



## Protect Your Brain from Toxins

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## What Are the Key Steps Used to Improve Cognitive Function?



- Add brain boosting foods and lower glycemic load
- Meet essential nutrient needs
- Add physical and mental fitness
- Proactively manage stress
- Avoid brain toxins
- These have become the five steps in my Better Brain Solution program

## How to Minimize Toxin Exposure

- Know which brain toxins to avoid
- Know how to limit your exposure
- Detox and increase their removal

## Critical Brain Toxins

- Tobacco
- Excess alcohol
- Pesticides
- Dioxins
- PCBs
- Mercury
- Inorganic copper
- Lead
- Nitrosamines
- BPA
- Phthalates

## Tobacco

- **Tobacco use increases your risk for cancer, heart disease, bone loss, emphysema, erectile dysfunction, as well as for dementia and Alzheimer's disease**
  - Our database showed that smokers could focus better, but there overall cognitive function worsened dramatically
- Tips for quitting:**
- Pick a quit date
  - Consider medication to help you quit
  - 2 weeks in advance, identify the three W's
    - When do you smoke?
    - Why do you smoke?
    - What else could you do to meet your needs at that time

## Excess Alcohol

- While there is some modest brain benefit from 1-2 servings of red wine daily, many people are not able to limit themselves to this amount
  - If you don't drink alcohol, you do not need to start!
  - If you can't drink in moderation, don't drink
- Hard liquor and beer showed no brain benefit at any intake, and small portions increase cancer risk
- Drinking >3 servings of red wine daily appears to harm your brain, increase cancer risk, and raise blood sugar levels
- Alcohol blocks your ability to remove toxins

## Pesticides

- People with high pesticide levels have 350% more risk for dementia than people with low levels
- In the USA, 80% of pesticides come from meat, poultry, and dairy (this intake is likely far less in Europe, Australia, and New Zealand).
  - So buy “organically-raised/grass-finished” meat, poultry, and dairy in the US! Canada has a similar practice of fed-lot feeding to fatten animals before going to market.
- 10% of pesticides come from vegetables and fruits
  - (Yet, most of that from the EWG’s dirty dozen: (strawberries, cherries, apples, nectarines, celery, grapes, cucumbers, cherries, spinach, tomatoes, bell peppers, cherry tomatoes).
- Coffee and tea are other sources of pesticides

## Dioxins and PCBs

- Both increase cancer risk, as well as rates of insulin resistance and diabetes
- Most of their intake comes from consuming non-organic sources of meat, poultry, and dairy products
- To minimize your exposure: Buy organically raised meat, poultry, and dairy products

## Mercury

- Mercury is a brain cell toxin
- Mercury levels in whole blood greater than 11 µg/L are considered elevated, our database shows that levels greater than 15 µg/L slow brain processing speed
- The biggest source of mercury comes from big mouth fish intake (tuna, grouper, snapper, bass, swordfish, shark, tile fish). Typically eating 3-4 servings per month gives 30% of people elevated levels
- Mercury amalgams can increase levels by 1-4 points, big mouth fish can raise levels by 20-30 points

## How to Remove Mercury

- For modest elevations, stop eating big mouth fish
- Gradually get rid of mercury fillings with proper technique
- Herbal supplements will double heavy metal excretion (MetalloClear)
- Oral chelation removes mercury, but clearly has risks. IV therapies have more risk than oral therapies, although they remove faster
  - Chelation removes essential minerals
  - Chelation pulls mercury out of deep tissues (such as bone) and distributes body wide (including the brain) as it is flushed out in urine and stool

## Inorganic Copper

- Organic copper is an essential nutrient and has been in our diet for >100,000 years
- Inorganic copper has only been introduced recently, about the time the Alzheimer’s epidemic started
- Inorganic copper is associated with an increased risk for cancer, and for Alzheimer’s disease
- Sources of inorganic copper include cheap supplements and indoor plumbing

## Tips to Avoid Inorganic Copper

- Buy supplements with NO copper, or with organic copper
  - Copper glycinate, bisglycinate, or amino acid chelates
- Avoid supplements with inorganic copper
  - Copper oxide, copper sulfate (also used as a pesticide), copper carbonate
  - If your supplement doesn’t say what type of copper, most likely it is inorganic
- If you have copper plumbing in the kitchen, get reverse-osmosis filtration for the kitchen to cover your drinking and cooking water
  - Reverse osmosis drinking water is the gold standard for home drinking water

## Lead

- Common in plumbing and paint prior to 1978
- Acidic water makes this problem worse
- If you live in a home built prior to 1978, check your lead level
  - A safe lead level should be zero (none)
    - Children with levels less than 5 mcg/dL have lower IQ scores than children with zero lead
  - If you have memory loss, check your lead level in case you were exposed in the past
  - Chelation therapy removes lead

## Nitrosamines

- Nitrosamines are preservative chemicals used in the production of most processed meats
- Foods that use nitrosamines include:
  - Hot dogs, deli meats, ham, bacon,
- Nitrosamines clearly cause cancer
- Recent evidence from animal studies shows that they also block insulin receptors and cause insulin resistance
- The latest evidence also shows that they are neurotoxic to brain cells and in lab animals they have been shown to cause Alzheimer's disease
- If you eat processed meats, choose organic, nitrosamine free products (such as Butcher Box)

## BPA

- Bisphenol A is used to line cans and containers (such as milk)
- It used to be in baby bottles, until banned
- Consuming two servings per week long term disrupts insulin sensitivity and doubles your risk for diabetes
- Look for BPA-free cans and containers. Buy beverages in glass; it is always better.

## Phthalates

- Phthalates are chemicals found in plastic
- When consumed, Phthalates disrupt hormone receptors, such as for testosterone, and increase the risk for diabetes
- To reduce your phthalate exposure:
  - Always avoid cooking with plastic, or plastic covers
  - Limit drinking out of plastic bottles

## Planning a 5-10 Day Detox

- Burn fat to release toxins
  - Partial fasting (15 hours/day; drink broth and/or water while fasting)
  - Exercise and sweat
- Sweat to increase excretion of toxins
  - Sauna
  - Exercise
- Consume foods that increase detoxification of toxins
  - Curcumin, sulphorafane (broccoli sprouts), milk thistle
- Eat foods that increase detoxification of toxins
  - Garlic, onions, cruciferous vegetables

## How to Compliment a Detox

- Don't consume alcohol when detoxing
- Avoid nightshade plants when detoxing (tomatoes, peppers, potatoes)
- Shift from coffee to tea or herbal drinks, and minimize caffeine intake
- Meditate for 10-20 minutes daily

## 5-Step Guide to a Better Brain

- Step 1: Fabulous Foods
- Step 2: Essential Brain Nutrients
- Step 3: Physical and Mental exercises
- Step 4: Stress management
- Step 5: How to avoid brain toxins

Combine as many steps as feasible.