceries – A Mail Order Guide To Organic Foods* (NY: HarperPerennial, 1992).
- John Robbins, *Diet for a New America* (Walpole, NH: Stillpoint Publishing, 1987).
- Rodale's *All-New Encyclopedia of Organic Gardening* (Emmaus, PA: Rodale, 1992)

#### *Mail Order Resources*

- Diamond Organics 1-800-922-2396.
- Goldmine National Foods 1-800-475-3663

#### *Organization*

- The Organic Trade Association, 74 Fairview Street, Greenfield, MA, 01302, (413) 774-7511

### **Vegetarian Foods**

#### *Journal*

- Vegetarian Times, 9 Riverbend Drive, S., Stamford, CT, 06907, (877) 717-8923

#### *Cookbooks*

- Lorna J. Sass, *Lorna Sass' Short-Cut Vegetarian* (NY: Quill William Morrow, 1997).
- Martha Rose Shulman, *Fast Vegetarian Feasts* (NY: Doubleday, 1986).
- Patricia Greenberg with Helen Newton Hartung, *The Whole Soy Cookbook* (NY: Three Rivers Press, 1998).

### ENDNOTES

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