Your Guide to

ANTIOXIDANT SUPERFOODS

Discover the Free Radical Fighters You Need to Guard Against Disease And Turn Back the Hands of Time

INSIDE:

10 Power Foods You Should Eat Every Week!

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Your Guide to
Antioxidant Superfoods

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Contents

What is Oxidation?

Lines on your face? Skin feeling less taut? Plaque clogging your pipes? Oxidation plays a role in all of these processes.

Oxidation is the chemical process that causes the metal on your car to rust or a fresh-cut apple to turn brown.

This same chemical process also happens within your body. And while the effects are less visible immediately, oxidative stress can lead to DNA damage, cell mutation, accelerated aging and many forms of disease.

The oxidation process is perfectly natural within your body. After all, oxygen is your primary metabolic fuel. But this natural process causes damaging molecules to form, called free radicals. These rogue molecules are missing an electron, making them highly reactive with other molecules within the body. As these molecules rob electrons from healthy cells, they can cause a cascading series of damage, like a line of dominos falling over.

That is why your body has mechanisms to neutralize these molecules and repair their damage. Free radicals are meant to be controlled by free radical scavengers known as antioxidants. But if these antioxidants are in short supply, or if so many free radicals are formed that they overwhelm your body's antioxidant defense system, cellular damage, accelerated aging and disease are the result.

Although it is impossible to escape the effects of oxidation, Mother Nature's kitchen cabinet offers a cornucopia of antioxidant-rich foods and nutrients that help to combat free radicals.

Antioxidants including carotenoids, vitamin C, vitamin E, selenium, and a colorful array of phytonutrients help repair, prevent, or limit oxidative damage to our cells caused by free radicals. You can get more antioxidants by:

- ✓ Kicking up your body's internal antioxidant artillery
- ✓ Opting for organic foods that naturally produce more antioxidants
- ✓ Choosing high ORAC foods including herbs, spices, legumes, fruits and vegetables (you'll learn about these on p. 17)
- ✓ Preparing your foods in a way that maximizes their antioxidant levels

Read on to learn how delicious fighting free radicals can be.

Your Body's Antioxidant Artillery

When it comes to anti-aging and disease-proofing your life, fighting free-radicals is job #1 (you'll learn about the other 4 jobs in ***The Food Cure™***).

But what might surprise you is that you get more free-radical protection from the antioxidants manufactured inside your body than you do from your food. It's true!

Endogenous antioxidants (meaning "antioxidants produced or synthesized within the organism") are free-radical fighters made primarily by the liver. They include the **phase 2 detoxifying enzymes** (glutathione and quinone reductase) as well as **superoxide dismutase**.

In this next section you'll learn:

- ✓ The ***specific foods you need to eat*** to help your body create endogenous antioxidants
- ✓ The ***exotic spice that kicks up your antioxidant production*** by turning on specific genes
- ✓ Why ***whole foods*** –not supplements– are the key to engaging your antioxidant artillery
- ✓ How to ***protect your liver***—your antioxidant manufacturing engine

Let's take a look at the jobs of each of these powerful free-radical fighters and how we can flip the antioxidant switch to the "on" position.

Is There Poison in Your Pantry? Packaged foods can contain hundreds of additives, preservatives, artificial colors and other contaminants that cause oxidative damage. Use ***Your Kitchen Makeover*** to protect your cells and start living greener today.

Glutathione: Guardian of Your Health

Glutathione is known as the body's master antioxidant and detoxifier. And for good reason.

In addition to performing the critical task of neutralizing free radicals, glutathione also:

- ✓ Breaks down highly toxic peroxide and other damaging compounds (including *xenoestrogens* like *bisphenol-a* which you learned about in ***Smart Cooks Age Better***)
- ✓ Protects cell membranes and DNA from damage
- ✓ Helps to repair damaged DNA
- ✓ Binds to carcinogens in the body, aiding in their removal
- ✓ Participates in immune function
- ✓ Recycles vitamins C and E back to their active forms

But in order to reap the benefits of this health guardian, your body requires three glutathione precursors—cysteine, glycine and glutamic acid.

Of these three precursors, glutamic acid and glycine are available in abundant amounts. Cysteine, on the other hand, becomes depleted quickly. And when this happens, glutathione production slows to a halt.

Keep your "master antioxidant and detoxifier" working for you by enjoying these delicious ingredients:

Sulfur-Containing Foods: Foods that provide high levels of sulphur-containing amino acids will help you achieve optimal levels of glutathione.

- **Grass-Fed Whey Protein Isolate**: Whey is rich in proteins like alphalactalbumin which are a concentrated source of sulfur-containing amino acids. But heating and pasteurizing destroys the delicate disulfide bonds that make these proteins active in the body. Look for "undenatured" grass-fed whey like Whey Advanced by HealthFX or Jay Robb's whey protein (and learn about the benefits of grass-fed in ***Organics: Beyond Green***)

- **Cruciferous Vegetables**: The broccoli family of veggies is especially high in organosulfur compounds which you learned about on p. 8 of ***Smart Cooks Age Better***. And later in this book (p. 13) you'll learn about the cruciferous veggies that provide the greatest glutathione-inducing power.

- **Organic, Omega-3 Eggs**: Eggs are a perfect protein and provide the necessary precursor for glutathione. While cooked eggs still offer many benefits, heating denatures the protein and reduces the potency of many vital nutrients (including the important omega-3 DHA, as well as carotenoids). To get the most, try enjoying them raw whirled in a smoothie.
- **Garlic**: The stinking rose is packed with organosulfur compounds like allicin, sufides and other compounds which boost glutathione production.

Foods High in Glutathione: Here are the foods naturally rich in glutathione (values per 100g) avocado (31 mg), watermelon (28 mg), asparagus (26 mg), grapefruit (15 mg), acorn squash (14 mg), orange (11 mg), tomato (11 mg), and cantaloupe (9 mg).

Turmeric: This essential ingredient in curry contains a powerful antioxidant called *curcumin* (see p. 7 of ***Smart Cooks Age Better***). Studies show that curcumin can increase glutathione levels by turning on the genes that make glutamate cysteine ligase (GCL) the enzyme required in glutathione synthesis.

The Thistle Family: Milk thistle and artichokes contain compounds like *silymarin - a* natural liver detoxifier that helps to prevent the depletion of glutathione.

N-Acetyl-Cysteine (NAC): This supplement is derived from L-cysteine and acts as a precursor to glutathione. It is quickly metabolize into glutathione and for this reason, has been approved by the FDA for use in acetaminophen overdose.

Alpha-Lipoic Acid: Known as the "mother antioxidant", alpha-lipoic acid recharges oxidized antioxidants including vitamins C and E and increases levels of glutathione in cells.

Selenium: This cancer-fighting mineral is a co-factor in glutathione. Low levels of selenium in your diet, means low levels of glutathione produced in your body. The best source of selenium is Brazil nuts – with one ounce providing 767% of the daily requirement. Many veggies also contain selenium, but the content of selenium in foods is directly related to the selenium in the soil—which is greatly depleted. In addition to enjoying Brazil nuts, wild salmon, wild halibut, shrimp and crab provide excellent sources of selenium as well.

Vitamin C: Vitamin C supplementation (500 mg/d) recycles the glutathione back to its "active" from in the blood and improves its antioxidant protection too.

Boost Antioxidants…with Exercise! What you eat is only half of the healthy lifestyle equation. The other half– exercise! In addition to the many well-established benefits of vigorous exercise, it also revs up your production of disease-fighting, anti-aging glutathione too. So get moving!

Superoxide Dismutase: Disarming the Damagers

Superoxide dismutase (SOD) is a potent antioxidant that repairs cells and reduces the damage done by superoxide – the most common free radical in the body.

In addition to SOD acting as an antioxidant, it is also a powerful anti-inflammatory agent (learn more about why fighting inflammation is critical to your health in ***The Food Cure***™).

As a metalloenzyme, SOD contains amino acids as well as the metal ions - **copper**, **zinc** and **manganese**.

Let's take a look at the three types of SOD in the human body:

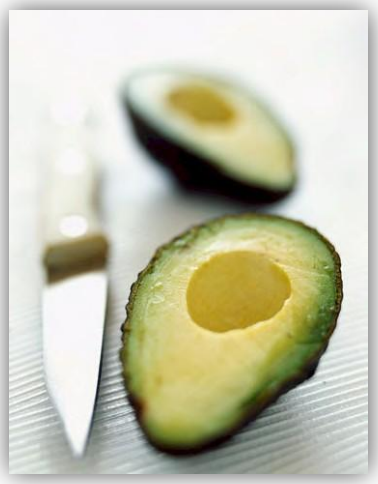
- **SOD1**: Found in the cytoplasm (or watery part of the cell).
- **SOD2**: Found in the mitochondria (or powerhouse of the cell). Because mitochondria consume over 90% of the oxygen used by cells, they are especially vulnerable to oxidative stress.
- **SOD3**: Found extracellularly (or outside of cells).

In order for SOD do its important job, it requires a healthy supply of the metal ions to catalyze the free-radical fighting reactions.

Here are the mineral-rich foods you need to enjoy help SOD do its dirty job:

- **Zinc**: Oysters, grass-fed beef and lamb, naturally raised pork
- **Copper**: Oysters, clams, crab, cashews, sunflower seeds, hazelnuts, almonds, lentils, cocoa
- **Manganese**: Pecans, oatmeal, brown rice, spinach, chard, mustard greens, collard greens, turnip greens, kale, pineapple, almonds, peanuts, sweet potato, garbanzo beans

Love Your Liver… to Live Longer!



As you learned in the last few pages, your body's antioxidant artillery greatly depends on your liver.

To get the most out of your free-radical fighting machine, you need to keep it healthy. Here are some tips:

1. **Pass on Prescriptions**: Avoid prescription drugs if at all possible. They are enemy #1 to your liver… and your longevity.
2. **Don't Let Painkillers Kill YOU!** Avoid over-the-counter drugs (especially acetaminophen/Tylenol) that damage your liver.
3. **Imbibe Wisely:** Enjoy alcohol in moderation. And if you drink wine, make sure it's organic (see Organics: Beyond Green to learn about the top contaminated crops—including grapes).
4. **Organic, Grass-Fed & Wild:** Eat only organic foods, grass-fed meats and wild seafood to lighten your liver's load (see ***Organics: Beyond Green*** to learn about the toxic burden conventional produce, grain-fed meats and farmed seafoods pose to your body due to the use of herbicides, fungicides, pesticides and other contaminants).
5. **"Clean" Your Cookware:** Certain types of cookware, storage containers, bottles and other kitchen tools add to your toxic burden. Reduce that burden with tips you'll find in ***Smart Cooks Age Better***.
6. **Savor Healthy Fats Only:** Enjoy healthy fats (like omega-3, monounsaturated and conjugated linoleic acid) and avoid harmful fats (like trans fats and omega-6s) that compromise your liver and promote free radicals (learn more in **Fats that Heal, Fats that Harm**).
7. **Power Up with Power Foods:** Fill your plate with the nutrient-dense foods discussed in this book that power up your natural antioxidant defensesglutathione and superoxide dismutase.
8. **Forgo Fakes:** Avoid artificial sweeteners (sucralose, aspartame) and preservatives (like sodium benzoate) that tax your liver, suppress your immune system and wreak havoc on your metabolic system.
9. **Enjoy Liver Lovers:** Learn more about the specific foods that have been found to have a protective effect on the liver—including beets, artichokes, grapefruit and avocado-at our website.
10. **Glisten, Glow & Purify:** Engage in vigorous exercise. It's the most effective form of detoxification for your body, and offers too many benefits to list. If you don't do it, start today—your life absolutely depends on it!

The ORAC Scale

When you think of ORAC, think of another "O" word: *octane*.

Just like high-octane fuel delivers more energy per unit to your car, high ORAC foods deliver more antioxidant protection to your body.

So what is ORAC anyway? Oxygen Radical Absorbance Capacity (ORAC) is simply a method of measuring the ability of a food to extinguish free radicals. Scientists refer to this as the "antioxidant capacity" of a food.

In the mid 1990's, Dr. Ronald Prior, Ph.D., an antioxidant expert at USDA's Human Nutrition Research Center on Aging at Tufts University aligned with the team who initially published the concept of ORAC—physician and chemist Guohua Cao, M.D., Ph.D., and his colleagues at the National Institute on Aging (NIA). And the ORAC scale was born.

So how does it work? ORAC tests challenge an antioxidant sample—blueberry extract, for example—against free radicals in a test tube. Researchers evaluate the sample containing free radicals as well as the isolated extract. The more the extract successfully negates free radicals, the greater the antioxidant capacity and thus the higher the ORAC score.

But all antioxidants are not created equal, the ORAC scale has its limitations and your own biochemistry factors in too. Here are several ideas to keep in mind to boost your antioxidant levels naturally:

1. **Water Dilutes the ORAC Score:** Don't get "diluted" into thinking you should be eating more energy dense dried fruits just because they have a high ORAC score. While a raisin may concentrate the antioxidants in a grape, it also concentrates the calories and sugar too. The same is true for water-rich foods— like watermelon—whose ORAC score reflects low antioxidant content.

2. **Some Like it Hot:** In order to understand what ORAC scores really mean to health and disease prevention, it's important to understand the differences between the types of antioxidants and how they work. Some are water soluble; some are lipid soluble. Some get stronger with heat while others shrink in their ability to quench aging free radicals at the very mention of a burner. We know the best preparation methods to maximize antioxidants and you'll learn about them in ***Smart Cooks Age Better***.

3. **Supplements Can't Mimic Foods:** Think you can pop a pill that will replace the unique antioxidant effects of a blueberry… a sweet potato… or green tea? Think again. Study upon study shows that the greatest antioxidant benefits come from foods in their natural state. Why? Because phytonutrients possess "synergy" multiple components working together to produce stronger, better effects than the isolated compounds do alone.

4. **Antioxidants are Selective Specialists:** You have a hair stylist for your hair, a manicurist for your nails, and a gardener for your lawn. You wouldn't expect the yardman to paint a perfect French manicure or the hair stylist to groom your petunias. Antioxidants are the same. They are specialized. Some fight singlet oxygen free radicals; others are programmed to annihilate peroxyl radicals. Vitamin C, for example, may be most effective in the aqueous part of a cell. Vitamin E may be most effective in the fatty parts of the cell (including the membrane bilayer and mitochondria). This is exactly why it's important to enjoy a whole foods diet that provides the entire antioxidant army.

5. **There's Antioxidant Variation Among the Same Foods:** Harvest times, growing conditions, use of chemicals, season, temperature, soil conditions, ripeness and other factors can dramatically affect the antioxidant capacity of foods. You'll learn later in this book, as well as in ***Organics: Beyond Green***, why organic foods give you more antioxidant bang per bite.

6. **Your Body Makes Antioxidants Too:** In the next section—*Your Body's Antioxidant Artillery*—you'll learn that some of the most powerful antioxidant protection comes from inside the body. And while this protection does in fact come from foods, it's not necessarily from the high ORAC foods that fuel the body's free-radical fighting furnace.

7. **A Healthy Gut Absorbs More Antioxidants:** We can test the free-radical fighting ability of extracts in test tubes, but their behavior in the body can vary greatly. To maximize absorption of antioxidants, it's important to cultivate the healthy bacteria in the digestive tract by enjoying high-fiber foods that act as prebiotics, as well as probiotic foods including kombucha, sauerkraut, yogurt, kefir and other fermented dairy. Learn more in ***Your Digestive Ecosystem***.

The bottom line? Enjoy a wide spectrum of antioxidants from the cleanest food sources available to provide maximum protection, health benefits and enjoyment!

Key Antioxidant Nutrients

In this section, we'll take a closer look at some of the phytonutrients (found in plant foods) and zoonutrients (from animal sources) that help to fend off your body's nemesis: free radicals.

Ajoene: This sulfur-rich nutrient, found exclusively in ***garlic***, helps to inhibit the release of superoxide—the most common free radical in the human body.

Allicin: Also found in ***garlic***, allicin helps induce the body's phase 2 detoxifying enzymes.

Anthocyanins: This group of more than 400 red-blue substances is found Primarily in ***berries*** and scavenges four types of cell-damagers—superoxide radicals, hydrogen peroxide, hydroxyl radicals and singlet oxygen.

Astaxanthin: Found in ***wild salmon, shellfish and microalgae***, astaxanthin shows antioxidant capacity 10 times stronger than other carotenoids. It's also a natural internal sunscreen that protects skin from sun damage and discoloration.

Carotenoids: This diverse group of more than 600 lipid-soluble plant pigments includes beta-carotene, alpha-carotene, lycopene, lutein, astaxanthin, zeaxanthin and cryptoxanthin. Because of their lipid-soluble nature, carotenoids are believed to be most protective in cell membranes.

Curcumin: Found exclusively in **turmeric**, not only does this potent antioxidant scavenge free radicals, it also kicks up the body's phase 2 detoxifying enzymes.

EGCG: Found in ***green tea***, this potent antioxidant scavenges free radicals, fights inflammation and boosts the body's phase 2 detoxifying enzymes.

Ellagic Acid: A potent antioxidant found in **raspberries, strawberries, cranberries, walnuts, pecans and pomegranates** that neutralizes free radicals and disarms carcinogens.

Ergothionene: This antioxidant is found in **mushrooms** (shiitake, oyster, king oyster and maitake have the most). Curious as to why mushrooms don't rank on our list of *150+ Antioxidant Superfoods?* While ergothionene does not contribute to total antioxidant activity in the mushroom, it may significantly boost antioxidant activity in the body.

Flavonoids: This large family of phytonutrients is found in a wide variety of healing foods—including **apples, onions, tea, red wine, berries, citrus, cocoa and beans (**see Table 1 below**)**. Researchers believe that flavonoids protect cells by increasing the body's production of phase 2 detoxifying enzymes and help to reduce inflammation, rather than acting as direct antioxidants.

Table 1: Flavonoids in Common Foods

Flavonoid Subclass	Dietary Flavonoids	Food Sources
Anthocyanidins	Cyanidin, Delphinidin, Malvidin, Pelargonidin, Peonidin, Petunidin	Red, blue, and purple berries; red and purple grapes; red wine
Flavanols	**Monomers (Catechins):** Catechin, Epicatechin, Epigallocatechin Epicatechin gallate, Epigallocatechin gallate **Dimers and Polymers:** Theaflavins, Thearubigins, Proanthocyanidins	**Catechins:** Teas (particularly green and white), chocolate, grapes, berries, apples **Theaflavins, Thearubigins:** Teas (particularly black and oolong) **Proanthocyanidins**: Cocoa, apples, berries, red grapes, red wine
Flavanones	Hesperetin, Naringenin, Eriodictyol	Citrus fruits: oranges, grapefruits, lemons
Flavonols	Quercetin, Kaempferol, Myricetin, Isorhamnetin	Widely distributed in plant foods including yellow onions, scallions, kale, broccoli, apples, berries, teas
Flavones	Apigenin, Luteolin	Parsley, thyme, celery, hot peppers
Isoflavones	Daidzein, Genistein, Glycitein	Soybeans, soy foods, legumes

Are Drugs Draining Your Antioxidants? Many drugs — over the counter and prescription medications—deplete your body of vital nutrients. As you've learned in this book, the most powerful antioxidants are produced inside your body and require these raw materials to manufacture free-radical fighters. Learn about the medicines that drain the nutrients your body needs in ***Depleted By Drugs?***

Glucosinolates: Earlier in this book, you learned that the endogenous antioxidants made by the body may afford more free-radical protection than antioxidant-rich foods themselves. And glucosinloates—found in the cruciferous family of veggies (see Table 2 below) are one of the most sulfur-rich groups of nutrients, helping to induce the phase 2 detoxifying enzymes and reduce inflammation. While fresh cruciferous veggies all start out with glucosinolates, they turn into isothiocyanates—including sulforaphane, phenethyl-isothiocyanate (PEITC) and others—when chewed and digested.

Table 2: Glucosinolate Content of Cruciferous Vegetables

Food (raw)	Serving	Total Glucosinolates (mg)
Brussels sprouts	½ cup (44 g)	104
Garden cress	½ cup (25 g)	98
Mustard greens	½ cup, chopped (28 g)	79
Turnip	½ cup, cubes (65 g)	60
Cabbage, savoy	½ cup, chopped (45 g)	35
Kale	1 cup, chopped (67 g)	67
Watercress	1 cup, chopped (34 g)	32
Kohlrabi	½ cup, chopped (67 g)	31
Cabbage, red	½ cup, chopped (45 g)	29
Broccoli	½ cup, chopped (44 g)	27
Horseradish	1 tablespoon (15 g)	24
Cauliflower	½ cup, chopped (50 g)	22
Bok choy	½ cup, chopped (35 g)	19

Resveratrol: Primarily found in red wine, resveratrol has potent antioxidant activity, protects DNA from damage and has been found to boost longevity too.

Table 3: Resveratrol Content of Foods & Beverages

Food	Serving	Calories/Serving	Total Resveratrol (mg)
Red wine (Spanish)	5 ounces	120	0.29-1.89
Red wine (Global)	5 ounces	120	0.30-1.89
Red Grape Juice	5 ounces	120	0.17-1.30
Peanuts, raw	1 cup	854	0.01-0.26
Peanuts, boiled	1 cup	572	0.32-1.28
Peanut butter	1 cup	1517	0.04-0.13
Red Grapes	1 cup	110	0.24-1.25

Pterostilbene: This cousin of resveratrol is found predominantly in blueberries. It's a potent scavenger of the peroxyl-radical, shows similar antioxidant capacity to resveratrol and has been found protective against several cancers.

Vitamin A: This lipid-soluble antioxidant vitamin is found in animal products including egg yolks, organ meats and milk. It is also converted by the body from beta-carotene.

Healing Tip: If you choose to eat organ meats—which are a rich source of certain nutrients—always ensure they are grass-fed and organic. Otherwise you are exposing yourself to a plethora harmful contaminants and inflammation-promoters (see ***Organics: Beyond Green*** for the dangerous byproducts in conventional foods that end up on your plate and ***Fats that Heal, Fats that Harm*** for how certain fats promote inflammation and disease).

Vitamin C: This well-known water-soluble antioxidant is found in citrus fruits, berries, mangoes, papaya, melons, tomatoes, peppers, and leafy greens. As you learned earlier, vitamin C helps to boost glutathione production. It is also essential for collagen synthesis (which is important for youthful skin and healthy blood vessels) and exerts most of its free-radical fighting power in the aqueous (or watery) part of the cell.

Vitamin E: Best known for its ability to protect LDL cholesterol from oxidative damage, vitamin E is a lipid-soluble group of eight compounds found primarily in nuts, nutritive oils (from nuts) and wheat germ, as well as mango, broccoli, dandelion greens, spinach and kiwi.

On the Web: Visit our website and check out our many Encyclopedias. You'll find more than 1,500 pages of life-saving information that's easily accessible, written in simple, easy-to-understand language and grouped into searchable categories including:

- ✓ ***Phytonutrients***
- ✓ ***Vitamins***
- ✓ ***Minerals***
- ✓ ***Additives & Preservatives***
- ✓ ***Fats***
- ✓ ***Contaminants***
- ✓ ***and many more!***

Get More Antioxidants with Organics

A redder, juicier, more succulent tomato. A sprig of basil that sings with notes and nuances that are indescribably fresh.

There's no doubt that organic foods boast more flavor. But that's not all. Research shows they pack more nutrients than their conventional counterparts too.

A comprehensive review of 97 studies entitled—*New Evidence Confirms the Nutritional Superiority of Plant-Based Organic Foods*—found that organic, plant-based foods contain higher levels of eight out of 11 nutrients studied. That includes significantly greater concentrations of health-promoting antioxidants and polyphenols. These compounds not only protect *your* body, but they protect the plant as well, acting as natural defense against pests and fungi. But when crops are sprayed, they no longer rely on their own defenses and produce less of these health-promoting nutrients.

What's more, researchers found that organically grown plant foods are 25 percent more nutrient-dense. That means they deliver more nutrition calorie for calorie than conventional grown foods.

More Nutrients + Less Risk! Filling your plate with an organic superfood smorgasbord not only maximizes the antioxidants in your diet, but also protects you from dangerous contaminants like herbicides, pesticides that wreak havoc on your metabolic machinery. Learn more in ***Organics: Beyond Green***.

Maximize Antioxidants... in the Kitchen!

The name of the antioxidant game is pretty simple: *know which antioxidants thrive in which environments.*

Tomatoes—as you might have guessed—long to be slowly simmered with a high quality extra virgin olive oil. That's because the heat unlocks the lycopene matrix and the healthy fat boosts the bioavailability in your body. Garlic, on the other hand, doesn't want to be tamed or tempered. On the contrary! The tingle on the taste buds represents the benefit in your body.

You don't have to be a chemist to know how to extract the most potency from healing foods. Simply refer to ***Smart Cooks Age Better*** for a list of foods and the best ways to prepare them.

Antioxidant Wolves in Sheep's Clothing

You've seen them. Drinkable concoctions that promise the ability to fend off free radicals (and all sorts of ailments) with more vigor than any pure, natural, whole food could ever hope.

At a first glance, their pitch may seem convincing. But look closer and you'll often find sugars, preservatives, and artificial sweeteners.

Even if the antioxidant levels of some of the constituent fruits is high, the benefits of the "superdrink" would be negated by the additives. What's worse, they may do more harm than good.

Here's why:

- **Sodium Benzoate + Vitamin C = Benzene (a carcinogen)**
- **Sugar = Insulin Resistance + Inflammation + Glycation**
- **Sucralose = Metabolic Disruption**

So where are these wolves in sheep's clothing lurking? They're found everywhere from smoothie shops (like Jamba Juice) to multi-level marketing meetings (like Mona Vie and clones), to products lining the shelves at your local healthy food store (like Tahitian Noni juice and even pomegranate juice).

If the product you're buying doesn't have a label, be sure to ask about the ingredients. You'll might be surprised to find an unhealthy dose of chemical sweeteners (like sucralose) and a whopping 20-30 grams of sugar per serving.

Learn more about why avoiding additives, preservatives and artificial sweeteners is crucial to your health in ***Organics: Beyond Green*** and use ***Your Kitchen Makeover*** to get started purging your pantry and purifying your body today!

Antioxidant Superfoods

Your Complete Guide to the Free-Radical Fighting Ability of 150+ Foods

Rank	Food	ORAC Score
1	Cloves, dried, ground	314,446
2	Cinnamon, dried, ground	267,536
3	Oregano, dried	200,129
4	Turmeric, ground	159,277
5	Sorghum, bran, black	100,800
6	Cocoa powder, natural (non-dutched)	80,933
7	Cumin seed, dried	76,800
8	Parsley, dried	74,349
9	Basil, dried	67,553
10	Curry powder, dried	48,504
11	Cocoa powder, dutched	40,200
12	Sage, fresh	32,004
13	Mustard seed	29,257
14	Pepper, black	27,618
15	Thyme, fresh	27,426
16	Marjoram, fresh	27,297
17	Rice bran	24,287
18	Chili powder, dried	23,636
19	Ginger, ground	21,867
20	Chocolate, dark	20,823
21	Pecans	17,940
22	Paprika, dried	17,919
23	Tarragon, fresh	15,542
24	Ginger root, raw	14,840
25	Sorghum grain, red	14,000
26	Peppermint, fresh	13,978
27	Oregano, fresh	13,970
28	Walnuts, english	13,541
29	Hazelnuts	9,645
30	Cranberries, raw	9,584
31	Pears, dried	9,496
32	Savory, fresh	9,465
33	Artichokes, boiled	9,416
34	Beans, red kidney	8,459

Rank	Food	ORAC Score
35	Beans, black	8,040
36	Pistachios	7,983
37	Currants, European, black, raw	7,960
38	Beans, pinto, raw	7,779
39	Plums, black diamond, w/ peel	7,581
40	Lentils, raw	7,282
41	Agave, dried	7,274
42	Garlic powder	6,665
43	Artichokes, raw	6,552
44	Blueberries, raw	6,552
45	Prunes	6,552
46	Plums, raw	6,259
47	Leeks, bulb + lower leaf, raw	5,997
48	Soybeans, raw	5,764
49	Onion powder	5,735
50	Blackberries	5,347
51	Garlic, raw	5,346
52	Cilantro, raw	5,141
53	Cabernet Sauvignon	5,034
54	Raspberries, raw	4,882
55	Basil, fresh	4,805
56	Almonds, raw	4,454
57	Dill, fresh	4,392
58	Blackeyed peas, raw	4,343
59	Apples, Red Delicious (with skin)	4,275
60	Peaches, dried	4,222
61	Apples, Granny Smith (with skin)	3,898
62	Dates, deglet noor	3,895
63	Strawberries, raw	3,577
64	Peanut butter, smooth w/ salt	3,432
65	Currants, red raw	3,387
66	Figs, raw	3,383
67	Cherries, sweet, raw	3,365
68	Peanuts, raw	3,166

Rank	Food	ORAC Score
69	Raisins	3,037
70	Pears, raw	2,941
71	Agave, cooked	2,938
72	Apples, Gala (with skin)	2,828
73	Cardamom, dried	2,764
74	Apples, Fuji (with skin)	2,599
75	Guava, white-fleshed	2,550
76	Dates, medjool	2,387
77	Broccoli, cooked, boiled	2,386
78	Lettuce, red leaf	2,380
79	Cabbage, red, raw	2,252
80	Oat bran cereal	2,183
81	Quick oats, dry	2,169
82	Asparagus, raw	2,150
83	Sweet potato, baked w/skin	2,115
84	Chives, raw	2,094
85	Cabbage, savoy, cooked, boiled	2,050
86	Prune juice	2,036
87	Guava, red-fleshed	1,990
88	Bread, pumpernickel	1,963
89	Cashew nuts	1,948
90	Avocado, Haas	1,933
91	Arugula, raw	1,904
92	Oranges, navel, raw	1,819
93	Peaches, raw	1,814
94	Beets, raw	1,767
95	Pears, red anjou	1,746
96	Popcorn, air-popped	1,743
97	Radishes, raw	1,736
98	Old fashioned oats, dry	1,708
99	Macadamia nuts, dry roasted	1,695
100	Spinach, frozen	1,687
101	Potatoes, russet, flesh + skin, baked	1,680
102	Asparagus, boiled	1,644

Rank	Food	ORAC Score
103	Mandarin oranges, raw	1,620
104	Broccoli raab, cooked	1,552
105	Grapefruit, pink, raw	1,548
106	Onions, red, raw	1,521
107	Spinach, raw	1,515
108	Alfalfa sprouts	1,510
109	Lettuce, romaine	1,447
110	Lettuce, butterhead	1,423
111	Bread, mixed grain	1,421
112	Brazil nuts, raw	1,419
113	Broccoli, raw	1,362
114	Parsley, raw	1,301
115	Grapes, red, raw	1,260
116	Green tea	1,253
117	Agave, raw	1,247
118	Grapefruit juice, white	1,238
119	Lemon juice, raw	1,225
120	Onions, yellow, sautéed	1,220
121	Kiwi, gold	1,210
122	Extra virgin olive oil	1,150
123	Grapes, green, raw	1,118
124	Apricots	1,115
125	Onions, raw	1,034
126	Mangos, raw	1,002
127	Salsa	1,001
128	Peppers, sweet, orange, raw	984
129	Peppers, sweet, yellow, raw	965
130	Eggplant, raw	933
131	Peppers, sweet, green, raw	923
132	Beans, pinto, boiled	904
133	Kiwi	882
134	Bananas	879
135	Onions, white, raw	863
136	Chickpeas, raw	847

Rank	Food	ORAC Score
137	Peppers, sweet, red, sautéed	847
138	Cauliflower, raw	829
139	Lime juice, raw	823
140	Peppers, sweet, red, raw	791
141	Sweet potato, boiled w/o skin	766
142	Beans, green, snap, raw	759
143	Nectarines, raw	750
144	Peas, yellow, mature, raw	741
145	Corn, sweet, yellow, raw	728
146	Orange juice, raw	726
147	Peppers, sweet, yellow, grilled	694
148	Tomato sauce, canned	694
149	Carrots, raw	666
150	Cauliflower, cooked, boiled	620
151	Pine nuts	616
152	Peppers, sweet, green, sautéed	615
153	Peas, green, frozen	600
154	Apple cider vinegar	564
155	Tomatoes, plum, raw	546
156	Peas, split, mature, raw	524
157	Cabbage, raw	508
158	Celery, raw	497
159	Tomato juice, canned	486
160	Pumpkin, raw	483
161	Lettuce, iceberg	438
162	Poppy seed, dried	418
163	Red wine vinegar	410
164	Tomatoes, ripe, cooked	406
165	Butternut squash, raw	396
166	Pineapple, raw	385
167	Cantaloupe, raw	315
168	Fennel bulb, raw	307
169	Beans, snap, canned	290
170	Eggplant, cooked, boiled	245

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