

# Spotlight on Health

## Heart Disease

Heart disease is the leading cause of death in the United States, accounting for 1 in 4 deaths each year.<sup>1</sup> In this newsletter, we'll focus on reports about 2 lifestyle behaviors that can be modified to trim this statistic: diet and exercise.

### Diet

#### Processed Meat and Unprocessed Red Meat

In October 2015, the International Agency for Research on Cancer (IARC) classified processed meats as carcinogenic. They also classified all red meats (including pork) as probably carcinogenic.<sup>2</sup> Shortly after, the World Health Organization (WHO) repeated its 2002 advice to limit intake of preserved meat.<sup>3</sup>

Other organizations have advised limiting red meat for many years. Such advice was based on studies that linked red meat consumption to all-cause mortality, heart disease, and diabetes. Research in this area has continued to provide new information. Meta-analyses published in the last 5 years found a link between processed meat and increased heart disease mortality. The data for unprocessed red meat, however, is inconsistent. Some of the meta-analyses found an increased risk of heart disease mortality, while others found a weak or no association.<sup>4-7</sup>

#### The Red Meat—Heart Disease Connection

Red meat is high in saturated fat. It's been thought that the high fat content is what leads to increased cholesterol and heart disease. But red meat also contains carnitine, which is converted in the gut into atherogenic compounds. Researchers have found an increased risk of heart disease in people with high levels of carnitine and its metabolites. This link may depend on the type of bacteria in the gut.<sup>8</sup>

The "redder" the meat, the more carnitine it contains. Thus, some may feel that pork, which is not as red as beef, is more heart healthy. More studies are needed to verify this.

More studies are also needed to clarify the benefit and risks of carnitine supplementation. Supplementation is approved for people with serious kidney disease and genetic deficiency. It might also be of benefit for a wide range of conditions. Some of these are heart-related, eg, acute myocardial infarction (MI) and peripheral artery disease. Other claims of benefit, yet to be proven or disproven, are related to brain function, aging, fat loss, and athletic ability. Since many of these claims are presented on the Web, many people may be taking carnitine supplements without medical supervision. Given the data about carnitine and possible heart disease risk, this is of concern.



### Heart-healthy Diet

Select:

- Variety of vegetables and fruits
- Whole grains (fiber-rich)
- Dairy products (fat-free or low-fat)
- Poultry and fish
- Nuts and legumes
- Olive or canola oil

Avoid or limit:

- Large-sized portions
- Trans fat (partially hydrogenated)
- Saturated fat; replace with mono- and polyunsaturated fats
- Sodas and other high-sugar drinks
- High-salt foods (pickles; olives; many packaged, prepared foods)
- Alcohol

## Exercise

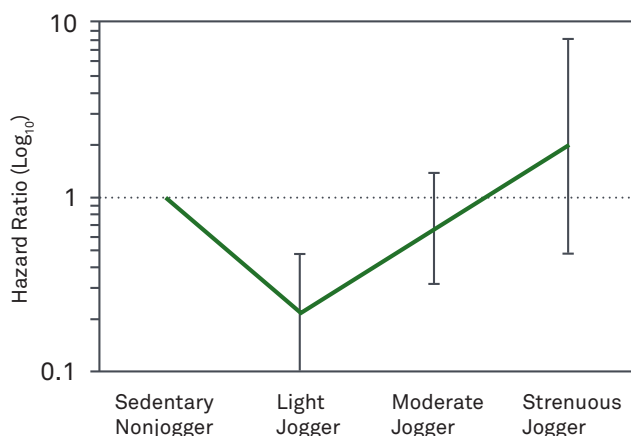
Physical activity is an important part of a healthy lifestyle. Guidelines suggest a minimum amount, frequency, and intensity for overall heart health. Guidelines have also suggested that to get more benefit, a person should do more than the minimum. This is based on a widely-held belief in a linear relationship between physical activity and health. People with certain medical conditions might get more harm than benefit from more exercise though. Even reasonably healthy people can be harmed by excessive exercise. For example, when sedentary people perform unaccustomed high-intensity physical activity, they are at risk for an acute cardiovascular event (MI or death).

### How much exercise is enough?

This question is still being investigated. A study published in February 2015 indicated that 1 to 2.4 hours/week of jogging done  $\leq 3$  days/week at a slow or average pace (ie, about 5 miles/hour) is sufficient to minimize the risk of death. The study found that this light level of jogging produced lower all-cause mortality than no jogging, moderate jogging, or strenuous jogging.<sup>9</sup>

### How much exercise is too much?

Jogging  $>4$  hours a week at a fast pace may be too much. Jogging  $\geq 2$  hours/week could also be too much if done  $>3$  days/week at a fast pace. This strenuous level of jogging led to essentially the same mortality rate that sedentary nonjoggers have. So the association between jogging and mortality looks a little like a U or J when graphed.<sup>9</sup>



### What does this mean for your patients?

This study just looked at jogging. There are, of course, other types of physical activity, including other types of aerobic activity. Many of your patients will be happy to know, though, that they don't have to be an elite athlete to benefit from exercise.

## References

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