1.12 Phytochemicals, Zoochemicals, & Functional Foods

Phytochemicals

Figure 1.121 Tomatoes & other plants contain phytochemicals.

Phytochemicals are compounds in plants (phyto) that are believed to provide health benefits beyond the traditional nutrients. One example is lycopene in tomatoes, which is thought to potentially decrease the risk of some cancers (in particular prostate cancer). Diets rich in fruits and vegetables have been associated with decreased risk of chronic diseases. Many fruits and vegetables are rich in phytochemicals, leading some to hypothesize that phytochemicals are responsible for the decreased risk of chronic diseases. The role that phytochemicals play in health is still in the early stages of research, relative to other areas of nutrition such as micronutrients. The following 2 links contain good information on phytonutrients if you're interested in learning more about them.

Web Links

American Heart Association: Phytochemicals and Cardiovascular Disease
Linus Pauling Institute: Phytochemicals

Zoochemicals

Zoochemicals are the animal equivalent of phytochemicals in plants. They are compounds in animals that are believed to provide health benefits beyond the traditional nutrients that foods contain. Hopefully the name is pretty easy to remember because you can find animals at a zoo. Some compounds can be both phytochemicals and zoochemicals. An example of this are the yellow carotenoids, lutein and zeaxanthin. Kale, spinach, and corn (phytochemicals) are good sources of lutein and zeaxanthin. However, egg yolks are also a good source of these carotenoids (zoochemicals).

Functional Foods

Functional foods are generally understood to be a food or food ingredient that may provide a health benefit beyond the traditional nutrients (macro and micronutrients) it contains. Functional foods generally contain phytochemicals or zoochemicals.

References & Links
Links
American Heart Association: Phytochemicals and Cardiovascular Disease -
http://www.justmove.org/HEARTORG/GettingHealthy/NutritionCenter/Phytochemicals-and-Cardiovascular-
Disease_UCM_306020_Article.jsp