

## **Natural Source Boron To Treat Arthritis (from mineral borax)**

Borax occurs in large evaporated lake deposits in the USA in Death Valley desert and Turkey. 20 Mule Team Borax is a brand known to be unprocessed salt lake deposit material that is 99.5 % pure Sodium TetraBorate with the 0.5% consisting of harmless light salts such as sodium and potassium chloride and potassium carbonate (baking soda).

### **Mixing 20 Mule Team Borax for mineral supplementation**

Elemental masses

Na=23            B=10.8            O=16

Formula for typical hydrated borax powder

Na<sub>2</sub>B<sub>4</sub>O<sub>7</sub> plus 10(H<sub>2</sub>O)

Atomic weight =  $23*2+10.8*4+16*7+10*18 = 381.2$

Ratio of Boron to Total Weight =  $10.8*4/381.2$  or 0.113

Therefore one gram of Borax has 113 milligrams of boron.

If we put 9 grams of borax into 500 milliliters of water there will be 1017 milligrams boron in 500 milliliters of water or ...

This solution has 2.03 milligrams of boron per milliliter or CC

A milliliter equals one Cubic Centimeter or CC

(liquid measuring syringes from the drug store use CC units)

(This gives only about 3% error which is insignificant so we will say ... "each CC contains 2 mg boron")

Dosages of the liquid measured in Cubic Centimeters or milliliters are:

For arthritis prevention take 2 CC per day or 4 milligrams boron per day.

For mild arthritis take 3 CC per day or 6 milligrams boron per day.

For full arthritis take 6 CC per day or 12 milligrams boron per day.

For cancer prevention take 9 milliliters per day or 18 milligrams boron per day.

See research in Health Canada site where boron is suggested for cancer prevention and treatment. Its only side effect is the prevention of arthritis.

### **Sodium Dosage Issues**

Remaining Na content =  $46/381.2$  or 121 milligrams per gram of borax powder.

Note that boron content = 113 milligrams of sodium per gram, so that you get almost the same dose of sodium as boron. This is a low sodium dose, not expected to cause any high blood pressure issues.

### **Alternative 1 Liter Formula**

18 grams borax per liter.

**Editor: Ian Soutar (May 25, 2020)**

[bodyworksvictoria@gmail.com](mailto:bodyworksvictoria@gmail.com)

Further research is below with links to Health Canada and the US National Institute of Health

**\*\*\*\* Science Links Below \*\*\*\***

Health Canada (Canadian Equivalent of the USA FDA) Article about Boron, the Arthritis Biochemistry and the Prevention of Prostate Cancers. At the top of the article it points out they have archived the information. I wonder why such amazing biochemistry research is being put back in the archives?

Health Canada link

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<https://www.canada.ca/en/health-canada/services/drugs-health-products/reports-publications/natural-health-products/boron-medicinal-ingredient-oral-natural-health-products-natural-health-products-directorate-health-canada-2007.html#es> )

“Nothing Boring About Boron” Boron is shown in this USA NIH document to:

- 1/ Prevent and heal Osteoarthritis & Osteoporosis.
- 2/ Has anti-cancer effects.
- 3/ Improves brain functions.
- 4/ Speeds wound healing.
- 5/ Increases sex hormones.

USA National Institute of Health source article:

( <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4712861/> )

(Please contact me if you have corrections or additions)