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When it comes to medical information, it can be very difficult to stay up-to-date. Why and how do medical opinions change? How is it that eggs are good for you one day, bad the next, then good again the day after that. Let's examine this question using the example of fiber and colon cancer (CC) prevention.

The idea that fiber may be protective against CC first arose in the 1970's when medical missionaries noted that CC (as well as diabetes and other diseases common in the Western world) were rare in Africa, where the local diet is much higher in "roughage".

This assumption was largely accepted for many years, and was supported by early research. Correlation studies, which measure associations between risk factors and disease incidence, found that cases of CC increased in both the USA and Japan as fiber consumption decreased over the course of the twentieth century. A confound to this observation is of course, that changes in fiber consumption aren't the only dietary changes that occurred during that period. Case-control studies, in which past consumption of fiber was compared between groups of persons with and without CC found that in general those without CC had eaten diets higher in fiber in the preceding years. A criticism of case-control studies is that they rely on participants to recall past eating patterns, and people's memory can often be unreliable.

Cohort or longitudinal studies evaluate the diet of a large number of people over an extended period moving forward. Over this period, some will develop CC, and their diets are compared to those who do not. This eliminates the problem of faulty memory, and in these studies the results were mixed. Some showed a protective effect of f fiber-rich diet, others did not.

Intervention trials, particularly randomized-control trials are considered the "gold standard" in evaluating medical hypotheses. Here, participants are divided in two or more groups, with one receiving the intervention to be studied (in this case high-fiber diet), and the others not. In time, the differences in the rates of CC in each group are evaluated. Studies under these conditions suggest that fiber does not protect against development of CC. Naturally, this method of evaluation has it's shortcomings as well. Cancers take a long time to develop: Perhaps lifelong high-fiber intake offers protection short-term increases in fiber intake do not. Perhaps amounts of fiber in the studies are not high enough to be protective (a high-fiber Western diet is much lower in fiber than an African diet). Perhaps the types of fiber used in the studies (e.g., fruit versus whole grains) affect the outcomes.

The purpose of this writing is not to determine whether or not fiber is protective against CC, but to illustrate that medical opinions are constantly evolving. How an issue is assessed affects what medical "consensus" is reported.

HEALTH TIP

Eat more fiber! Although evidence for the protective effects of fiber in the prevention of colon cancer are equivocal, evidence for it's benefits in other areas of prevention including heart disease, type 2 diabetes, diverticular disease, hemorrhoids and constipation are not. Depending on age, women should consume between 21-26 g of fiber daily, and men 30-38 g.

An easy way to increase your fiber (and at the same time decrease your calorie, fat and refined carbohydrate intake) is to visualize your plate as a half and two quarters. The half should be non-starchy vegetables or fruit, one quarter should be protein (e.g., a palm-sized serving of meat) and one quarter should be a whole grain or starchy vegetable (e.g., potato).

This model allows you to quickly and easily balance your diet, and at the same time keep eating the foods you enjoy.

IN THE NEWS…

In related news, a recent study published in the on-line journal Circulation (abstract available at: http://circ.ahajournals.org/cgi/content/abstract/CIRCULATIONAHA.107.716159v1) suggests that consumption of a Western diet (i.e., high intake of meat and fried foods) promotes incidence of metabolic syndrome. Metabolic syndrome is a cluster of risk factors that predispose one to heart disease, including insulin resistance, high blood pressure and obesity.