Dynamic Chiropractic

DIAGNOSIS & DIAGNOSTIC EQUIP

Understanding Indole-3-Carbinol's Cancer-Fighting Properties

James P. Meschino, DC, MS

Over the years, various observational studies have suggested that people who regularly consume cruciferous vegetables (broccoli, cauliflower, brussels sprouts, cabbage, turnips, bok choy) have lower rates of many cancers, including breast and prostate cancer. Researchers have investigated cruciferous vegetables in an attempt to identify the active agent(s) that account for this cancer-protective effect.

As it turns out, cruciferous vegetables are unique in that they contain sulforaphane and indole-3-carbinol. Both of these natural agents enhance the body's ability to detoxify cancer-causing chemicals, but indole-3-carbinol exhibits other impressive anti-cancer effects that should be recognized.

Your Body Makes Cancer Cells Every Day

You may not realize it, but your body actually creates cancer cells every day of your life (as old cells replace new ones). Under healthy conditions, the emerging cancer cell realizes that something has gone array and initiates a series of steps that encourage the cell to commit suicide (so as to prevent it from becoming a danger to the rest of the body).

How does this work? Some of the genes in our DNA act as sensors, which are triggered when a cell is becoming cancerous, infected by a virus or bacteria, or damaged from physical trauma. Once the sensors identify a problem, the sensor genes (called tumor suppressor genes) instruct other genes to make specific proteins that ultimately rip apart the energy factory of the cell (causing a power outage) and destroy the genetic material of the cell (so it cannot reproduce). This leads to cell death or what researchers call "programmed cell death" or "apoptosis."

However, some emerging cancer cells become very intelligent and, in their desire to survive and multiply, produce other chemicals that prevent the cell from committing suicide via programmed cell death. This is how cancer cells get traction and give themselves the opportunity to multiply like rabbits and form malignant tumors.

Indole-3-Carbinol and Cancer Cell Replication

Via several mechanisms, indole-3-carbinol has been shown to disrupt the cancer cell's attempt to bypass programmed cell death. Experimental studies show that indole-3-carbinol and its metabolites (products made from indole-3-carbinol in the body's metabolism) not only stop the growth of certain types of cancer cells, but also trigger them into committing suicide. This is an important mechanism by which the indole-3-carbinol is thought to lower our risk of cancer.

So, in addition to speeding up the body's ability to neutralize (detoxify) and eliminate cancer-causing chemicals, indole-3-carbinol also appears to help ensure that any emerging cancer cells commit suicide before they can become a threat to the body. Supplementation with indole-3-carbinol in human clinical studies has also reversed cervical dysplasia and vulvar intraepithelial

neoplasia (tumor), two precancerous conditions that occur in women, in a high percentage of cases. Another study showed that indole-3-carbinol supplementation reversed respiratory papillomas as well.

Healthier Hormones

In addition to all of this, indole-3-carbinol also helps prevent the buildup of the form of estrogen that is linked to breast and uterine cancers. Researchers have identified that when a woman's body makes more 16-OH estrone and less 2-OH estrone, her risk of reproductive organ cancer is greater.

Indole-3-carbinol promotes the conversion of estrone to 2-OH estrone, the form of estrone that is safer and less potent, and reduces the buildup of the dangerous 16-OH estrone. It's not just a woman thing, as studies reported in the *International Journal of Nutrition and Cancer* indicate that higher intake of cruciferous vegetables is also associated with a reduced risk of developing prostate cancer.

Supplementing With Indole-3-Carbinol Makes Sense

As one of the most powerful and proven cancer-fighting nutrients ever identified, you may not want to leave it to chance that you will derive optimal indole-3-carbinol protection from food alone. You should consume broccoli or some combination of cruciferous vegetables at least four to five times per week. In addition, you should consider indole-3-carbinol supplementation to further optimize your cancer defenses on a daily basis.

A practical way to accomplish this is to take a daily supplement that contains an additional 25 mg of indole-3-carbinol per capsule, and also includes milk thistle (which boosts detoxification function at the cellular level) and two important immune-system boosters: reishi mushroom extract and astragalus. The reason to combine these nutrients is because your body's detoxification and immune systems work hand-in-glove to help prevent cancer.

As we get older (after age 45-50), these systems become progressively sluggish; that's when cancer incidence begins to go through the roof. I take two capsules per day of this type of immune- and detoxification-boosting formula for general well-being and health optimization. If you feel a cold coming on, you may wish to double the dosage, taking four capsules per day, to help your immune system defeat the virus before it can really take hold.

Share with your patients that ensuring adequate intake of indole-3-carbinol may help to reduce the risk of developing cancer and boost the detoxification and immune systems, as outlined in this review. Indole-3-carbinol is truly a powerful agent. You should strive to attain optimal levels on a daily and weekly basis.

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