

Excerpt from book titled Silica Water the Secret of Healthy Blue Zone Longevity in the Aluminum age by Dennis N Crouse PhD to be published Fall 2018

Appendix II – Daily Sources of Aluminum

Aluminum can be accumulated in the body by oral ingestion, inhaled as vapor, or injected as an adjuvant in a vaccine. Orally ingested aluminum is preferentially accumulated in the brain, bone, liver, spleen, and kidney of rats⁶⁴ and the brain, breast, retinal, and ovarian tissues of mice⁴³⁹. Aluminum has also been shown to accumulate in the brains of humans²⁶⁶. Inhaled aluminum is preferentially accumulated in the brain of rats via the olfactory nerve⁶⁷. Aluminum in tobacco and cannabis (as much as 0.37% and 0.4% by weight respectively) is volatilized during smoking and is absorbed by the lungs during both active and passive second-hand exposure to smoke⁴⁴⁰.

Avoid products with any ingredient on a label than includes the words: alum, alumina, aluminum, or bauxite.

Daily sources of aluminum are listed in table 36 with the highest indicated with a “*” :

| Table 36. Daily Sources of Aluminum ^{1,174,440-445} | | | |
|---|-------------------------|------------------------------|---------------------------|
| Source of Aluminum (Al) | Examples | Aluminum (mcg) | Safer Alternatives |
| Al Cookware* | Pots, Pans, Calderos, & | 775/liter H ₂ O - | Stainless Steel |
| | Dutch Ovens | 350 °F for 1hr. | Cast Iron |
| | | | Porcelain - Ceramic |
| | | | Non-stick Thermalon |
| | Aluminum Foil | 60,000-220,000 | Non-stick Al Foil |
| | | Per Kg of beef | Parchment Paper |
| | | baked 1-3hr. | Plastic Wrap Under Foil |
| Antacids* | Aluminum Hydroxide: | | Calcium Carbonate: |
| | Equate - Liquid | 138,330/tsp | CVS Natural Antacid |
| | Maalox - Liquid | 138,750/tsp | Aluminum= 90mcg/tablet |
| | Mylanta - Tablets | 69,170/tablet | |
| | Mylanta - Liquid | 170,910/tsp | |

| | | | |
|--|------------------------|-----------------------|---------------------------|
| | Gelusil - Tablets | 69,170/tablet | |
| | | | |
| Antiperspirants | Alum, Bauxite, & | 4/use absorbed | Arm & Hammer Essentials |
| | Aluminum Chlorohydrate | | Schimdts |
| Table 36. Daily Sources of Aluminum - Continued | | | |
| Source of Aluminum (Al) | Examples | Aluminum (mcg) | Safer Alternatives |
| Baking Powder* | Acid = Alum: | | Acid = Cream of Tartar: |
| | Davis | 48,600/tsp | Homemade Baking Pdr.: |
| | “Aluminum Free”: | | Cream of Tartar 2 tsp |
| | Rumford | 790/tsp | Baking Soda 1 tsp |
| | Market Pantry | 930/tsp | Corn Starch 1 tsp |
| | Trader Joe’s | >1,000/tsp | Aluminum < 4mcg/tsp |
| | Whole Foods 365 | >1,000/tsp | |
| | | | |
| Coffee Makers* | Aluminum Containing: | | Non-aluminum Containing: |
| | Drip Style: | | Drip Style: |
| | Black & Decker 1050 | 37-264/liter | BUNN Speed Brew |
| | Cuisinart DCC-450 | 52/liter | Jura Compresso MG900 |
| | Cuisinart DCC-1200 | 182/liter | Nespresso + cups C110 |
| | Percolator Style: | | Keurig K90 |
| | Presto 0281104 | 82/liter | Krups Moka Brew |
| | Hawthorn 3424 | 260/liter | Percolator Style: |
| | | | Farberware FCP-412 |
| | | | Farberware FCP-240A |
| Colorants* | Aluminum Lakes: | | No Aluminum Lakes: |
| | Kellog Cherry Poptart | 1,110/serving | Natural Food Colorants |
| | Marsh Green Cookie | 154/serving | See Color Kitchen’s |
| | Cupcakes: | | |
| | Hostess Orange | 470/serving | |
| | Betty Crocker Blue | 84/serving | |
| | Betty Crocker Red | 3,470/serving | |
| | Okedoke Chessy | 420/serving | |
| | Combos | 350/serving | |
| | Hamburger Helper | 1,040/cup | |
| | Scalloped Potatoes | 380/cup | |
| | M&M Milk Chocolate | 2,950/48 pieces | |
| | M&M Peanuts | 1,410/15 pieces | |
| | Skittles Original | 3,320/61 pieces | |
| | Reese’s Pieces | 660/51 pieces | |
| | Rainbow Nerds | 370/Tbls | |
| | Sprees | 230/8 pieces | |
| | Jawbreakers: | | |
| | Red | 130/3 pieces | |

| | | | |
|--|---|-----------------------|---------------------------|
| | Orange | 50/3 pieces | |
| | Purple | 70/3 pieces | |
| | Green | 50/3 pieces | |
| | Yellow | 27/3 pieces | |
| Table 36. Daily Sources of Aluminum - Continued | | | |
| Source of Aluminum (Al) | Examples | Aluminum (mcg) | Safer Alternatives |
| Cosmetics | Aluminum Containing | | Non-aluminum Containing |
| | Sun Screens & Blocks | | Zinc Oxide Sun Screens |
| | Lipstick | | |
| | Styptic Pencil | | |
| | | | |
| Drinking Water | Tap Water- Alum Treated | 179/liter avg. | Tap Water- Brita Filtered |
| | Bottled Water: | | Bottled Water: |
| | AquaFina | 5/liter | Fiji Water 0 mcg/liter |
| | Eska | 5/liter | Poland Spring 0 mcg/liter |
| | Evian | 7/liter | Starkey Water 0 mcg/liter |
| | Perrier | 13/liter | Volvic 0 mcg/liter |
| | San Pellagrino | 23/liter | |
| | | | |
| E-Cigarettes | 10% Al on Woven Tube in Core of E-Cigarette | 4.4/15 puffs | Avoid E-Cigarettes |
| | | | |
| Food* | Contains Baking Powder: | | Use Aluminum Free B.P. |
| | Brownies | | |
| | Cakes | | |
| | Corn Bread | | |
| | Cupcakes | | |
| | Donuts | | |
| | Biscotti | | |
| | Biscuits | | |
| | Muffins | | |
| | Pancakes | | |
| | Scones | | |
| | Tortillas | | |
| | Waffles | | |
| | Fried Chicken | | |
| | Chicken McNuggets | | |
| | Food Containing Alum: | | |
| | Cheese Shredded | | |
| | Some Mt Olive Pickles | | |
| | Some Salt | | |
| | | | |
| | | | |

| Table 36. Daily Sources of Aluminum - Continued | | | |
|--|--------------------------|-----------------------|---------------------------|
| Source of Aluminum (Al) | Examples | Aluminum (mcg) | Safer Alternatives |
| Pharmaceuticals* | Al as Active Ingredient: | | |
| | Ascriptin Buff. Aspirin | | CVS Buffered Aspirin |
| | Aluminum as Colorant: | | |
| | Bayer LowDoseAspirin | | Walgreen LowDoseAspirin |
| | Citrucel Caplets | | |
| | Levothyroxine | | 50mcg pill is white |
| | Musinex 12 Hour | | |
| | Aluminum for Anticaking | | |
| | Centrum Multivitamins | | |
| | Aluminum as Astringent: | | |
| | Domboro | | Use Epson Salts |
| | Canker Sore Powder | | |
| | | | |
| Pigments | Used for Tattooing | | |
| | | | |
| Soap | Dove Orig Beauty Cream | | |
| | EnviroKlenz Odor | | |
| | Neutralizing Soap | | |
| | | | |
| Spices | Alum* | 5.7% by Wt. Al | Dispose of all Alum |
| | | | |
| Tobacco* | Aluminum Accumulators | 0.4% by Wt. Al | Don't Smoke |
| & Cannabis* | | | |

Vaccines as a Source of Aluminum – Vaccines contain aluminum as an adjuvant. When injected this aluminum is 23% to 73% bioavailable as opposed to ingested aluminum in foods and water that is only 0.2% bioavailable (i.e. the amount that gets into the blood stream and is accumulated or excreted as urine.) Vaccines need to be considered a daily source of aluminum as the aluminum that is used as an adjuvant in the vaccine is released slowly over at least 28 days after the vaccination⁴⁴⁶. Some of the aluminum adjuvants injected as vaccines in rabbits have been found to be accumulated in their brains⁴⁴⁶.

Note that depending upon manufacturer the amount of aluminum for a given vaccine can vary by a factor of approximately 2 so when possible ask for the lower dose of aluminum:

- Daptacel 330mcg and Infanrix 625mcg
- Quadracel 330mcg and Kinrix 600mcg
- Engerix 250mcg and Recombivax 500mcg
- Gardasil 225mcg and Gardasil 9 500mcg

| Table 37. Vaccines that Contain Aluminum | |
|---|-------------------------|
| Vaccine | Aluminum Content |
| Daptacel (DTaP – Diphtheria, Tetanus, Pertussis) | 330 |
| Infanrix (DTaP) | 625 |
| Kinrix (DTaP + Polio) | 600 |
| Pediarix (DTaP + Polio + Hepatitis B) | 850 |
| Pentacel (DTaP + Polio + Haemophilus influenza B) | 330 |
| Quadracel (DTaP + Polio) | 330 |
| PedvaxHIB (Haemophilus influenza B) | 225 |
| Havrix (Hepatitis A) | 250 |
| Vaqta (Hepatitis A) | 225 |
| Twinrix (Hepatitis A and B) | 450 |
| Engerix-B (Hepatitis B) | 250 |
| Recombivax (Hepatitis B) | 500 |
| Gardasil (Human Papillomavirus / HPV) | 225 |
| Gardasil 9 (HPV) | 500 |
| Bexsero (Meningococcal B) | 519 |
| Prevnar (Pneumococcal) | 125 |
| Td (Tetanus and Diphtheria) | 530 |
| Tenivac (Tetanus and Diphtheria) | 330 |
| Adacel (Tdap – Tetanus and Diphtheria Booster) | 330 |
| Boostrix (Tdap – Tetanus and Diphtheria Booster) | 390 |

