James H. Carraway, M.D.<br>Eastern Virginia Medical School

If you ask your friends, relatives, and coworkers what they think about the health benefits of coffee and tea, their answers will vary from noting that there is no health benefit to stating that there is a lot. Tea has been around for a couple thousand years in China and India, and coffee for about 500 years. Interestingly, there have been many studies showing that both have the potential for benefiting your health. While you are reading this, remember from past articles that the antioxidant effect of foods or substances is very important in fighting free radicals which cause more rapid aging of your cells and body organs. Also, ORAC (Oxygen Radical Absorption Capacity) units are a measure of the antioxidant capacity of certain foods and supplements.

Studies of very large groups $(19,000$ and 126,000$)$ have demonstrated a decreased risk of diabetes, Parkinson's disease, and colon cancer in coffee drinkers. Consuming up to 4 or 5 cups of coffee a day is not unhealthy and, in fact, reduces the risk of diabetes in men by $50 \%$ and in women by $30 \%$. Six individual studies noted that people who drink coffee on a regular basis are $80 \%$ less likely to develop Parkinson's disease. Even smokers or heavy drinkers will have less heart disease if they consume large amounts of coffee every day. One other good benefit of coffee is that it tends to improve the body's insulin sensitivity and glucose metabolism. By doing this, it reduces the body's insulin needs. This is why it is useful in preventing diabetes

Caffeine can be unnerving to some people because it might speed up the heart rate or even cause arrhythmias of the heart. However, it does stimulate the brain and nervous system and therefore makes people think more clearly. This is why we drink it early in the morning! While it is stimulating the brain and nervous system, it's also having an effect on the basal metabolic rate to increase it and on muscles to produce a stronger contraction.

Of course, coffee is loaded with antioxidants and minerals. It may surprise you to know that in spite of all the vitamins and supplements we take that coffee is the No. 1 source of antioxidants in America. But since it is such a pleasant drink, it is almost magical that it is capable of protecting you against heart disease, cancer, diabetes, and even stroke. Some scholars believe that coffee is a better anti-aging food than dark chocolate, which of course has been touted as a highly nutritious product which slows down the aging process. Coffee is definitely a "super-food" like blueberries, acai, chocolate, spinach, and other very healthy foods. It has as many antioxidants as blueberries on an ounce-forounce basis.

Last but not least, one study shows that there is a $65 \%$ reduced risk of dementia in people who drink significant amounts of coffee throughout their lifetime. That is probably the
best information of all and tends to make most of us "perk" up our ears when we hear that.

As far as tea is concerned, it is also full of antioxidants. In addition, it has about onethird to one-fourth as much caffeine as coffee, making it less likely to stimulate the heart or keep you awake most of the night. You would have to drink about 4 cups of tea to get the same caffeine effect as you do with a cup of coffee. Interestingly, decaffeinated coffee generally retains all of its antioxidants, whereas decaf tea does not have as high a level of original antioxidants due to the processing.

In some studies, tea has been shown to have the ability to reduce the risk of fatal heart attack by $50-70 \%$ in those who ingest at least $2-3$ cups of black tea a day over several years. Also, stronger bones result from drinking tea, and it has been noted that people who have drunk tea for 10 or more years have the strongest bones of all those studied. This is probably due to its phytochemicals and nutrients.

A good side effect of tea is that it helps clean your teeth and preserve them because there are fluorides and tannins present in the tea. Since tea keeps you hydrated in the same way as water, you can drink 4-5 cups a day. However, if you get more than that you will have a diuretic effect. An interesting feature about green tea and weight gain and loss is that green tea actually increases the metabolic rate. You can burn 70-80 additional calories a day just by drinking $4-5$ cups of green tea per day. In a year's time you could lose 8 pounds by drinking green tea alone.

Some ask the question, is green, black, or white tea better? They all contain about the same amount of flavonoids which are the important antioxidants. A Harvard study shows that green tea is the best food source of catechins, which are plant-derived compounds acting as antioxidants. They are more powerful than vitamins C and E in halting oxidative damage. There is an association between consuming green tea and having a reduced risk for skin, breast, lung, colon, and other cancers. Oolong tea helps block the oxidation of LDL and increases HDL. There is significant reduced risk of hypertension in people who drink Oolong or green tea according to a large Chinese study published in the Archives of Internal Medicine. They suggest drinking about 3 cups of tea per day and letting it steep for 3-5 minutes to bring out the catechins. Interestingly, research also indicates that older women who are tea drinkers are $60 \%$ less likely to develop rheumatoid arthritis.

When you begin to think about nutrition, it's always nice to know that highly nutrient foods and drinks can be very tasty. This is certainly true of coffee and tea. In fact, these two drinks are therapeutic in a sense, because they really make a difference in your health outlook. If you are inclined, you can increase your intake of both tea and coffee and end up with better health benefits.

