Nutrient-Rich Cooking is a new way of cooking, and one of the healthiest and most nutritious ways of cooking because it focuses not only on making food taste great but on preserving as many nutrients as possible. Nutrients are essential to keeping us healthy. Nutrients provide the energy for our cells to function optimally. If we want to eat to nourish our bodies rather than to merely fill our stomachs, it becomes increasingly important that we learn how to cook our food to maximize nutrient retention. This is what Nutrient-Rich Cooking is all about.

Our health is related not only to what food you eat but how that food is cooked. For example, while eating fish has been found to help decrease the risk of heart disease, eating fish that is fried will increase that risk. Studies also show that breast and prostate cancer increase in those who eat charred meat, eating too much overcooked food causes an increase in inflammation, and cooking on high heat can potentially result in the production of carcinogenic compounds.

My goal to create a better way of cooking and an alternative to traditional ways of cooking was achieved in Nutrient-Rich Cooking. By matching each food to the proper cooking method and minimizing cooking times and temperatures, Nutrient-Rich Cooking helps you enjoy a wealth of nutrients as well as great flavor. Studies have found that foods cooked at high temperature and cooked until they are soft and have lost their structure can lose from 50-80% of some of their vitamins, minerals, and antioxidants and other nutrients. That’s why I believe Nutrient-Rich Cooking can be the force for change to a healthier eating lifestyle.

Nutrient-Rich Cooking is science-based cooking

Nutrient-Rich Cooking is science-based cooking because it is supported by science. Cooking itself is science based. It involves the chemical and structural changes that occur in our food when we transform it from its raw into its cooked form.
Every month here at the George Mateljan Foundation we review hundreds of scientific studies involving healthy eating and cooking to provide you with the most comprehensive and up-to-date research information. As I wrote in the introduction to this book more than 10,000 studies have been reviewed in the process of publishing this second edition of The World’s Healthiest Foods book.

We cook foods for four reasons:

• To make it easier to digest
• To increase availability of nutrient for assimilation
• To enhance flavor
• To preserve food safety

Science tells us that nutrient loss and retention is almost always predictable and that a very well defined group of factors can help you minimize nutrient loss:

• Minimizing degree of heat
• Minimizing duration of cooking
• Minimizing degree of surface contact with water
• Minimizing size of food (chopping, slicing)
• Consideration of the ratio of surface area to the interior area of food

Nutrient-Rich Cooking takes these basic science-based tenets of cooking and puts them into practice to:

• Preserve nutrients
• Preserve natural flavor
• Prevent formation of toxic compounds

Nutrient-Rich Cooking was designed to make the transformation from raw to cooked food nutritious and flavorful. Nutrient-Rich Cooking helps keep your foods as close to their natural state and retain as many of their nutrients as possible.

nutrient-rich cooking combines science with great taste

While I believe the science behind Nutrient-Rich Cooking helps make it a great advance in cooking when it comes to nutrient retention, I also feel it is also a great innovation when it comes to eating enjoyment. The short cooking times and use of low heat helps preserve the natural flavor of the food itself, and my suggestions for the addition of a variety of complementary ingredients provides for a number of ways to enjoy each food so it never gets boring!

what science tells us about food flavors and where the flavors come from

Scientists have learned a lot about the complexities of food chemistry. Flavor, they always remind us, isn’t something locked up inside food.

The total number of compounds in a food that contribute to its flavor is astonishing. We’ve seen studies on cruciferous vegetables like broccoli and cabbage that identify hundreds of flavor-related compounds. [Some of these compounds have names straight out of a chemistry book, like 2,6,6-trimethyl-1-cyclohexene-1-carboxaldehyde.] The term “volatiles” is often used to refer to many of food’s flavor components. “Volatile” is short for “volatile compounds.” Volatile compounds are substances with a high vapor pressure and in plants, they are typically related to food flavor and food odor. Some volatiles are derived from nutrients that are already familiar to us, like fatty acids, amino acids, or carotenoids. Other volatiles involve terpenoids, phenylpropanoids, aldehydes, ketones, and other compounds that are unfamiliar, even to most nutritionists.

Natural flavor complexes are probably most familiar not in the form of whole natural foods but in the form of natural food flavorings like vanilla, orange, or almond extract, but these natural flavor complexes are key components of the whole foods that contribute to their unique flavor. Numerous acids in food play a role in their tart, sour and bitter flavors, and numerous sugars play a role in their sweetness.

taste buds and beyond

Most people have heard about the basic types of human taste buds: sweet, salty, sour, bitter, and savory [umami]. There is extensive research about the role of these taste buds in food flavor, and many aspects of this research are important to our understanding of taste. However, while appreciating the value of this taste bud research, it is also important to keep in mind the big picture. We take delight in food flavor precisely because it goes so far beyond the simple components of sweet, sour, salty, bitter and savory. When a food tastes absolutely delicious to us, all of its individual components are combining together in a way that is unique to the food itself and the way it’s been cooked.