



SUNWARRIOR®

Heavy Metals

An Informational Guide

Heavy metals are in everything grown in soil. These metals naturally exist in the earth's crust, in our air, and in our water. They appear frequently in foods that require more water, like brown rice, root vegetables, and greens. They are unavoidable, but the body does an amazing job removing these minute amounts, especially the safer, organic forms that exist in plants.

That said, Sunwarrior and other leading health advocates are seeking higher standards from farmers and suppliers to reduce the heavy metals that naturally are more prevalent in certain foods. Together, we can create change in the way food is grown, improving ingredients from the source. We will never be able to fully eradicate heavy metals, but we can make things a little safer for all of us.

Sunwarrior products follow a high standard and we work to raise that standard even higher every day. Our rice protein falls well below FDA, WHO, and EU guidelines in test after test. Our products are, always have been, and always will be safe for anyone and any lifestyle. They are USDA Certified Organic (no herbicides or pesticides) and are Non-GMO Project Verified, as well. If you are still concerned with rice, make the switch to Warrior Blend, which doesn't contain any rice protein and consistently tests far lower across the board.

Microgram (mcg)
1/1000th of a milligram

Parts Per Million
ppm

GV
Guideline Value: Tolerance levels set by the FDA/EU

FDA & EU Guidelines

Lead	75 mcg per day (FDA)
Cadmium	70 mcg per day (EU)
Arsenic	150 mcg per day (EU)
Tungsten	No regulatory standard

Vegetable & Food Levels

per 4 oz serving

In 2007, the FDA released a report called *Total Diet Study Statistics on Element Results*. The report summarized the levels of certain heavy metals found in a variety of food. Some of the results are provided below. This helps to put the numbers in context.



The more processed a food, the less heavy metals it contains. **These are removed along with the nutrients, minerals, vitamins, antioxidants, and enzymes** that make living foods great. Processed foods—like sodas, candies, refined carbs, and even bacon—appear healthier when looking at heavy metal content alone, but appearances can be deceiving. Whole foods will always naturally contain some heavy metals.

	mcg	GV
Red Apple	Lead 2.61	3.5%
	Cadmium .34	.5%
	Arsenic 4.99	3.3%

	mcg	GV
White Rice	Lead 3.4	4.5%
	Cadmium 1.81	2.6%
	Arsenic 14.51	9.7%

	mcg	GV
Strawberries	Lead 1.93	2.6%
	Cadmium 7.37	10.5%
	Arsenic 1.25	0.8%

	mcg	GV
Cucumber	Lead 3.4	4.5%
	Cadmium .79	1.1%
	Arsenic 2.83	1.9%

	mcg	GV
Avocados	Lead 4.54	6%
	Cadmium 12.02	17.2%
	Arsenic 4.2	2.8%

	mcg	GV
Cantaloupe	Lead 1.59	2.1%
	Cadmium 3.29	4.7%
	Arsenic 2.83	1.9%

	mcg	GV
Spinach	Lead 7.03	9.4%
	Cadmium 59.42	84.9%
	Arsenic 4.88	3.3%

	mcg	GV
Sweet Potato	Lead 7.26	9.7%
	Cadmium 2.04	2.9%
	Arsenic 2.95	2%

	mcg	GV
Asparagus	Lead 1.59	2.1%
	Cadmium 15.76	22.5%
	Arsenic 0	0%

	mcg	GV
Celery	Lead 1.36	1.8%
	Cadmium 10.66	15.2%
	Arsenic 0	0%

	mcg	GV
Sunflower Seeds	Lead 1.81	2.4%
	Cadmium 74.5	106%
	Arsenic 0	0%

	mcg	GV
Mushrooms	Lead 1.81	2.4%
	Cadmium 1.81	2.6%
	Arsenic 23.02	15.3%

	mcg	GV
Carrots	Lead 1.93	2.5%
	Cadmium 7.71	11%
	Arsenic 4.88	3.2%

	mcg	GV
Beets	Lead 3.52	4.7%
	Cadmium 6.69	9.5%
	Arsenic 1.7	1.1%

Organic VS Inorganic

Many metals—even arsenic, cadmium, and tungsten—combine with molecules within plants to form organic metals, often called chelates. The organic forms of arsenic and cadmium are less reactionary, far less dangerous, and often even completely neutral. The body easily dispatches these.

Inorganic metals come from pollutants and industrial contamination. These are the dangerous ones we need to worry about. Studies estimate that only 10% of the heavy metals in our foods are the more toxic inorganic forms.

	mcg	GV
Lettuce	Lead 2.04	2.7%
	Cadmium 30.5	43.5%
	Arsenic 1.47	0.9%

	mcg	GV
Baby Carrots	Lead 3.74	5%
	Cadmium 9.19	13.1%
	Arsenic 1.81	1.2%

	mcg	GV
Tomatoes	Lead 1.02	1.4%
	Cadmium 3.63	5.2%
	Arsenic 0	0%

	mcg	GV
Peanut Butter	Lead 3.74	5%
	Cadmium 12.02	17.2%
	Arsenic 9.75	6.5%

	mcg	GV
Mixed Nuts	Lead 10.21	13.6%
	Cadmium 2.38	3.4%
	Arsenic 4.31	2.9%

	mcg	GV
Raisins	Lead 3.52	4.7%
	Cadmium 1.02	1.5%
	Arsenic 4.76	3.2%

	mcg	GV
Tuna	Lead 1.47	2%
	Cadmium 3.29	4.7%
	Arsenic 163.63	110%

	mcg	GV
Brussel Sprouts	Lead 7.94	10.5%
	Cadmium 1.81	2.6%
	Arsenic 1.81	1.2%