

Bromide Toxicity: Bromism

Bromine was discovered in 1826. It has a reduced form called bromide which is rapidly absorbed in the digestive tract. Due to its similarity to iodine, it readily replaces iodine on receptor sites throughout the body. The primary iodine sites are on the thyroid gland, ovaries/testes, and in the breast tissue. Bromine intoxication (Bromism) has been shown to cause the following symptoms:

Delirium Psychomotor reduction Mental confusion Hallucinations

Dull and Apathetic Poor concentration Headaches Irritability Depression

Recent research has shown that these symptoms can be present even with very low levels of bromide in the diet. Bromine (Bromide) is used as an antibacterial agent in pools and hot tubs. It is also used on crops, termites, and other pests as a fumigant. High consumption of some carbonated drinks containing brominated vegetable oils, has been reported to be toxic (Mountain Dew, Amp Energy Drink, some Gatorade products). Diets high in breads, pasta, and baked goods increase bromide ingestion as well. (Due to an erroneous concern of getting too much iodine from bakery products, iodine was replaced with bromine in the early 1980's.) Some medications contain bromide: Atrovent inhalers, and nasal sprays, Ipratropium nasal spray, Pro-Panthine, and Spiriva Handihaler. Consumption, medications, lack of iodine, and exposure all combine to tilt the scales toward toxic levels of bromide in the system. As bromine levels increase and bind to the receptors for iodine throughout the body, iodine is released from the body and symptoms of iodine deficiency become more prevalent:

Goiter Hemorrhoids Migraines ADD/ADHD Excess mucous formation Fatigue
Fibrocystic Breasts Atherosclerosis Increased urination Kidney syndrome
Vaginal infections Prostate disorders Keloids Hypertension Thyroid disorders
Liver diseases Viral, bacterial, and fungal infections Reduced immunity
Dry skin Puffy eyes Constipation as well as other signs of hypothyroidism...

Unfortunately, our intake of iodine has decreased over the years due to low content in soils, reduced salt use, and diets that are deficient including lack of fish and/or sea vegetables, or diets high in bromide like breads, pasta, baked goods, etc. that reduce our ability to uptake iodine. We become more sensitive to having bromide binding in our bodies when we are nutrient deficient in iodine.

Fortunately, testing can show these deficiencies and toxicities. A 24 hour iodine urine challenge test is by far the most appropriate and valuable test. Levels of iodine in our bodies should be around

50mg according to Dr. Guy Abraham, considered the world's leading researcher on iodine. Children require dosing based on weight, .11mg/pound/day, for iodine/iodide supplements. Prolamine iodine from standard process seems to be more readily absorbed and should be dosed at ½ of the final weight dosage. Ex. If the child is 50 pnds, $x .11 = 5.5 \text{ mg/day}$ ioderol or divided by 2 = 2.75 mg/day prolamine iodine.

Bromine levels should be below 12 mg/ 24hr clearance test. To properly chelate bromide from the system, natural support for the organs of elimination, glutathione pathways, and immune support are needed. Kidney support, Liver support, Selenium, Magnesium, Iodine, and Vitamin C to name a few. Also, the addition of unrefined salt like celtic sea salt is needed for bromide excretion, Epsom salt baths (2 cups in bath) and immune boosting techniques like chiropractic adjustments to support healthy body function.

Diet restrictions:

Low or no Baked goods, breads, pasta

No Mountain Dew, AMP, Gatorade

Avoid swimming pools

Organic grown veggies, fruits

Avoid bromide medications, consult physician.

Preventing bromide/bromine toxicity through exposure is paramount, However, maintaining a healthy body supply of Iodine is most important. Dr. Abraham has shown that the required daily intake of iodine necessary for maintaining sufficiency for the whole body is at least 13mg/day. The thyroid needs approx. 6 mg/day for sufficiency. Breasts need at least 5mg (more for larger breasts) which leaves 2mg of iodine for the rest of the body, well above the RDA for daily iodine, 150ug/day, 14x the RDA.

Adult Dosages:

Children Dosages

(Based on weight)

Vitamin C(Immune); 8-10,000 mg/day	4-5000 mg/day
Cataplex C(Immune); 6-12 tablets/day	2-6 tablets/day
Magnesium Lactate; 3- 6 capsules/day	1-3 capsules/day
Cataplex E (selenium); 6-9 tablets/day	3-5 tablets/ day
Garlic 2000(selenium); 1-3 tablets/day	1-3 tablets/day
Celtic Sea Salt (Bromine detox); 10 mg/ day	3-5 mg/day
Iodoral Loading(Bromine/Metals detox): 30- 50mg/day	.11/ lb/ day
Prolamine Iodine Load(Bromine/Metals detox): 3-10 tablets/day	.06/ lb/ day
Renafood(Kidney); 3-9 tablets/ day	1-4 tablets/day
Chela Co(Metal Detox); 3-6 tablets/ day	1-3 tablets/day
Livaplex(Liver); 3-9 capsules/day	1-4 capsules/day
Chlorophyll (Selenium&Magnesium); 4-8 perles/day	1-4 perles/day
Thyroid complex(Support & Metal detox); 3-4 tablets/day	1-2 tablets/day

Prolamine Iodine Loading:

Support kidney and liver function as well as load with magnesium and selenium while performing Iodine loading. Iodine loading is not a race, it should be done gradually. It causes the excretion of other toxic halides- bromine, chlorine, and fluorine which can cause detox reactions and symptoms if done quickly. Other heavy metals like mercury, arsenic, cadmium, and lead are also excreted during Iodine loading and can cause symptoms if detoxification is too rapid.

Loading requires 9-30mg/day adult, .06/lb/day child, for several months or longer and sometimes higher doses in larger individuals and people with higher fat percentage.

Iodine Reactions:

Many reactions to iodine thought to be allergies are detoxification reactions especially with rapid iodine loading. Some detox symptoms: Runny nose, salivation, skin Rash, watery eyes, muscle weakness, frontal headaches, fatigue, aches and pains, and migraines may temporarily occur. These are tempered and/ or relieved typically with supplementation of magnesium and selenium.

*Referenced from the book; "Iodine-Why You Need It; Why You Can't Live Without It.", by Dr. David Brownstein, MD