What are the essential trace minerals? Get the 411

Consuming adequate amounts of essential nutrients grows increasingly important as we age. This becomes more difficult as calorie needs decline and people eat less. This challenge is particularly true in regard to a group of essential minerals called trace minerals.

Since these minerals are needed only in trace amounts, there is a tendency to consider them less important than those required in greater amounts and as easier to obtain in the diet. However, this is not the case.

Like all other essential nutrients, trace minerals must be consumed in adequate amounts from diet or supplements, or deficiencies will develop and have negative health effects over time.

**Question:** What are the essential trace minerals?

**Answer:** The main ones include cobalt, copper, chromium, iodine, iron, manganese, molybdenum, selenium and zinc.

**Q:** What makes obtaining adequate amounts of trace minerals challenging?

**A:** First, most nutrition research has been conducted with younger individuals, therefore we are only now starting to understand the trace mineral requirements of older individuals. This includes understanding both the amount of a nutrient that is adequate for health and the amount that could be excessive and harmful.

Second, the amount of a trace mineral in food does not directly reflect the amount that is absorbed in the body.

Absorption of trace minerals is hindered by many food components such as fiber, various phytochemicals and even the balance of other minerals in the diet, including excessive amounts of other trace minerals.

For example, as people move toward consuming primarily plant-based diets, excess fiber and phytochemicals can substantially decrease the absorption of trace minerals like iron and zinc.

Third, the amount of trace minerals in a particular type of food can vary somewhat depending upon the minerals in the soil or water they are grown in.

Consequently, the amount of any one trace mineral in a food is not set in stone, but has a potential range. To help assure that you are getting adequate amounts of trace minerals, it can be best to obtain your produce from multiple sources.

**Q:** Can someone consume excess trace minerals?

**A:** Now that people are living longer, we are finding that excessive amounts of some trace minerals get stored in the body and can have negative health effects with age.

For example, excessive manganese can accumulate in the brain and function as a neurotoxin with the potential to cause neurological problems that resemble Parkinson’s disease. Manganese is highest in plant-based proteins, whole grains, pine- apple and blueberries.

**Q:** Are there ways to prevent getting excess trace minerals such as manganese and toxic minerals like aluminum, lead, mercury and arsenic?

**A:** Maintaining a normal iron status may be one of the most important ways to maintain trace mineral balance. When iron status is low, the intestine absorbs more of these minerals.