SMART COOKS AGE BETTER

Culinary Secrets to Unlock The Healing Power of Foods

- ✓ *Guard against Free Radicals*
- ✓ *Boost Nutrition Up to 654%*
- ✓ *Discover Hidden Dangers in Your Cookware*

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Smart Cooks Age Better

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HEALING Gourmet
Your Recipe for Health™

Contents

Cooking for Optimum Nutrition

Do you want to get the most health benefits out of your food? Who doesn't!

But if you're not preparing your food properly you
could be losing up to 50% of the healing nutrients.

What's worse, you may be exposing yourself to harmful chemicals that promote cancer, aging and metabolic dysfunction.

Not to worry! By the end of this course, you'll have a good handle on the tools and techniques you need to maximize the benefits of your food, while minimizing your exposure to health-harming compounds.

You'll learn:

- Which nutrients are **water-soluble** and which are **lipid-soluble** and how to get the most from each
- The nutrients that are **more potent when cooked**, and those whose power depends on enjoying them "in the raw"
- How to avoid harmful aging substances called **lipid oxidation products (LOPs)** that are created by heating specific types of cooking oils
- Which oils you should cook with and which ones you should never use
- The cancer-causing compounds (**HCAs**) that form when cooking meats, poultry and fish and the simple and delicious ways to prevent them
- The health-harming guests found in your cereal and other grain-based products (**acrylamide**) that promote cancer
- The substance created with "normal" cooking that **speeds the aging process**, promotes inflammation and even increases your risk of Alzheimer's disease (among others)
- The **dangers lurking in your cookware**, storage containers and other utensils plus the healthier alternatives (that produce yummier results!)

Let's get started!

Unlocking the Healing Power of Nutrients

Your body relies on nutrients to power and protect cells and DNA, to maintain optimal immune function, to keep your heart ticking and your brain thinking and even to ward of the visible signs of aging.

And while you probably know it's important to enjoy a wide range of whole foods (preferably from organic sources) to get the most nutrients in your diet, what you may not know is that without the right preparation, many of these nutrients literally go right down the drain.

You see, every nutrient has a specific set of biochemical properties that allow it to carry out its health-promoting functions. But to get those benefits, you must supply the right conditions. The good news is that it all comes down to three key principles:

1. ***Fat vs. Water***
2. Tough Guy vs. Soft Guy
3. Hot vs. Cold

Let's explore the first principle—***fat versus water***. Try mixing oil and water. You can whisk, blend, shake and churn, but in the end, they always separate back into their constituents.

Nutrients are the same way—they're either ***lipid-soluble*** or ***water-soluble***. In the case of lipid-soluble nutrients, it's important to pair them with a healthy fat (learn more in ***Fats That Heal, Fats That Harm***). Without it, the body's absorption of these nutrients is greatly reduced.

For example, you'll better absorb the lutein (a yellow-green, lipid-soluble nutrient fund in leafy greens that is critical to eye health) in your spinach salad when it's drizzled with olive oil.

Next, is ***tough guy, soft guy***. Some nutrients have a tough exterior (in chemical terms called a matrix). And this matrix requires a little softening to get them to "open up". But once they do...they're yours for the taking. A simple chop or a gentle crush is all that's needed to get them to deliver the benefits.

Finally, the last principle is ***hot vs. cold***. In the presence of heat, the flavors of certain foods become more complex… and their nutrients become stronger too (think of lycopene-rich tomatoes in a hearty Bolognese sauce). Conversely, other nutrients are all but destroyed with the mere mention of a flame.

Unlocking the Healing Power of Nutrients

While there are literally tens of thousands of nutrients, with hundreds of different functions, you needn't be a chemist or devote hours of study time to get the benefits.

This primer organizes nutrients according to family which, while unique, demonstrate similarities (not unlike people!).

Here are the Nutrient Families we'll explore in the following pages:

- **Phenolics & Flavonoids**: This group represents more than 2,000 phytonutrients found in foods ranging from apples to mushrooms. Because this group is so diverse, they vary in color, activity and best prep methods.
- **Carotenoids**: This group of more than 600 carotenoids are easy to spot by their yellow, orange and red hues. They're all fat-soluble, tough guys that like a little heat.
- **Organosulfur Compounds**: This group of nutrients is best-known for its cancer-fighting activity. They come from the "mustard" family of veggies (Cruciferae) which is best known for broccoli and its relatives. They're all water-soluble soft guys that like to stay cool.
- **Allylic Sulfur Compounds**: There's no denying the strength of a chopped onion or a clove of crushed garlic. These compounds come from the *Liliaceae* (or onion) family. They're all water-soluble soft guys that like to stay cool.
- **Vitamins**: Vary in color, activity and best prep methods. See individual vitamins for more information.

Note: *Phytonutrients and vitamins are more likely to be affected by processing than mineral content. Therefore, we do not discuss minerals here.*

Sumptuous Synergy: As you learned in ***Your Guide to Antioxidant Superfoods***, nutrients work together. And when they do, the effect is greater than that of the isolated compounds alone. This concept, called "synergy", is one of the reasons we at *Healing Gourmet* prefer Mother Nature's Perfect Packaging. Choosing an organic whole foods diet is your best bet to provide your body with the spectrum of nutrients it needs.

Nutrient	Found In	Benefits & Activities	Get The Most
Allicin **Family:** Allylic Sulfur	Garlic	• Antioxidant • Encourages **phase 2 detoxifying enzymes*** • Reduces inflammation • Fights fungus and bacteria	Destroyed by heat Water-soluble Breaking the matrix increases bioavailability **Healing Tip:** Raw garlic is best. For maximum benefit, crush and allow to stand for 10 minutes
Anthocyanins **Family:** Phenolics & Flavonoids	Concentrated in Açaí, Blueberries, Blackberries, Raspberries, Pomegranate, Cherries, Red Wine; also found in Grapes, Strawberries, Radicchio, Plums, Eggplant, Rhubarb, Cabbage, Apple	• Antioxidant • Reduces inflammation • Helps to balance blood sugar	Destroyed by heat Water-soluble
Astaxanthin **Family:** Carotenoid	Wild Salmon, Shrimp, Trout, Spirulina Crayfish	• Potent antioxidant	Heat stable Lipid-soluble – best eaten with 3-5 g of healthy oil to boost absorption
Beta-carotene **Family:** Carotenoid	Sweet Potato, Kale, Collards, Cantaloupe, Carrots, Spinach	• Antioxidant	Lipid-soluble – best eaten with 3-5 g of healthy oil to boost absorption Heating and chopping breaks the matrix and increases bioavailability **Healing Tip:** It is especially important to get betacarotene from food sources; supplements have been found to promote cancer in studies.

Phase 2 Detoxifying Enzymes are manufactured by the liver and are a natural defense against free-radicals and toxins. Learn more about these important health-defenders and how you can boost their production with the healing foods you'll learn about in ***Antioxidant Superfoods***.

Nutrient	Found In	Benefits & Activities	Get The Most
Beta Cryptoxanthin **Family:** Carotenoid	Pumpkin, Papaya, Carrots, Paprika, Tangerines, Cilantro, Corn, Watermelon, Red Pepper, Oranges	• Antioxidant • Anti-inflammatory	Lipid-soluble – best eaten with 3-5 g of healthy oil to boost absorption Heating and chopping breaks the matrix and increases bioavailability
Curcumin **Family:** Carotenoid	Turmeric	• Antioxidant • Anti-inflammatory • Encourages phase 2 detoxifying enzymes • Potent cancer fighter– currently being studied in human trials as a natural chemoprevention agent	Lipid-soluble – best eaten with 3-5 g of healthy oil to boost absorption Heating breaks the matrix and increases bioavailability
Ellagic acid **Family:** Phenolics & Flavonoids	Raspberries, Cranberries, Pecans, Pomegranate, Strawberries, Walnuts	• Antioxidant • Disarms carcinogens	Water-soluble Destroyed by heat Healing Tip: The highest concentration of ellagic acid is found in the seeds of blackberries and raspberries
Epigallocatechin gallate (EGCG) **Family:** Phenolics & Flavonoids	Green Tea	• Antioxidant • Encourages phase 2 detoxifying enzymes • Reduces inflammation • Fights fungus and bacteria	

Blackberries: Delicious Cancer Protection. Researchers at University of Pittsburgh evaluated a compound in blackberries called cyanidin-3-rutinoside (C-3-R) on leukemia cells. At low doses, C-3-R killed half of the cancer cells within 18 hours; at higher doses, it killed all of the cancer cells within 18 hours. According to Dr. Gary Stoner, 1.5 to 2 cups of fresh berries daily may be the ideal "dose" to stave off certain types of cancer.

Nutrient	Found In	Benefits & Activities	Get The Most
Flavonoids **Family:** Phenolics &	Apples, Eggplant, Leeks, Berries, Broccoli, Onions, Celery, Grapes, Parsley, Tea, Cocoa, Grapefruit, Oranges, Lemons, Herbs, Soy, Red and Purple Grapes, Red Wine	• Encourage phase 2 detoxifying enzymes • Potent cancer-fighter, encourages cancer cells to self-destruct (a process called *apoptosis*)	Water-soluble Destroyed by heat **Healing Tip:** Fermenting foods containing glucosinolates boosts their activity. Get more of these cancer-fighters by enjoying fermented foods like kimchi and sauerkraut.
Glucosinolates **Family:** Organosulfur	Bok Choy, Cauliflower, Kale, Rutabagas, Broccoli, Collards, Mustard Greens, Turnips, Brussels Sprouts, Horseradish, Radishes, Watercress, Cabbage	• Encourage phase 2 detoxifying enzymes • Potent cancer-fighter, encourages cancer cells to self-destruct (a process called apoptosis)	Water-soluble Destroyed by heat **Healing Tip:** Fermenting foods containing glucosinolates boosts their activity. Get more of these cancer-fighters by enjoying fermented foods like kimchi and sauerkraut.
Lutein & Zeaxanthin **Family:** Carotenoid	Egg Yolks, Kale, Collards, Mustard Greens, Spinach and other green leafy vegetables	• Helps to prevent Age Related Macular Degeneration (AMD) • Benefits heart health • Cancer-fighting activity	Lipid-soluble – best eaten with 3-5 g of healthy oil to boost absorption Heating and chopping (when applicable) breaks the matrix and increases bioavailability
Lycopene **Family:** Carotenoid	Red foods including Tomatoes, Red Peppers, Papaya, Guava	• Antioxidant • Cancer-fighting activity • Prostate protecting activity • Benefits heart health	Lipid-soluble – best eaten with 3-5 g of healthy oil to boost absorption Heating and chopping (when applicable) breaks the matrix and increases bioavailability

A Salad for Your Sight: Recent research published in the *Archives of Ophthalmology* cites **lutein** and **zeaxanthin** (nutrients found in eggs, spinach and other leafy green vegetables) as nature's most potent peeper protectors. In the study, people getting the most lutein and zeaxanthin in their diet had 35% less chance of developing age-related macular degeneration (AMD) compared to those getting the least in this study. Along with the many fresh and delicious salad recipes we offer at our website, you'll notice we also display the amount of lutein and zeaxanthin in every recipe. While a recommended daily amount has not been set for these important nutrients, 6 mg daily seems to offer the most vision protection.

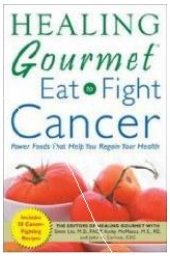
Nutrient	Found In	Key	Benefits & Activities	Get The Most
Quercetin **Family:** Phenolics & Flavonoids	Apples, Onions (Red & Yellow), Broccoli, Red Grapes	•	Antioxidant	Water-soluble
		•	Reduce inflammation	Heat stable
		•	Fight histamine (allergic) reactions	**Healing Tip:** Quercetin is concentrated in the skins/peels of fruits, so don't peel and be sure it's organic!
Resveratrol **Family:** Phenolics & Flavonoids	Red Wine; also found in skins of Peanuts, Blueberries, Cranberries, Red Grapes	•	Potent antioxidant	Water-soluble
		•	Discourages oxidation of LDL or "bad" cholesterol which protects against heart disease	Heat stable, but sensitive to oxygen and light
		•	Protects DNA and may increase longevity	**Healing Tip**: Grapes are part of the the "Dirty Dozen". Always choose organic. Learn more in ***Organics Beyond Green***
Vitamin A **Family:** Carotenoid	Egg Yolks, Organ Meats, Milk Also converted by the body from beta-carotene	•	Antioxidant	Lipid-soluble
		•	Immune health	Destroyed by heat
		•	Skin health	
Vitamin B1 (Thiamine) **Family:** Vitamin	Sesame Seeds, Legumes, Nuts, Pork, Asparagus, Spinach	•	Involved in energy metabolism	Water-soluble
		•	Helps convert carbohydrates to energy	Destroyed by heat and alcohol
		•	Essential for the functioning of the heart, muscles, and nervous system metabolism	
Vitamin B2 (Riboflavin)	Mushrooms, Spinach, Milk, Grass-Fed Beef, Lamb, Egg Whites	•	Involved in energy metabolism	Water-soluble
		•	Required for the metabolism of fats, ketone bodies, carbohydrates, and proteins	Moderately heat stable
Vitamin B3 (Niacin) **Family:** Vitamins	Chicken, Ostrich, Avocados, Turkey, Wild Salmon, Peanuts, Mahi Mahi, Lobster, Tuna, Lentils, Mushrooms, Grass-Fed Beef, Lamb	•	Involved in energy metabolism	Water-soluble
		•	Helps convert carbohydrates and fat to energy	Heat stable
		•	Required for processing alcohol	

Nutrient	Found In	Key Benefits & Activities	Get The Most
Vitamin B5 (Panthothenic acid) **Family:** Vitamins	Milk, Meats, Yeast, Legumes	• Protein, fat and carbohydrate metabolism • Required for processing alcohol	Water-soluble Destroyed by heat
Vitamin B6 (Pyridoxine) **Family:** Vitamins	Garbanzo beans, wild salmon, chicken, pork, grass-fed beef, oats, trout, sunflower seeds, spinach, ostrich, avocado, tuna	• Protein and carbohydrate metabolism • Helpful in maintaining blood sugar levels within a healthy range • Red blood cell formation & metabolism • Nerve & brain activity • Immune health • Reduces levels of dangerous ***homocysteine****	Water-soluble Heat stable
Vitamin B12 (Cyanocobalamin) **Family:** Vitamins	Primarily in red meat (grass fed beef, lamb, buffalo); also in mussels, salmon, tuna, clams, crab, shrimp, lobster, halibut, scallops, ostrich, yogurt	• Helps maintain healthy nerve cells and red blood cells • Required to make DNA • Breaks down of fatty acids and amino acids to energy • Reduces levels of dangerous **homocysteine***	Water-soluble Heat stable
Folate **Family:** Vitamins		• Required to form red blood cells • Required for DNA synthesis and cell growth • Breaks down of fatty acids and amino acids to energy • Reduces levels of dangerous **homocysteine***	Water-soluble Heat stable, but decreases with prolonged heating Destroyed by use of copper utensils
Biotin (Vitamin B7) **Family:** Vitamins	Royal jelly, brewer's yeast, egg yolk, milk	• Involved in energy metabolism • Helps metabolize and synthesize fats and amino acids • Necessary for cell growth • Helpful in maintaining blood sugar levels within a healthy range	Water-soluble Destroyed by heat

Homocysteine is an amino acid and byproduct of protein metabolism. You'll learn more about this harmful byproduct, its relation to heart disease, stroke and inflammation and why you should get your levels checked in ***20 Lifesaving Tests Your Doctor Hasn't Performed (And Should!)***

Nutrient	Found In	Key	Benefits & Activities	Get The Most
Vitamin C **Family:** Vitamin	Oranges, Kiwi, Peppers, Strawberries, Kale, Lemon, Broccoli, Cantaloupe, Blackberries, Papaya, Brussels sprouts, Cauliflower	•	Antioxidant Required for collagen synthesis Supports immune function	Water-soluble Destroyed by heat
Vitamin D **Family:** Vitamin	Sunlight, Milk, Liver, Fish Oil, Tuna, Eggs, Sardines, Salmon	•	Potent antioxidant Reduces inflammation Benefits metabolism and endocrine system Enhances mood Helps to maintain normal blood levels of calcium and phosphorus promotes bone health Reduces the risk of many ***hormone-dependent cancers****	Lipid-soluble, vitamin D3 (cholecalciferol) is best form Heat soluble Healing Tip: The best source is sunlight. Aim for 15-30 minutes with as much skin exposed as possible, 3-5 days per week. Or 2,000—5,000 IU vitamin D, daily in the absence of sunlight.
Vitamin E **Family:** Vitamin	Nutritive Oils, Wheat Germ, Nuts, Mango, Broccoli, Dandelion Greens, Spinach, Kiwi	•	Antioxidant activity Protects LDL cholesterol from oxidative damage Natural blood-thinner Blocks formation of nitrosamines (carcinogens formed in the stomach from nitrites consumed in the diet) Enhances immune function	Lipid-soluble Heat stable, but at high temperatures it is oxidized or destroyed

Hormone-dependent cancers are the most prevalent cancers — including cancers of the breast, colon and prostate. Research shows a healthy dose of sunlight greatly reduces the risk of these cancers. That's because vitamin D receptors are present in the tissues of the breast, colon and prostate (among others), and when "filled", greatly protect against the production of pro-inflammatory substance and the processes of cancer-initiation and cancer promotion.



Further Reading

Healing Gourmet—Eat to Fight Cancer, Featuring Dr. Simin Liu, MD, Harvard's Brigham & Women's Hospital Dietitians & Chef John Carlino, C.E.C.

Cooking with... Steam!

Unless you're making a sauce or a soup—where the liquids are consumed with the veggies, herbs and spices in the mix—many health-promoting, water-soluble nutrients may be going right down the drain.

To prevent water-soluble nutrients from getting washed away while still unlocking the power of lipid-soluble nutrients that need a little heat try this: lightly steam.

You'll retain those nutrients and even boost the antioxidant ability of your food, according to a recent study published in the *American Journal of Clinical Nutrition.*

In the study, researchers evaluated the antioxidant content of foods after different methods of preparation. Here's what they found:

- **Carrots:** steaming carrots boosts antioxidants by 291%
- **Asparagus:** steaming asparagus boosts antioxidants by 205%
- **Broccoli:** steaming broccoli boost antioxidants by 122-654%
- **Green Cabbage:** steaming green cabbage boosts antioxidants by 448%
- **Red Cabbage:** steaming red cabbage boosts antioxidants by 270%
- **Green Pepper:** steaming green pepper boosts antioxidants by 467%
- **Red Pepper:** steaming red pepper boosts antioxidants by 180%
- **Tomatoes:** steaming tomatoes boosts antioxidants by 112-164%
- **Sweet Potatoes:** steaming sweet potatoes boosts antioxidants by 413%

Diverse Diet, More DNA Protection: Eating more organic fruits and vegetables is vital to your health. And varying your produce picks may offer even more protection. A study published in the *Journal of Nutrition* found that a diet with 8-10 daily serving of fruits and veggies representing 18 plant families was more effective in preventing DNA damage than one with the same number of servings from only eight plant families. Beat taste bud boredom and get more DNA-protecting power by:

1. Choosing organic, locally grown foods in season
2. Stocking your freezer with flash frozen organic fruits and veggies for convenient use
3. Varying your cuisine with creative substitutions (try hearts of palm instead of artichokes, jicama instead of apple, etc).

Supercharge Your Foods...with Spice!

Now that you know the best culinary methods to maximize the power of healing foods, you're ready to season to your heart's content.

And actually, herbs and spices do protect the heart, as well as all of the cells in your body.

That's because they're chart-toppers in the antioxidant arena (which you'll learn about in ***Your Guide to Antioxidant Superfoods***) providing more free-radical fighting power than the foods we use them on. It's true!

While fresh herbs are delicious and provide antioxidants and "clean" flavor to foods, using dried herbs can boost their power tenfold. Let's take a look:

ORAC Score of Oregano

- 13,970 (fresh)
- 200,129 (dried)

ORAC Score of Basil

- 4,805 (fresh)
- 67,553(dried)

To ensure maximum potency, store herbs in opaque containers away from heat and light. And replace your herbs and spices every 6 months to get the most flavor and free-radical fighters out of your shaker.

Indian Spice Mix

Use this antioxidant-rich seasoning to spice up wild fish, free range poultry, grass-fed beef and organic veggies.

Ingredients

2 Tbsp. organic turmeric
2 Tbsp. organic cumin seeds
2 Tbsp. organic coriander seeds
2 Tbsp. organic cardamom seeds
2 Tbsp. organic black peppercorns
1 (3-inch) stick organic cinnamon, broken
1 tsp. organic whole cloves
1 tsp. organic grated nutmeg

Preparation

Put the cumin, coriander, cardamom, peppercorns, cinnamon, and cloves in a dry heavy skillet over medium heat. Toast the spices, stirring occasionally, until fragrant, about 5 minutes. Cool completely. Transfer the mixture to a spice mill, Magic Bullet or coffee grinder. Grind to a powder. Stir in the nutmeg and turmeric. Store in an airtight container in a cool, dry place.

Avoiding The Fiery Foursome

In the previous section, you learned that some nutrients (specifically fat-soluble nutrients like lycopene) are supercharged by cooking. In fact, they deliver their best when sautéed in a stir-fry or simmered in a savory sauce.

You also learned that heat can negate a nutrient's power. But it can do worse than that. *It can pose health hazards as well.*

n this section, you'll learn how the flame can be a health foe too—fueling inflammation, cancer and many other chronic diseases by the wrath of this fiery foursome:

- **Lipid Oxidation Products (LOPs)**
- **Heterocyclic Amines (HCAs)**
- **Acrylamide**
- **Advanced Glycation Endproducts (AGEs)**

The good news is by following a few simple guidelines, you can cook safely and put a damper on these burner bandits… deliciously!

Slow and Low is The Way to Go! To avoid the hazards of the fiery foursome, you have two choices: eat your food raw or keep the temperature nice and low. When it comes to cooking your meats, slow cooking is by far the healthiest method (you'll learn why in the next few pages). A tool that is an essential in any healthy cook's kitchen is a slow cooker (see p. 39). And at *Healing Gourmet* we've created an entire recipe section – Slow Cooker Recipes - dedicated to this old-fashioned cooking method. Visit our website for slow cooker recipes including:

- ✓ *Slow Cooker Beef Bourguignon*
- ✓ *Slow Cooker Chicken and Artichokes*
- ✓ *Slow Cooker Chicken Marsala*
- ✓ *Slow Cooker Cioppino*
- ✓ *Slow Cooker Italian Meatloaf*
- ✓ *Slow Cooker Lamb Chops with Red Wine Glaze*

Lipid Oxidation Products (LOPs)

Don't try this at home!

Pour a tablespoon of an omega-6 rich oil (like soybean or corn oil) in a pan. Turn the heat to medium-high. Within a minute or so, you'll notice that smoke creeps up and a rancid odor fills the kitchen.

You've just created DNA-damaging compounds called lipid oxidation products (LOPs). It's time to toss the oil (*don't breathe the fumes!*) and start over

Lipid oxidation products (LOPs) are created by the degradation of oils—by heat, aging or chemicals.

As these oils break down, they generate free radicals that are harmful to cells, damaging to DNA and have been found to increase the risk of cancer and heart disease.

In our diet, lipid oxidation products (LOPs) primarily come from the heating of unstable oils especially the polyunsaturated fatty acids omega-6.

While omega-3 is also a polyunsaturated fat, research shows these long-chain fats do not generally increase oxidative stress or lipid peroxidation, but rather offer protection from degradation and rancidity (You'll learn more about the amazing benefits of omega-3's in ***Fats That Heal, Fats That Harm***). It's important to note, however, that plant-based nutriment oils rich in omega-3's (like flaxseed oil) are delicate and should be used only for drizzling.

To protect yourself, opt for oils that are more stable and do not readily form lipid oxidation products (LOPs). In general, saturated fats like grass-fed organic butter and raw organic coconut oil are the best choices.

On the next page, you'll learn the "safe zones" for the different types of oils and the point at which they begin to smoke (called the *flash point*).

Cooking with Oils: Stay in the Safe Zone

Prevent thermal oxidation and lipid oxidation products (LOPs) by using oils within their recommended temperature ranges.

The flash point—the point at which each oil begins to decompose– is listed to the right of each oil. Stay below that temperature for maximum protection.

The oils listed in the table below are healthful and recommended for cooking.

All Purpose Cooking Oils: High Heat	Avocado	510°F
	Almond	495°F
	Apricot Kernel	495°F
	Extra Light Olive Oil (not Extra Virgin)	468°F
	Palm Oil	450°F
	Sesame (Refined)	445°F
Baking & Sautéing: Medium- High Heat	Extra Virgin Olive Oil	406°F
	Macadamia	400°F
	Walnut	400°F
	Safflower, High-Oleic	390°F
	Coconut	365°F
Light Sautéing & Sauces: Medium Heat	Butter	350°F
	Sesame (Unrefined)	350°F
	Peanut (Unrefined)	350°F
	Toasted Sesame (Unrefined)	350°F
	Olive (Unrefined)	350°F
	Coconut (Unrefined)	350°F
Nutriment & Flavor: Cold Use Only	Borage (Unrefined)	225°F
	Evening Primrose (Unrefined)	225°F
	Flax Oil (Unrefined)	225°F
	Wheat Germ Oil (Unrefined)	225°F

Pour Choices: While the following oils are often used for cooking, we suggest against using them due to high levels of omega-6, trans fats or high risk of genetic modification (GM). Learn more about how fats affect your health in ***Fast that Heal, Fats that Harm***.

- ✘ Soybean oil
- ✘ Corn oil
- ✘ Canola oil
- ✘ "Flower" Oils—Sunflower, Safflower
- ✘ Margarine
- ✘ Peanut oil

Heterocyclic Amines (HCAs)

If you like your steak well done, I have some unappetizing news: You're being exposed to dangerous carcinogens called **heterocyclic amines (HCAs).**

Heterocyclic amines (HCAs) are formed when muscle meats –beef, pork, poultry and fish—are exposed to high temperatures. More specifically, it is the reaction between amino acids (the building blocks of proteins) and creatine (a chemical found in muscles) reacting at high temperatures that creates these harmful byproducts.

Recent research shows HCAs increase the risk for several types of cancer including stomach cancer, colon cancer, breast cancer and pancreatic cancer.

A National Cancer Institute study assessed the diets and cooking habits of 176 people diagnosed with stomach cancer and 503 people without cancer. The researchers found that those who ate their beef medium-well or well-done had more than three times the risk of stomach cancer than those who ate their beef rare or medium-rare. They also found that people who ate beef four or more times a week had more than twice the risk of stomach cancer than those consuming beef less frequently.

Halt HCAs! Reduce the formation of HCAs by following these simple tips:

- **Eat Less Meat and Reduce Portion Size:** Doing this will naturally reduce your exposure to HCAs.
- **Avoid Frying, Grilling & Broiling Meats:** These high-heat cooking methods are those most likely to cause HCAs to form. In fact, one study showed a threefold increase in the content of HCAs when the cooking temperature was increased from 392° to 482°F (200° to 250°C).
- **Opt for Slow & Low Techniques as Your #1 Method:** Stewing, boiling, poaching and slow-cooking are done at or below 212°F (100°C) . Cooking at this low temperature creates negligible amounts of HCAs.
- **Roast Meats, But Don't Make Gravy:** Because oven roasting and baking are done at lower temperatures, lower levels of HCAs are likely to form. However, the meat drippings do contain substantial amounts of HCAs. Avoid using the drippings as au jus or sauce base.
- **Marinate with Antioxidant-Rich Herbs & Spices:** Research shows that marinating meat in an antioxidant-rich blend can reduce the risk of HCAs forming by more than 80 percent. Try rosemary and turmeric—two high antioxidant, high flavor additions (and see ***Your Guide to Antioxidant Superfoods*** for more ideas on spices to slash HCAs).
- **Get Fruity:** Adding cherries to burger meat (12% of the total burger) reduced the formation of HCAs by 70%. Check out our ***Cherry Burgers*** on our website.

Acrylamide

Can your snack habit or morning breakfast cereal give you Alzheimer's?

Maybe. Carbohydrate-rich foods that are processed at high temperatures are a source of **acrylamide**—a carcinogenic and neurotoxic compound formed when plant-based foods that are rich in carbohydrates and low in protein are cooked at high temperatures (higher than 120 C or 248 F).

So just how serious is acrylamide exposure?

In 2005, the UN Food and Agriculture Organization (FAO) and the World Health Organization (WHO) warned that acrylamide in foods may be of public health concern and further noted that acrylamide "may be responsible for up to one third of all cancers cause by diet".

- **Acrylamide & Your Body's Antioxidant Artillery:** Acrylamide reduces the body's production of phase 2 detoxifying enzymes (including glutathione) which detoxifies toxins and disarms carcinogens.

- **Acrylamide Doubles Ovarian Cancer Risk:** A study published in the journal *Cancer Epidemiology* found that women who ate one portion of chips per day (40 mcg acrylamide) had twice the risk of developing ovarian and endometrial cancer as women who ate less.

- **Acrylamide & Alzheimer's:** Studies have linked high levels of acrylamide to neurological damage in humans. According to Richard LoPachin, Jr., Ph.D., a neurotoxicologist with Albert Einstein College of Medicine in New York, acrylamide is structurally similar to *acrolein*, a chemical found in increased levels in brains of patients with Alzheimer's and other neurodegenerative diseases.

- **Acrylamide Increases Kidney Cancer Risk 59%:** The Netherlands Cohort Study which included more than 12,000 participants, evaluated acrylamide in the diet based on food questionnaires. Researchers found that after 13.3 years, those with the highest levels of acrylamide in the diet experienced a 59 percent higher risk of renal cell carcinoma than those with the lowest. What's more, every 10 mcg increase appeared to increase the risk of kidney cancer by 10%.

On The Web: Want to know just how much acrylamide is in foods? Visit us online for a complete listing of the amounts of acrylamide in hundreds of foods. Just type "acrylamide" in the search box on our website.

If you're following a ***Low Glycemic Lifestyle*** (refer to your new eBook), you're already doing a great deal to reduce your exposure to acrylamide. Here are a few more tips and reminders:

1. **Forgo the Fries:** Of course, these are not part of any healthy diet for a number of reasons, but are also the food highest in acrylamide.

2. **Pass on Pretzels:** Again, nothing here but refined flour and salt—as well as acrylamide.

3. **Skip the Chips**: Potato chips and other snacks/crisps are high in acrylamide.

4. **Refrain from Grains:** Pastries and sweet biscuits, breads, rolls and toast, as well as so-called "healthy" snack bars and other processed grain-based products contain acrylamide. If you choose to enjoy organic, sprouting grain toast, only *lightly* toast.

5. **Go Light on the Java:** Acrylamide is a byproduct of roasting the beans.

6. **Beware of the Tap:** Acrylamide is added to public water supplies. It is added as a coagulant to clarify drinking water. The amount in drinking water is small (300 times lower than the percentage in fast food French fries). Still, it's best to drink bottled spring water (in safe BPA-free bottles which you will learn about on p. 29) or opt for purified tap water.

7. **Supply an Acrylamide Antidote:** Recent research published in the *Journal of Agriculture and Food Chemistry* found that several nutrients have been found to guard against the damaging effects of acrylamide— including those in tea (polyphenols), red wine (resveratrol) and garlic (diallyl trisulfide).

Smart Snacking? Dumb Idea! In attempts to allay consumers' fears of the dangers of sugar-laden, high-heat processed "junk food", manufacturers are offering mini-packs. Their notion is that they're only 100 calories. They even have a "snack fairy" telling you it's OK. At *Healing Gourmet* we believe *the dose doesn't make the poison*. And nutrient-void, chemically processed junk is poison indeed. Visit our website for hundreds of healthy snack recipes with only 100 calories….but packed with health benefits.

Advanced Glycation End Products (AGEs)

What's in a name? In this case…everything.

Advanced glycation end products (AGEs) will in fact speed up the aging process. But that's not all they'll do.

AGEs have been directly linked to the cornerstones of chronic disease— *inflammation* and *insulin resistance*—and are also implicated in the development and progression of diabetes, vascular and kidney disease, and Alzheimer's disease.

AGEs are the end-products of *glycation reactions*—the scientific term for a sugar molecule binding to a protein or a lipid.

AGEs can come into the body through the foods we eat (called exogenous AGEs) or can be produced by our metabolism of foods (called endogenous AGEs). *Either way, we have the power to avoid them.*

Here's why.

Exogenous AGEs come pre-packaged. They are in the brown sauce of a microwaved meat meal, the caramel hue of a cola and the crisp shell of a crème brulee. They are preformed and all have something in common—they're brown.

This "browning" reaction (properly called the Maillard reaction in chemistry) is what causes carmelization. And carmelization is the visible effect of a sugar molecule attaching itself to a protein and creating an AGE.

Endogenous AGEs, on the other hand, are manufactured by the body's metabolic processes. But to create these aging compounds, the body requires one specific ingredient. ***Sugar***.

And when it comes to the type of sugar, the rule is this: A *sugar molecule is a sugar molecule*. So whether it be from a delicious, nutrient-packed grape or an artificially-flavored jelly bean, eating sugar flips the switch to the "on" position of the body's AGE process (you'll learn more about the other reasons to avoid sugar in ***Your Guide to Living a Low Glycemic Lifestyle***).

Once that switch is flipped—either by the body's processing of sugar (and therefore creating its own glycation reactions) or though the diet by eating foods that have undergone the "browning reaction"—the body initiates what is regarded as the cornerstone of chronic disease...

Inflammation.

But the destructive reaction doesn't stop there. Not only do AGEs set the wheel in motion, they also push it along.

Many cells in the body (like endothelial cells, smooth muscle cells and immune cells) from tissue such as lung, liver, kidney or peripheral tissues bear the Receptor for Advanced Glycation End products (RAGE).

When these receptors bind AGEs, they contribute to age and diabetes-related chronic inflammatory diseases such as atherosclerosis, asthma, arthritis, myocardial infarction, nephropathy, retinopathy or neuropathy.

Let's look at the research of how AGEs impact health:

1. **AGEs Increase Inflammation:** A recent study published in *The Journal of Clinical Investigation* found that higher consumption of foods rich in AGEs equated to higher the blood levels of AGEs...and higher levels of CRP and other markers of inflammation.

2. **AGE Damage is Proportional to Sugar Intake:** Researchers have found that most AGE-related damage in the body is directly proportional to sugar intake. Therefore, reduce sugar, reduce AGEs.

3. **AGEs Promote Alzheimer's:** The **amyloid proteins** that are implicated in Alzheimer's disease are by-products of the reactions which progress to AGEs.

4. **AGEs Are Slow to Go:** Glycated substances are eliminated from the body very slowly. In fact, their clearance factor is only about 30%. This means that the half-life of an AGE in the body is about double the average cell life. Because of this, long-lived cells (like nerves and brain cells), long-lasting proteins (like eye crystalline and collagen) as well as DNA accumulate this damage over time. Metabolically active cells—including the glomeruli in the kidneys, the retinal cells in the eye and the beta cells of the pancreas (which produce insulin) are also at high risk of damage by AGEs.

5. **AGEs Promote Wrinkles:** Dr. Nicholas Perricone, M.D. and author of The Perricone Prescription, believes that about 50% of skin aging is due to the glycation process. Besides damaging collagen, sugar also affects what type of collagen you have. The most abundant collagens in the skin are type I, II and III. And of these, type III is the most stable and long lasting. But glycation transforms type III collagen into the more-fragile type I, leaving you with skin that's less supple and more wrinkle-prone.

6. **AGEs Cause Cardiovascular Damage:** There are several ways AGEs damage the cardiovascular system:

- The endothelial cells of the blood vessels are directly damaged by glycation reactions.
- Atherosclerotic plaque tends to accumulate are areas of high blood flow (i.e– entrance to the coronary arteries) due to increased presentation of sugar molecules and AGEs at these points.
- Damage by glycation causes stiffening of the collagen in the blood vessel walls, which narrows the vessels and leads to high blood pressure.
- Glycation weakens collagen in the blood vessels walls (and everywhere else!), which may lead to micro– or macro aneurisms; if in the brain, the result may be a stroke.

Don't Give Glycation a Chance! Reducing the sugar in your diet is the #1 way to fight glycation. And unlike other so-called "healthy" cooking sites (ahem... *Cooking Light and Prevention*) here at *Healing Gourmet* all of our recipes are low glycemic. Plus, you can track every gram of sugar (plus 20 more nutrients) in each recipe, menu, and packaged food we showcase.

Here are the simple steps you can take to reduce glycation:

1. **Stick to a Low Glycemic Diet:** At *Healing Gourmet* it's easy – all of our recipes and menus are low glycemic to help keep your blood sugar levels stable, to fight AGEing and disease. See Your ***Guide to Living a Low-Glycemic Lifestyle*** for more information.

2. **Sweeten Safely:** Use organic erythritol and stevia to satisfy your sweet tooth safely without the risk of producing AGEs. These sweeteners have a glycemic index of zero and do not undergo the "browning" reaction we discussed earlier.

3. **If it's Brown, Turn it Down:** Avoid highly-caramelized foods—especially prepacked ready meals—as they have been found to contain high levels of AGEs.

4. **Indulge Wisely:** When the craving strikes, satisfy with a dessert that contains no more than 10 grams of sugar. You can find lots of delicious sweet recipes on our website. Also, try our get our latest eBook ***Guilt-Free Desserts*** for a complete guide to low-glycemic baking. For healthy desserts fast, try ***Wellness Bakeries*** low-glycemic, low-sugar mixes you bake right at home.

5. **Get Your B's:** Vitamin B1 (thiamine) and vitamin B6 have recently been found to act as potent inhibitors of advanced glycation end products (AGEs). Aim for 1 mg per day of each.

Raw Foods: The Fresh Solution

In this last section, you learned about the hazards of heat.

Along with following the precautions listed in this book, Mother Nature has provided us with a simple solution: *enjoy more raw foods*.

While eating a completely raw diet is impractical for most people, there's no doubt that enjoying more fresh, unprocessed foods will benefit your health.

Raw foods offer many benefits including:

- ✓ Preserve the water-soluble, heat-sensitive nutrients you learned about in *Unlocking the Healing Power of Nutrients*
- ✓ Offer powerful enzymes that are essential for healthy digestion which are destroyed in cooked or processed foods
- ✓ Increase hydration level in the body

It's also important to note here that many of the popular packaged raw foods are full of… *raw sugar*. These are not the real raw foods we advocate. Learn more about the dangers of sugar in ***Your Guide to Living a Low Glycemic Lifestyle***.

What's Your "Fresh Factor"? We believe at least 60% of your diet should be enjoyed raw for optimum health. And that's not just fruits and veggies—it's animal foods too. Raw egg yolks, raw milk products, sushi-grade wild salmon and even certain meats may be consumed raw (provided there are no impending health issues that would contraindicate this). To get more raw foods in your diet, visit us online and browse our "*Raw Recipes*" collection for a fresh solution to the hazards of heat including recipes like:

- *Avocado, Coconut & Sliced Almond Salad with Agave Nectar*
- *Beet, Fennel & Endive Salad with Macadamia Dressing*
- *Raw Cashew Coconut Cookies*
- *Raw Vanilla Almond Milk*
- *Tahini Zucchini Hummus*

Are Uninvited Dinner Guests Making You Sick?

Now we've learned that cooking—the right foods, the right way—can boost nutrient absorption and protect us against harmful culinary byproducts including AGEs, LOPs, HCAs and acrylamide.

But there's one more place we need to look before we cook: The pan!

Pots and pans, as well as storage containers and wraps can leach harmful substances into our foods and beverages too. So choosing the right cookware is the final step in graduating from *Healing Gourmet University* and becoming an age defying, disease-fighting chef!

In this section you'll learn about a toxic quintet of chemicals that ooze, smoke and leach their way into your foods including:

- **Perflorinated chemicals (including PFOA)**
- **Bisphenol-a (BPA)**
- **Vinyl PVC #3**
- **Polystyrene #6**

You'll also discover the "inert" cookware and storage containers that not only protect you and your family from these metabolic-wreckers and cancer-promoters, but actually produce better tasting, more nutrient-dense food too.

Do You Suffer from Endocrine Disruption? In the next few pages you'll learn about the harmful chemicals that make their way into your body through your cookware. But the contaminants don't just leach into your food. Many of them are in the food itself. In ***Organics: Beyond Green*** you'll learn about the hundreds of chemicals that are found in conventionally-raised produce, animal foods and farmed fish. You'll also learn how to evaluate your levels of these contaminants and detoxify your body in ***20 Tests Your Doctor Hasn't Performed (And Should!***)

Say "No" to Non-Stick

Think your non-stick pan is saving you time and making for an easy cleanup?

Possibly, but there's something else it's doing that you may not know about: leaching toxic substances like trifluoroacetate (TFA) and perfluorooctanic acid (PFOA) into your foods and the air you breathe.

These chemicals, collectively called perflourinated compounds, act like estrogen and have been linked with cancer, endocrine issues, "polymer fume fever" and other health problems in humans.

In animal studies, at least one perflourinated compound was found to be fatal to rats, and fumes from Teflon coatings are fatal to birds.

In 2006, the EPA turned up the heat on eight companies producing or using PFOA calling for a 95% reduction of PFOA in products and plant emissions by 2010 and total elimination of PFOA by 2015.

And that's a really good thing because PFOA was detected in close to 98% of the population and in 100% of newborn babies.

Yet still, even with the evidence that these toxic chemicals are invading our bodies, the makers of non-stick coatings contend that "proper use" of non-stick cookware (i.e. cooking at lower temperatures, not heating the pan without food or liquid, using nonmetal tools, etc.) poses no threat of PFOA contamination.

But a recent study conducted by *Cooks Illustrated* again proved them wrong. Comparing two varieties of non-stick pans (a cheap pan and a good-quality All-Clad pan), the study prepared three recipes in each pan – skillet roasted potatoes, chicken stir fry and a frittata.

Using an infrared thermometer gun to measure temperatures, the testers found that it was very easy for both pans to get hotter than 500 degrees. In fact, on high heat, it took three minutes for the cheap pan, and five minutes for the All-Clad, to pass 500 degrees. The testers also found that a gas stove was more likely to overheat the pan than an electric stove.

The contents of the pan also made a difference. Testers found no excess heat in pans cooking frittatas or skillet potatoes because the pan's surface tended to be covered with food the whole time. However, during cooking of the chicken stir fry, both pans got higher than 600 degrees in the bare spots, although only for a second or so as ingredients were moved around the pan.

In addition to the most popular non-stick coating – Teflon – also watch out for Silverstone, Fluron, Supra, Excalibur, Greblon, Xylon, Duracote, Resistal, Autograph and T-Fal.

Healing Gourmet's ZERO Tolerance Poison Policy: We believe there is no safe level of exposure to these harmful chemicals and encourage you to toss all of your non-stick cookware. PFOAs area also found in the liners of microwave popcorn bags (Healing Gourmet does not endorse microwaving –see p. 28) and "roasting" bags.

Aluminum Pots & Pans: Cooking up Alzheimer's

Aluminum is a widely recognized nerve toxin and has been found in increased concentrations in all Alzheimer's disease affected tissue.

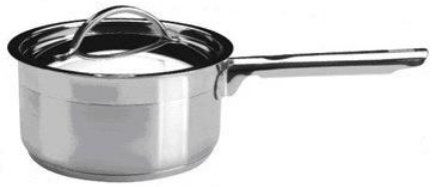
As a "reactive" metal, aluminum reacts with acids or salts in ingredients and is released into your foods. Leafy vegetables and acidic foods, such as tomatoes and citrus products, absorb the most aluminum.

While the World Health Organization estimates that adults can consume more than 50 milligrams of aluminum daily without harm, there's no way to know how much you're getting. We recommend you avoid it altogether, so toss out your aluminum pans and avoid aluminum cans and aluminum foil.

Here are a few other places where aluminum lurks:

- **Antiperspirants and Antacids:** Scientists have found a direct correlation between these products and Alzheimer's. The more antiperspirant that was used, the more likely the person would develop Alzheimer's disease. The same held true for aluminum antacids. The risk in high users was as high as 300%
- **Baking powders:** Be sure to opt for non-aluminum baking powder (like Rumford)
- **Processed Foods:** Refined foods, refined flours, baked goods, processed cheeses, and common table salt contain aluminum. Yet another good reason to avoid these.

Stainless Steel & Copper: Meddling with Metals



Stainless steel accounts for one-third of U.S. cookware sales. And contrary to popular belief, stainless steel may not be an inert metal either.

That's because all stainless steel has alloys containing nickel, chromium, molybdenum, carbon, and various other metals.

Cooking with stainless steel—clad or not—increases the likelihood that metals will leach into your food. This risk increases if the cookware becomes pitted due to extended use or storage of acidic foods.

So what are the risks associated with getting metal in your meals? Here are a couple you should be aware of:

- **Nickel & Molybdenum:** Many people have nickel and molybdenum allergies, yet are unaware of this. In a study conducted on heart patients receiving stainless steel stents, restenosis occurred in 50% of the patients. Restenosis is recurrence of stenosis (or narrowing of the passageway) after corrective surgery on a heart valve. Allergies to the molybdenum and nickel were suspected causal factors.
- **Copper:** Copper should never come into direct contact with your food as there is a risk of copper poising. If enough copper leaching occurs, you could potentially experience nausea, vomiting, and diarrhea.

Food for Thought: If you choose to use stainless steel or copper pots, keep the following facts in mind:

- **Detecting Damage:** Is your cooking surface damaged? It may be hard to tell. Because of this it's difficult to determine exactly how much metal you're getting with your meal.
- **Soups & Sauces:** Tomato sauces, which are acidic, as well as some soups and other "wet" foods would absorb more of the alloy than when using metal pan for sautéing, stir frying or other quick cooking methods.

Your safest bet? Opt for the "inert" cookware we discuss in the next section.

The Microwave: Zapping Away Precious Nutrients

Is using a microwave harmful to your health? Can it increase the risk for cancer or other diseases? Many believe so.

One thing is for certain—using a microwave devitalizes your food. And in the long term, this devitalizes you.

Let's look at the facts:

- **Microwaving Destroys Vital, Cancer-Fighting Nutrients:** A study published in the journal *Science of Food and Agriculture* found that microwaved broccoli lost up to 97% of its beneficial antioxidants. But that's not all. Microwaving is the biggest culprit in destroying cancer-fighting compounds in your vegetables including flavonoids, sinapics and caffeoyl-quinic derivatives.

- **Plastic + Microwave=DANGER:** Typically, microwaving requires covering your food. And that covering is usually plastic. On page 29 you'll learn about the harmful compounds in plastic that leach into your food when the plastic molecules are heated to an "excited" state.

- **Microwaves Reduce Important Enzymes:** Microwaving (along with pasteurizing, irradiating and canning) destroys digestive enzymes.

- **Microwaves Produce Radiolytic Byproducts:** Microwaved food contains both molecules and energies (called radiolytic byproducts) not present in food cooked in the way humans have been cooking food for tens of thousands of generations.

- **Microwaves Destroy Important Vitamin B12:** Microwaving inactivates vitamin B-12. After just six minutes of microwaving, nearly half of the vitamin B-12 was destroyed. As you learned earlier (see p. 10), vitamin B12 is essential for many critical body functions including the formation of red blood cells, healthy nerve function, DNA manufacture and reduction of *homocysteine*—an amino acid which increases the risk for heart disease and stroke.

Healthier Options: There are so many easy, energy-efficient, time-saving ways to cook that ensure the potency of your food and offer delicious, contaminant-free results too. Use these for optimum health (see p. 24-42)

The Perils of Plastics

Drinking clean, clear spring water is one of the best things you can do for your health. But there may be danger in the container.

A recent study published in *Toxicology Letters* found that polycarbonate water bottles, exposed to regular conditions, contain harmful levels of **bisphenol A (BPA)**.

Bisphenol A is an endocrine disruptor that acts like estrogen in the body, triggering hormonal changes and encouraging the growth of breast and prostate cancers.

While you can keep your bottles cool after you've purchased them, there's no knowing their past history of heat exposure or storage time—which also affects the amount of BPA that leaches into the water.

But that's not the only place you'll find this harmful substance lurking. It's also found in the lining of most canned goods (it helps prevent acidic veggies and fruits from eroding the container).

In 2004, the Centers for Disease Control and Prevention (CDC) found that 95% of Americans have the chemical in their urine.

Banish BPA in Your Body! You can limit or **eliminate your exposure to BPA** follow these simple guidelines:

- **Avoid bottles with recycling number 7**, as most contain BPA. Instead, opt for recycling numbers 2 and 4 or cloudy-colored plastics which are usually free of BPA. Water packaged in containers made from corn are BPA-free and also biodegradable.
- Use a high quality **reverse osmosis purification system** (which also removes other contaminants), and store your water in glass bottles in the refrigerator.
- Use glass baby bottles or plastic bag inserts made of **polyethylene**, or choose polypropylene bottles labeled as #5 which are milky, not clear.
- Choose **Eden Foods** canned goods—they're packed in lead free tin covered steel cans coated with a baked on oleoresinous c-enamel lining that does not contain bisphenol-A (BPA).
- Choose soups, broth and milks packaged in cardboard "bricks" by **Tetra-Pak** and **SIG Combibloc** which are made of safe layers of polyethylene (#2) and are also recyclable.

But BPA isn't the only dangerous chemical in plastics we need to avoid. Plastic containers made of **vinyl PVC #3** also pose risks.

Found in water bottles, food storage containers and wraps (like Saran and Reynolds) vinyl PVC #3 releases toxic substances including adipates and phthalates into food and water when heated.

In addition to harming your health, these petroleum-based products are difficult to recycle and account for nearly 20 pounds of solid waste per American annually.

Finally, there's **polystyrene #6** found in Styrofoam products which leaches styrene—a carcinogen—into your foods and drinks. With one sip of a hot beverage out of a Styrofoam cup you can taste it. And if you add a squeeze of lemon, you'll notice the cup melts before your eyes.

The Body…Unburdened. Keep your body free of phthlates, adipates and styrene with these simple tips:

- **Choose a clear solution—glass.** Plenty of inexpensive, contaminant free glass storage containers (like Pyrex and Anchor) are available. While they do have plastic lids, the lid doesn't come into contact with the food for storage purposes.
- **Don't microwave.** If you do, never heat food in takeout containers or use storage wraps in the microwave.
- **Avoid Styrofoam containers.**

Are You Minimizing Your Minerals? If you're drinking filtered tap water, you're doing a lot to reduce your exposure to contaminants. But there's something you should know. Some filters remove almost all of the important minerals found in "hard" water including magnesium. Learn more about why you need this important mineral and how a deficiency is a silent cause of disease in ***20 Lifesaving Tests Your Doctor Hasn't Performed (And Should!***). And be sure you're taking a high quality, whole foods multivitamin/mineral supplement daily.

Silicone: A Slippery Subject?

With promises to make muffins pop right out of their flexible, colorful cups (with easy clean-up too) the latest trend in bakeware—silicone— has become popular in recent years.

Silicone is a synthetic rubber which contains bonded silicon (a natural element which is very abundant in sand and rock) and oxygen. According to manufacturers, silicone does not react with food or beverages, or produce any hazardous fumes.

In the United States Silicone cookware is considered safe. According to the FDA:

"Silicon Cookware is inert, FDA approved and safe up to 428 degrees F. If heated above its safe range, silicon melts but doesn't outgas toxic vapors. This is apparently because silicon is a manmade blend of sand and oxygen (versus a synthetic plastic). Brightly colored rubbery Silicon cookware includes baking pans, baking sheets, muffin tins, spatulas, ice cube trays, molds, rolling pins and more. It is the only non-reactive, non-stick material".

But what about those vibrant colors? They're not plant-based, so what about the risk of these artificial/synthetic dyes leaching into our foods?

As for the fumes being hazardous or not, numerous reports have been made of strong smells and "off" flavors resulting from the cookware. Here are a couple scary silicone stories:

- *"These pans made me short of breath and smelled like plastic. The temperature range said they were good up to 500 degrees but I was using them at 400 degrees."*
- *"...in less than 10 minutes at 400 degrees there was some smoke and burning rubber smell emitting from the oven and my smoke alarm went off. The color of the pan (bright red) looked darker too…I ate some and they seem to absorb some rubber smell/taste."*

Food For Thought: Just because it's considered "safe" by the FDA, doesn't mean it is (think trans fats, high fructose corn syrup, aspartame, etc). Our advice: When in doubt, keep it out!

Leaded Crystal: Clearly a Bad Choice

If you've been bequeathed a family heirloom of a beautiful set of crystal, you may want to save it for looking...and not for drinking.

The word "crystal" means, in most of the western world, the presence of lead.

But it's not just old crystal ware that could put you at risk. There's plenty "fine" crystal products on the market today that are leaded as well.

According to European Union rules, glass goods containing less than 4% lead are defined as "glass". Goods containing more than 10% lead are defined as "crystal", and goods containing more than 30% lead are defined as "highly leaded crystal".

But in the USA it is the opposite glass is defined as "crystal" if it contains only 1% lead. Leaded crystal means crystal containing more than 24% lead oxide.

Beverages — alcoholic or non — must not be stored in crystal decanters that contain any lead because this mineral can leach out into the drink. Acidic liquids, such as fruit juice or vinegar, increase the leaching effect.

Regular use of leaded crystal glassware is not recommended, particularly for children and pregnant women due to lead's harmful effects on fetal development.

While the risk of lead poisoning from enjoying a glass of wine from a leaded crystal glass may be small, with so many beautiful, inexpensive lead-free options (try the **Reidel "O"** non-leaded crystal line), why chance it?

At high concentrations, lead poisoning can cause seizures, coma, and death. Symptoms of low to moderate levels of lead poisoning include decreased attention span, hearing loss, insomnia, behavioral and emotional problems, slowed growth, reading and learning disabilities, headache and stomach pain.

Get the Lead Out! While the safe limits for lead have been set at 60 mcg/dL of blood by the U.S. government, research shows that any level over 2 mcg/dL significantly increases the risk for heart attack, stroke and death. More worrisome still is that 40% of Americans have those levels of lead! Learn more about getting the lead out in ***20 Lifesaving Tests Your Doctor Hasn't Performed (And Should!***)

Safe & Superior Cookware for Contaminant-Free Cooking

Now that you've cleaned your cabinets and eliminated many of the health hazards that were lurking in your tools and leaching into your food, it's time to restock!

In this next section, we'll help you choose the quality wares that will produce delicious results without the worry of inviting any unwelcome guests along for the meal.

Here's a quick list of the cookware you'll learn about to produce safe, sumptuous results:

- ✓ Nano-Glaze Ceramic
- ✓ Porcelain Enamel on Cast Iron
- ✓ Ceramic-Coated Non-Stick
- ✓ Ceramic & Glass
- ✓ Convection Ovens
- ✓ Slow Cookers
- ✓ Cast Iron
- ✓ Terra Cotta
- ✓ Bamboo Utensils

"The doctor of the future will give no medicine but will interest his patients in the care of the human frame, in diet and the cause and prevention of disease."

-Thomas Edison

Nano-Glaze: Cookware of the Future

The latest trend in cookware promises benefits to your health, your energy bill and the earth too.

While it can be pricey, this beautiful, versatile, inert cookware comes with a 50 year manufacturer's warrantee.

Advantages of Nano-Glaze Cookware

- ✓ Non-reactive
- ✓ Nonstick
- ✓ Practical– it goes from stove to table to refrigerator—saving you time and reducing clutter in your cabinets
- ✓ Versatile—can be used for multiple cooking applications (stove top, oven, broiler, refrigerator, freezer, and table top)
- ✓ Durable—it has an scratch-resistant cooking surface—even when cooking with metal utensils and cleaning with industrial steel wool, won't chip or flake off in food
- ✓ Easy to clean
- ✓ Withstands very high temperatures (2700° F). Compare that to steel which melts at 2200° F
- ✓ Derived from inorganic natural materials from the earth's crust. The manufacturing of nano-glaze cookware is "green" using clean burning, safe natural gas

Brands to Try

- Xtrema (www.ceramcor.com): 12 piece set $399.95 + 50 yr. warrantee
- Mercola Cookware (www.mercola.com): Full set $297.00 + 50 yr. warrantee

Porcelain Enamel Cookware: Tried & True

Porcelain enamel cookware is a long-standing favorite of professional chefs across the globe.

This non-reactive cookware offers a hard, smooth, surface of enamel—simply a durable, colored glass, which is stick resistant and non-porous — with either cast iron or another metal core to provide strength and cooking performance.

It's important to note that low quality porcelain enamel cookware can chip, and if so, must be discarded or enamel chips will find their way into your food. We recommend using the high-quality brands listed below to prevent this.

Advantages

- ✓ Non-reactive
- ✓ Cooks consistently
- ✓ Easy to clean
- ✓ Nearly nonstick
- ✓ Practical– it goes from stove to table to refrigerator—saving you time and reducing clutter in your cabinets
- ✓ Insulates well—keeping food hot longer
- ✓ Uses less energy to cook meals

Disadvantages

- ✘ Low quality varieties can chip

Brands to Try

- Le Crueset
- Chantal
- Staub
- Cuisinart Chef's Classic

Ceramic-Coated Cookware: A Healthy Hybrid

This healthy hybrid cookware uses aluminum as the core (the aluminum is sealed off by the coating) topped with a safe, ceramic-based nonstick interior.

This cookware is ideal for people who have difficulty working with the heavier, porcelain enamel cookware.

It comes with a lifetime warrantee, and is safe for all cooking surfaces.

Advantages

- ✓ Non-reactive
- ✓ Nonstick
- ✓ Hard-anodized for high heat conduction (best used at medium and low heats)
- ✓ Suitable for all cooking surfaces including magnetic induction
- ✓ Easy to clean
- ✓ Energy efficient
- ✓ Inexpensive

Brands to Try

- Cuisinart's Green Gourmet (from $24.95 to $69.95)comes with a lifetime warrantee

Ceramic & Glass Cookware: A Pocket-Friendly Oven Option

These common and inexpensive varieties of cookware are indispensable tools for any cook.

They're practical and time-saving—many going from stove or oven to table then to refrigerator all in the same dish.

Because ceramic cookware emits a far-infrared heat (which is the most beneficial heat for cooking) it enables a full spectrum of subtle flavors to emerge.

Advantages

- ✓ Completely inert
- ✓ Nonstick
- ✓ Energy efficient
- ✓ Practical– it goes from stove to table to refrigerator—saving you time and reducing clutter in your cabinets
- ✓ Insulates well

Disadvantages

- ✘ Not suitable for range-top or broiler—oven use only
- ✘ Buy ceramic from a reputable company. There is a risk of lead or other contamination if purchased outside US.

Brands to Try

- CorningWare
- Emile Henry
- Staub

NOTE: *Healing Gourmet* does not recommend Pyrex as there have been issues with safety of this brand. Reports have been made that Pyrex can shatter or "explode" when transferred from a hot oven to a cooler surface (like a countertop).

Cooking with Convection

Juicier meats, faster cooking and healthier results... in less time? Sounds like a cook's dream.

But with a convection oven, its reality. Here's why. Convection ovens create a uniform temperature with internal fans that circulate hot air. Because the air transfers heat more efficiently, food cooks uniformly and in less time.

And here's the *really* great part. Most recipes are done in 25% less time, and are done at a lower temperature—which is optimal for preventing the *fiery foursome* (*see p. 14-23*).

When using convection, you'll need to reduce temperature by about 25 degrees and cut cooking time by 25%.

Advantages

- ✓ Quicker cooking time
- ✓ Cooks consistently
- ✓ Lower temperature = less risk of HCAs, LOPs, AGEs & acrylamide
- ✓ More flavorful, juicy results—seals in moisture, doesn't dry out foods
- ✓ Fat drips away—less calories and less risk of eating oxidized fats
- ✓ Helps maintain nutrients in your food (due to less heat and less time)
- ✓ Ultra energy efficient—uses 80% less energy than a standard oven
- ✓ Versatile—Bake, roast, grill, steam, broil, and reheat

Brands to Try

It's important to note that there are a wide variety of convection ovens which range greatly in price. Here are two inexpensive ones that also include infrared heath that we love.

- Thane Flavorwave Oven Turbo: ~$120.00 (www.thane.com)
- Delonghi Convection Oven with Rotisserie Black: $99.95

Slow Cookers: Seal in Moisture, Save You Time

Slow-cookers certainly enjoy praise for their timesaving benefits and the juicy, flavorful results they produce.

But they don't get all the credit they deserve.

As you learned earlier in *The Hazards of High Heat*, cooking meats and fats at lower temperatures, while maintaining moisture levels, can help to reduce the risk of dangerous culinary byproducts—including lipid oxidation products (LOPs), heterocyclic amines (HCAs) and advanced glycation end products (AGEs). While many types of cookware can be used for slow cooking, the slow-cooker is designed just for this purpose.

Not only is this old-fashioned tool beneficial in the kitchen, it's also easy on your wallet.

Advantages

- ✓ Inert ceramic insert
- ✓ Nonstick
- ✓ Lower temperature = less risk of HCAs, LOPs, AGEs & acrylamide
- ✓ More flavorful, juicy results—seals in moisture, doesn't dry out foods
- ✓ Energy efficient—uses same energy as a 75 watt light bulb!
- ✓ Time-saving
- ✓ Reduces prep work—"set it and forget it" style cooking

Disadvantages

- ✘ Requires some advanced planning

Brands to Try

- All Clad
- Rival

Cast Iron: A Durable Value

Cast iron cookware is unquestionably the best value in the kitchen.

With proper seasoning and good care, cast iron cookware is great for most kinds of stovetop and outdoor cooking as well as baking.

A word of caution—cast iron is not suitable for "wet" foods (like sauces and soups) or acidic foods. Reserve your cast iron pan for meats, sautéing and baked goods.

Once you have seasoned your cast iron pan, don't use soap to clean it. Simply rinse and gently pat dry.

Advantages

- ✓ Nonstick
- ✓ Versatile –safe for most types of cooking and all heating sources

Disadvantages

- ✘ Heavy
- ✘ Not suitable for soups, sauces or acidic foods as they will absorb iron

Brands to Try

- Lodge

Seasoning Your Cast Iron Pan

1. Clean your pan with soap and water, and rinse well.
2. Apply oil to the inside of the pan with a paper towel. Try coconut oil or olive oil.
3. Put a couple sheets of aluminum foil on the rack under your pan to catch any drips.
4. Bake the pan upside down in your oven at 350 degrees for one to two hours.

Now, you're ready to cook with your safe, non-stick cast iron pan! As you use the pan, you may want to repeat the process.

Terra Cotta Earthenware: The Original "Green" Cookware

Terra cotta was man's (or woman's) first cooking vessel. While our cookware has evolved since the Stone Age, the methods used to make terra cotta haven't changed much.

Using a simple mixture of clay and water, terra cotta is a healthy form of cookware that cooks dishes evenly without incorporating hazardous by-products or toxins.

The clay construction means less heat is required during cooking or baking (due to the terra cotta's premium heat conduction) and the glass-like finish produced by the glaze makes it easy to clean.

Advantages

- ✓ Completely inert
- ✓ Nonstick
- ✓ Energy efficient
- ✓ Versatile– safe for all types of cooking and all heating sources
- ✓ Practical– it goes from stove to table to refrigerator—saving you time and reducing clutter in your cabinets
- ✓ Easy to clean
- ✓ Insulates well

Disadvantages

- ✘ Antique earthenware or imported terra cotta may contain lead or other contaminants, so it's important to purchase from a reputable company

Brands to Try

- Piral Italian Terra Cotta Cookware

Bamboo Utensils: Gentle on Your Cookware & the Earth Too!

Many of the gentle "nonstick" cooking tools available are made of nylon or silicone (which we discussed earlier).

To avoid the being exposed to petroleum-based chemicals (and to help the environment too) choose bamboo.

Not only is bamboo ideal for working with all of the cookware recommended in this section, it is also sustainable...and inexpensive.

Advantages

- ✓ Nontoxic
- ✓ Nonstick
- ✓ Won't scratch cooking surfaces
- ✓ Heat and stain resistant
- ✓ Sustainable, earth-friendly

Disadvantages

- ✗ While typically sealed with a natural oil, bamboo utensils, with wear and tear, can trap bacteria. To keep your bamboo tools germ-free, wash with hot soapy water after every use or disinfect with a 10% hydrogen peroxide solution.

Brands to Try

- Bambu

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