

**A Special News Report**  
SUMMER 2013



**Physicians  
Committee**  
for Responsible Medicine  
[PCRM.org](http://PCRM.org)

*Metals of Concern in Common Multivitamins*

## Metals of Concern in Common Multivitamins

Dietary supplements are big business: Forty percent of Americans take vitamin and mineral supplements,<sup>1</sup> contributing to a \$30-billion-a-year industry.<sup>2</sup> However, many are unaware that these products can contain more than twice the amount of iron and copper recommended for an entire day. Research studies have linked these trace metals to brain disorders, including Alzheimer's disease.

While trace metals are necessary for health—iron for hemoglobin and copper for enzyme function—they are double-edged swords, becoming toxic, or even fatal in excess.

At even modestly elevated levels, iron and copper have been associated with impaired cognition, and both end up in the brain of people with Alzheimer's disease.<sup>3,4</sup> A study of more than 1,450 people in San Diego showed that those who perform highest on cognition tests have the lowest levels of copper and iron in their bloodstream.<sup>5</sup>

Because most people already obtain these metals from everyday foods, the added amounts in multivitamins increase the risk of overdose. The Recommended Dietary Allowance (RDA) per day for copper for men and women is 0.9 milligrams. The RDA for iron is 8 milligrams for men and women older than 50 and 18 milligrams for women ages 19 to 50 years.

The Physicians Committee surveyed copper and iron in the most common multivitamins, based on widely available vitamins. Centrum Adults Under 50 contains more than twice the RDA of iron for men and 100 percent of the RDA for women. One A Day Women's Active Mind & Body and One A Day Men's Health Formula both contain more than double the RDA for copper.

Manufacturers should reformulate multivitamins to remove these metals that may be linked to Alzheimer's risk. Before taking metal-containing multivitamins, consumers should talk to their physicians.

*"If choosing a multivitamin, consumers should favor products that deliver vitamins only."*

## Mineral Amounts in Common Multivitamins

Brand	Copper RDA = 0.9 mg men and women	Iron RDA = 8 mg men and women > 50; 18 mg women 19-50
One A Day Women's 50+ Healthy Advantage	Copper: 2.2 mg More than 200 percent RDA	Iron: 0 mg
Nature Made Multi Complete	Copper: 2 mg More than 200 percent RDA	Iron: 18 mg 100 percent RDA
Nature Made Multi for Her	Copper: 2 mg More than 200 percent RDA	Iron: 18 mg 100 percent RDA
One A Day Women's Active Mind & Body	Copper: 2 mg More than 200 percent RDA	Iron: 18 mg 100 percent RDA
One A Day Women's Active Metabolism	Copper: 2 mg More than 200 percent RDA	Iron: 18 mg 100 percent RDA
One A Day Women's	Copper: 2 mg More than 200 percent RDA	Iron: 18 mg 100 percent RDA
Nature Made Multi for Him	Copper: 2 mg More than 200 percent RDA	Iron: 0 mg
Nature Made Multi for Him 50+	Copper: 2 mg More than 200 percent RDA	Iron: 0 mg
Centrum Men Under 50	Copper: 0.9 mg 100 percent RDA	Iron: 8 mg 100 percent RDA
Centrum Women Under 50	Copper: 0.9 mg 100 percent RDA	Iron: 18 mg 100 percent RDA
One A Day Women's Menopause Formula	Copper: 1 mg More than 100 percent RDA	Iron: 0 mg
One A Day Men's Health Formula	Copper: 2 mg More than 200 percent RDA	Iron: 0 mg
One A Day Men's Pro Edge	Copper: 2 mg More than 200 percent RDA	Iron: 0 mg
Centrum Adults Under 50	Copper: 0.5 mg	Iron: 18 mg More than 200 percent RDA for men; 100 percent RDA for women
Centrum Silver Women 50+	Copper: 0.5 mg	Iron: 8 mg 100 percent RDA
Centrum Silver Men 50+	Copper: 0.7 mg	Iron: 0 mg
Centrum Silver Adults 50+	Copper: 0.5 mg	Iron: 0 mg
Nature Made Multi Daily	Copper: 0 mg	Iron: 18 mg 100 percent RDA



## Healthful Dietary Sources of Metals

---



### COPPER

Copper is essential for enzyme function and helps maintain healthy bones, blood, and nerves. The best sources are nuts, seeds, beans, lentils, leafy greens, and whole-grain cereals.

### IRON

Iron in the body is found in hemoglobin and is used to carry oxygen to tissues (lungs, liver, muscles, etc.). Iron also supports respiration, metabolism, immunity, and building of connective tissue to support bones.

Food sources of iron include all types of beans, lentils, and soy products. Other sources include greens such as spinach, kale, Swiss chard, and Brussels sprouts. Dried fruits, such as prunes, apricots, and raisins, and pumpkin and sesame seeds are also excellent sources. Grains, such as amaranth and quinoa, and fortified cereals and plant-based milks are also good choices. When you eat these foods with a source of vitamin C (orange slices, lemon juice, red peppers, kiwi, papaya, and pineapple) iron absorption is enhanced.

### CONCLUSION

Supplement manufacturers should stop the routine addition of metals to multivitamins and, instead, should market multivitamins containing vitamins only. Consumers will easily obtain copper and iron through an array of food sources. It is best for them to choose supplements that deliver only the vitamins they need.

Vitamin supplementation is mainly required for vitamins B12 and D. B12 is essential for healthy nerves and healthy blood. All typical store brands have more than the 2.4 micrograms adults need, and there is no toxicity from supplements with higher amounts. Although vitamin D's best-known function is to help you absorb calcium from the foods you eat, it also has a cancer-preventive effect. The natural source is sunlight. Fifteen or 20 minutes of direct sunlight on your face and arms each day provides the vitamin D you need. If you are indoors most of the time, you'll want to take a supplement. The U.S. government recommends 600 IU per day for adults up to age 70 and 800 IU per day for older people.

If choosing a multivitamin, consumers should favor products that deliver vitamins only. In cases where specific supplementation is needed, it is essential that they work with their physicians to determine appropriate levels for all supplements.

---

*Before taking metal-containing multivitamins, consumers should talk to their physicians.*

---

## References

---

1. Centers for Disease Control and Prevention. Dietary Supplement Use Among U.S. Adults Has Increased Since NHANES III (1988–1994). *NCHS Data Brief*. 2011;61.
2. Office of Dietary Supplements, National Institutes of Health. Dietary Supplement Fact Sheet: Multivitamin/mineral Supplements; 2013.
3. Brewer GJ. The risks of copper toxicity contributing to cognitive decline in the aging population and to Alzheimer's disease. *J Am Coll Nutr*. 2009;28:238-242.
4. Stankiewicz JM, Brass SD. Role of iron in neurotoxicity: a cause for concern in the elderly? *Curr Opin Clin Nutr Metab Care*. 2009;12:22-29.
5. Lam PK, Kritz-Silverstein D, Barrett Connor E, et al. Plasma trace elements and cognitive function in older men and women: the Rancho Bernardo study. *J Nutr Health Aging*. 2008;12:22-27.