

## DIETARY GUIDELINES FOR THYROID PATIENTS

There are naturally-occurring substances that can interfere with the function of the thyroid gland. The foods we eat may alter thyroid function, so having a better understanding of how your diet affects your thyroid will allow you to make the best choices to maximize your health.

There are two general categories of foods that have been associated with disrupted thyroid hormone production in humans: soybean-related foods and cruciferous vegetables. In addition, there are a few other foods not included in these categories – such as peaches, strawberries, and millet (certain small-seed cereals and grasses).

### **Soybean-related foods**

Included in the category of soybean-related foods are soybeans themselves as well as soy extracts, and foods made from soy, including tofu and tempeh (an Asian food prepared by fermenting soybeans). While soy foods share many common ingredients, it is the isoflavones in soy that have been associated with decreased thyroid hormone output. Isoflavones are naturally-occurring substances that belong to the flavonoid family of nutrients. Flavonoids, found in virtually all plants, are pigments that give plants their amazing array of colors. Most studies in the health sciences have focused on the beneficial properties of flavonoids, and these naturally-occurring phytonutrients have been shown repeatedly to be highly health-supportive. However, isoflavones like genistein appear to reduce thyroid hormone output by blocking activity of an enzyme called *thyroid peroxidase*. This enzyme is responsible for adding iodine onto the thyroid hormones. (Thyroid hormones must typically have three or four iodine atoms added on to their structure in order to function properly.)

### **Cruciferous vegetables**

A second category of foods associated with disrupted thyroid hormone production is the cruciferous food family. Foods belonging to this family are called “crucifers,” and include broccoli, cauliflower, brussel sprouts, cabbage, mustard, rutabagas, kohlrabi, and turnips. Isothiocyanates are the category of substances in crucifers that have been associated with decreased thyroid function. Like the isoflavones, isothiocyanates appear to reduce thyroid function by blocking thyroid peroxidase, and also by disrupting messages that are sent across the membranes of thyroid cells.

## **Should you stop eating soy and cruciferous?**

In the absence of thyroid problems, there is no evidence to suggest that such foods will negatively impact your health. In fact, the opposite is true: soy foods and cruciferous vegetables have unique nutritional value, and intake of these foods has been associated with decreased risk of disease in many research studies.

*Because carefully controlled research studies have yet to take place on the relationship between these foods and thyroid hormone deficiency, especially autoimmune thyroid disease, healthcare practitioners differ greatly on their perspectives as to whether a person who has thyroid problems, and notably a thyroid hormone deficiency, should limit their intake. Most practitioners use words like “overconsumption” or “excessive” to describe the kind of intake that would be a problem for individuals with thyroid hormone deficiency. Here the goal is not to eliminate these foods from the meal plan, but to limit intake into a “reasonable range,” whatever that means.*

Limiting intake is often much more problematic with soy foods than with cruciferous vegetables, since soy appears in so many combination and packaged food products in hidden form. Ingredients like textured vegetable protein (TVP) and isolated soy concentrate may appear in foods that would rarely be expected to contain soy. A standard one cup serving of cruciferous vegetables 2-3 times per week, and a standard, 4-ounce serving of tofu twice a week is likely to be tolerated by many individuals with thyroid hormone deficiency.

### **The effect of cooking**

Although research studies are way more limited in this area, cooking does appear to help inactivate the goitrogenic compounds (things that adversely affect thyroid function) found in food. Both isoflavones (found in soy foods) and isothiocyanates (found in cruciferous vegetables) appear to be heat-sensitive, and cooking appears to lower the availability of these substances. In the case of isothiocyanates in cruciferous vegetables like broccoli, as much as one third of these substances may be deactivated when broccoli is boiled in water. That is, of course, both good and bad.

### **Practical tips**

Although for many people these foods do not seem to pose a health concern, certain individuals who have thyroid problems may be advised by their healthcare practitioner to limit excessive consumption of foods that contain these compounds. Cooking decreases the impact of soy and crucifers on thyroid hormone production, but it also decreases the overall benefit of these foods as well. Bottom line: everything in moderation, and if you take a thyroid modulating medication, try to be consistent in whatever amount of soy and crucifers you consume.

## Autoimmune Disorders

There has been considerable interest recently in “leaky gut syndrome” and autoimmune disorders. Although the data is somewhat conflicting and the evidence is certainly incomplete, many non-traditional practitioners suggest avoiding foods containing the following:

1. Gluten
2. Processed sugar and sugar substitutes
3. Dairy products, including milk, yogurts, ice cream and cheeses
4. Animal meats, specially beef and pork

Examples of food that may affect thyroid function	
Cruciferous vegetables including:  Broccoli Brussels sprouts Cabbage Cauliflower Kale Kohlrabi Mustard Rutabaga Turnips	Other Foods:  Millet Peaches Peanuts Radishes Soybean and soy products, including tofu Spinach Strawberries

*Adapted from The George Mateljan Foundation.*