

FUNCTIONAL NUTRITION METABOLIC DETOX OVERVIEW

Evidence-based, clinically effective protocol for wellness, weight loss, & anti-aging

What does functional nutrition/medicine have to do with detoxing?

Functional nutrition/medicine doesn't "heal" the body or "cure" disease – it simply addresses imbalances (that create symptoms) at the root cause that lead to a state of dis-ease. When this happens, the body heals on its own. The overall goal is to give the body what it is deficient in (nutrients, raw materials) and remove what is blocking it (toxicities) from being naturally vibrant and functioning optimally, and regenerating.

Why do a detox?

We live in a toxic world, and since we cannot escape our environment filled with 77,000 + chemicals, our total body burden grows daily and is not equipped to deal with a massive amount of toxins. We can do our best to remove toxic influences, but we should also do quarterly detox to remove buildup, just as they did in many ancient health care practices.

Think of our bodies like a rain barrel collecting water which represents all of the toxic burdens and debris in our world. Over time, it collects water until suddenly it is at capacity and overflows. This requires it to be emptied in order to work properly again.

Similarly, when our body is overwhelmed and at its tipping point with toxic load, our capacity to process them "overflows" and we begin to see symptoms of internal imbalance and states of dis-ease emerging.

Detoxes empty the rain barrel and eliminate accumulated toxins in the body so it can function optimally.

Toxins are filtered by the liver, which captures and cleans out the debris continuously.

Can you imagine the mess that remains from never cleaning your home or the filter on your vacuum or in your car? Things would be dirty, run less efficiently, and eventually break down.

Likewise, toxins build up from external sources like environmental and commercial chemicals, plastics, personal products, heavy metals, pesticides, poor food quality, etc., and also from internal sources like hidden viruses, bacteria, pathogens, and normal cellular metabolism byproducts and free radicals that age our body and cause inflammation.



Our liver is designed to prevent damage to the body. It filters our blood completely every six minutes and needs an adequate supply of b vitamins, vitamin c, antioxidants, amino acids, and minerals. Without these nutrients it can become clogged and won't work well – this creates toxin storage in the body instead of toxin excretion. The liver then stores toxins in our fat tissue to protect us. However, this creates expanded adipose tissue volume, resulting in puffiness, inflammation, slowed metabolism and weight gain.

Even more, this toxicity causes rises in cortisol and blood sugar levels and our cell receptors become more insulin resistant, setting the stage for metabolic syndrome and type 2 diabetes.

Everything in the human body is connected, and detoxing the liver is a good baseline for reducing chronic symptoms and improving the quality of your health and life!

How to Pre-Tox -- prepping for a Detox 1-2 weeks prior:

- 1. get baseline of measurements waist/weight/resting heart rate/symptoms
- 2. food elimination prep start eliminating caffeine, sugar, alcohol, dairy, gluten, processed foods, sweetened beverages, heavy meats
- 3. familiarize with the foods on the "eat" list
- 4. read the gluten free foods list for reference/education
- 5. shop for ample foods on food list
- 6. prepare food ahead of time and meal plan if necessary
- 7. prepare to be adequately hydrated and consider water quality water filters, glass or stainless steel containers, lemon to add to water, herbal teas
- 8. begin to implement intermittent fasting routine stop eating after dinner, do not eat breakfast until 12 hours later
- 9. optimize sleep hygiene normalize sleep patterns (our liver detoxes at night; need rest to support liver detox)
- 10. get all supplements and food ahead of time, ready to go
- 11. let family and friends know that you are doing a guided medical detox and need their support and understanding during this time
- 12. read resources about what to do during and after the detox program (how to transition off)
- 13. consider adding another 7 or 14 days to the detox
- 14. ask any questions you have!

How long to detox:

• 21 day for first timers or as an annual detox

- 7 days: Quarterly/seasonal
- or every six weeks if very toxic
- one day diet for 24 hour reset days when needed total fast or shake day

When to do a detox:

Detoxes are ideal to do once a quarter when our bodies are also acclimating to a change in season, or when someone is unwell and needing an overall body reset. You may be feeling sluggish and experiencing a host of symptoms, having hormone or blood sugar imbalance, poor digestion, higher levels of inflammation, poor sleep, poor skin issues, and fatigue (just to name a few).

A well-designed detox promotes autophagy (immune system self-cleaning) and provides the nutrients that support the liver cleansing, revitalizing, and recalibrating the body.

What a detox can help with:

Functional medicine detoxes can provide energy, mental clarity, emotional balance, feeling light, better digestive health, reduction of vague and general symptoms, and can have anti-aging benefits from reducing oxidative stress and improving nutritional assimilation.

A functional medicine liver detox will promote rebalancing in:

- Metabolism and weight
- Healthy inflammation levels
- Healthy blood sugar levels
- Hormone balance/estrogen dominance
- Toxin reduction
- Joint pain
- Allergies
- Digestion

- Brain fog
- Skin appearance
- Energy
- Mood
- Libido
- Sleep
- Healthy, whole food consumption

While there are many other practices that contribute to healthy living such as sleep, exercise, stress management, mindset, nutritional supplementation, emotional balance, relationships, time in nature, a clean environment, etc.., a detox is an ideal starting point. It will jumpstart your health and provide a clean slate. You can gradually add more changes for long-term, sustainable self-care that promotes overall quality of life and longevity.

Added Detox benefits:



- water helps hydrate, flush out accumulated toxins overnight (when liver is doing its job the most), easy to digest, helps with joint pain, congestion, fatigue, headaches
- low cost/net zero cost due to meal replacement supplements
- loaded with antioxidants for energy eliminate need for caffeine
- does not spike blood sugar or cortisol (no activation of stress response, which also spikes insulin)
- support autophagy (body's self cleaning mode) for immune function—breaking down and removing harmful/dead tissue in the body. Our white blood cells attack viruses, bacteria, cancer cells, etc. 30% of our energy goes to digestion -now it can go towards immune system function and clean house of debris
- Maximum micronutrients (but low calories) means the body will feel satiated since it is getting what it needs nutritionally
- Reduces cravings, food addictions, and removes common inflammatory food sensitivities

How the Liver detoxes:

There are two phases to liver detox, which require various vitamins, minerals, and amino acids. In phase 1 the liver uses fat-soluble vitamins to break down stored toxins into a harmless water-soluble form that can be excreted in phase 2 through the stool, urine, lungs, and the skin. The liver is the epicenter of how the body stays pure and clean.

The Liver and our detoxification process is affected negatively by:

- Alcohol
- Excessive work load
- Smoking
- Rx/OTCs
- Infections/Illness
- Stress
- Processed food
- Non-organic food/glyphosate
- Environmental toxins/heavy metals
- Soils deficient in key detox-supportive minerals
- Allergies/food intolerance (WBC's working to break down things affecting body)
- Poor eating habits/undernourished
- Coffee/energy drinks (metabolized by liver, slows down CP54-0 phase 1 detox pathway)
- Genetic variances affecting liver function

The liver's key roles:

- Immunity against infection removes bacteria from blood
- Makes most proteins needed by body
- Makes cholesterol (which we need for all cell makeup and brain health)
- Excretes waste via bile
- Bile for fat digestion
- Converts excess glucose to glycogen for storage of fuel
 - o Breaks down nutrients from food to convert to energy as needed
- Prevents nutrient deficiencies by storing vitamins, minerals, and glucose
- Regulates blood clotting
- Clears blood of drugs, chemicals, alcohol
- Hormonal regulation clears excess estrogens

What the liver removes during a detox:

- Endotoxins
- Exotoxins
- Pathogens
- Carcinogens
- other harmful substances and waste products

Toxins are made water soluble by the liver and excreted by our:

- Kidneys-urine
- Skin-sweat
- Lungs breath
- bile-feces

The liver needs specific nutrients for detox:

Toxins picked up in blood and filtered through liver, which needs antioxidants and key nutrients to bind (fat soluble) toxins and make them (water soluble) harmless for excretion in two phases.

Phase 1:

- B vitamins:
 - o Riboflavin (b2)
 - Niacin (b3)
 - Pyridoxine (b6)
 - o **B12**
 - o **B6**

- Glutathione
- Branched chain amino acids
- Flavonoids
- Phospholipids
- Fat soluble vitamins a &d

calcium

Intermediary stage (free radical quelching)

- Vit a
- Coenzyme q 10
- Vit c
- Thiols (garlic onions cruciferous)
- Tocopherols (vit e)
- Selenium

- Copper
- Bioflavonoids
- Zinc
- Silymarin (milk thistle)
- Manganese
- Pycnogenol

Phase 2: think proteins, esp. bone broth, gelatin, eggs, fish

- Amino acids:
- NAC
- Glycine
- Taurine

- Glutamine
- Cysteine
- Methionine

Why we need specific nutrients for detoxification:

- needed for phase 1 liver detox (converting harmful fat soluble toxins into water soluble compounds) and phase 2 liver detox (elimination of water soluble toxins)
- when the body is in fat burning mode, more toxins will be released from fat tissue where it is stored
 - additional support needed from specific vitamins, minerals, antioxidants, and amino acids so liver can keep up and clean them out so they don't recirculate in the blood.

Formulated Supplements to support liver detox (look for an all in one supplement):

- activated multi-vitamin (phase 1 & 2 liver detox)
- chelated multi mineral (phase 1 & 2 liver detox)
- electrolyte formula (energy, metabolism)
- methylated b-complex (energy, detox, lower stress)
- pure antioxidant formula (detox, anti-aging)
- flax seed (fiber, detox, omega-3/anti-inflammatory, bowel movement support)
- psyllium husk (fiber, detox, bowel movement support)
- chromium (blood sugar stabilization)
- broccoli extract (sulfurophane for detox, kill cancer cells)
- Liver detox support with milk thistle
- I-glutamine (detox, tissue & gut repair, muscle sparing)
- vegan protein powder (specific amino acids & muscle sparing)

 Ayurvedic supplement removes toxins via intestines (ginger, turmeric, trifola helps gut health and intestinal detox)

Detox Program Food Eliminate List (short term):

- Inflammatory foods
- **Allergenic foods
 - o Eggs
 - dairy
 - o gluten
 - o soy (organic, fermented tofu/tempeh is allowed)
 - corn
- GMO foods
- Sugar
- Artificial sweeteners
- Coffee/tea/caffeine
- Processed food, refined carbohydrates
- Food colors, preservatives, additives
- Nitrates, MSG, etc.
- Fried food
- High glycemic load foods
- All farm raised fish
- high mercury fish
- non free range animal proteins

Detox Program Food Include List:

- Nondairy milks (unsweetened)
- Numerous non-starchy vegetables eat the rainbow
- Wild caught fish
- Free range eggs, chicken
- Starchy vegetables: sweet potatoes, squashes
- Low glycemic fruits
- Healthy oils (coconut, olive, ghee, avocado oil)

Additional supplements for Digestive support:

In addition to therapeutic food, supplements such as key vitamins and minerals, digestive aids, non-pharmaceutical anti-parasitic anti-bacterial herbs, beneficial compounds, herbal extracts can all contribute to mucosal repair. They can support the

^{**}short term (7-28 days) removal of potentially allergenic foods will support detoxification and immune health until food testing or reintroduction phase

immune system, overall gut health to promote healing and help restore the body's natural detoxification function

- Zinc
- Antioxidants (vitamins A, C, E)
- Omega-3 fish oils
- Ginger
- Turmeric
- L-glutamine
- Aloe Vera Juice

- DGL Licorice
- Collagen powder amino acids, easily absorbed for impaired digestion, repairs digestive tract, reduces fatigue, helps leaky gut
- Probiotics (pharmaceutical grade only)

About Detoxification And The Importance Of Gut Health:

Detoxification is directly connected to gut health, and poor gut health often leads to poor detoxification capacity. The integrity of our digestive lining can cause exposure to internal toxins leaking from our digestive tract and going to the liver (as seen in leaky gut or intestinal permeability). Toxins, microbes, and food particles escape into the blood stream. Also, bile from the liver aids in digestion and detoxification, and good microbial balance assists in nutrient assimilation and proper bowel movements for ongoing detox.

Additional factors adding to poor detoxification:

It is recommended to work with a trained functional nutritionist to address potential reasons for detoxification impairment and/or to detect sources of increased toxic load. A compromised detoxification capacity can often be from ongoing factors such as:

- Inflammatory food intake and high glycemic load
- Pharmaceuticals/recreational drugs/cigarettes/alchohol
- Poor nutrient intake (lack of vital nutrients and cofactors needed for the liver to detox consistently)
- Poor nutrient absorption/assimilation
- Hidden gut infections: bacteria, parasites, fungi, yeast/candida
- Dysbiosis imbalanced microbial populations of favorable/unfavorable bacteria
- Genetic variances affecting liver function and ability to detox properly (MTHFR/COMT)
- Environmental/chemical toxin load
- Heavy metal toxin load

It is beneficial to use lab testing, targeted nutrition and supplementation, and health rebuilding protocols to rebalance the body and support liver function.



About the All-In-One Functional Medicine Detox Plan

Includes all supplements with key nutrients to support phase 1 and 2 of liver support

What does the detox entail exactly?

The 7, 14, or 21- day protocol relies on basics of liver detoxification, which includes:

- 1. Nutrition from key vitamins, minerals, and compounds in food and carefully formulated herbs
- 2. Hydration
- 3. Bowel movements to excrete waste
- 4. Elimination of inflammatory and allergenic foods
- 5. Sleep/rest
- 6. Autophagy, where the body can "clean house" and further remove build up. This is supported through a) intermittent fasting and b) the two day initial liquid fast days.

What to expect:

It is common to experience some symptoms, especially during the first few days of the detox. It is NOT uncommon to feel worse before you feel better during a healing process, and this can actually be a GOOD sign that things are moving along. Symptoms may include:

- low energy
- low mood
- headaches
- nausea
- irregular bowel movements

You will most likely feel hungry the first two days during the liquid fast. Just know this will pass and stay hydrated and distracted!

Thankfully, keep in mind that the long term benefits include clearer thinking, improved digestion, weight loss, increased energy, vibrant skin, and deeper sleep just to name a few.

You can do this!

Non-negotiables for detoxing:

 It is important to take it easy and avoid intense exercise during the first two days of the detox.



- It is also important to hydrate. Aside from the shakes, it is recommended to drink ample water or tea throughout the day.
- Making sure you have bowel movements (at least once per day) is key for detoxification, otherwise the toxins being excreted by the liver will recirculate throughout the system if they are not excreted via stool. Proper elimination means having a bowel movement at least once per day, that is ideally easy to pass.

Some things that can support regular bowel movements are water, Epsom salts baths, taking additional magnesium citrate in the evenings, adding extra psyllium husk or flax meal to smoothies, drinking ample water, and making sure you are getting the adequate recommended amount of fiber from non-starchy vegetables. Adding a **probiotic** if you are not currently taking one is also important (please ask for recommendations on this, as quality is highly important. Most forms of probiotics do NOT survive the digestive tract appropriately).

How to Purchase: Contact Carly or order your detox kit online directly with the following link: https://track.equilibriumnutrition.com/SH1ZW

The FM detox protocol meal plan outline:

1. Nightly 12-hour overnight fast

- Stop eating 2-3 hrs before bed
- No food after dinner until waking (example: "fast" 7pm 6/7 am)

2. When to eat

- Eat every 3.5 hrs beginning 1 hr after waking and 2-3 hrs before bed
- Upon rising, Drink warm water with lemon
- Up to 60 minutes later drink smoothie





3. What to eat and drink:

Days 1 & 2 (4 shakes per day)

- 4 daily detox shakes per day (only 1 scoop each)
- 2 AYU caps each in AM and PM
- 2 FM caps each in am & pm

Days 3-7 (2 shakes & 2 detox meals)

- 2 daily detox shakes per day (increase to 2 scoops each)
- 2 detox meals lunch and dinner
- 2 ayu caps both in am & pm
- 2 fm caps both in am & pm

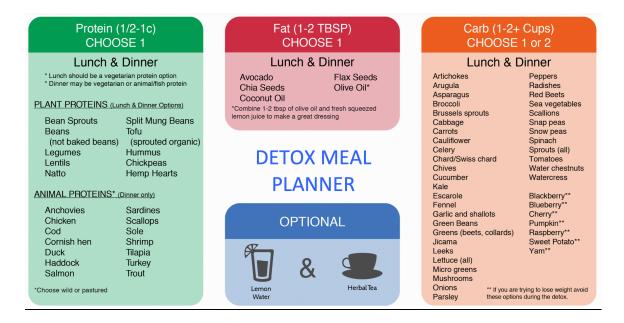
^{*}shake serving sizes: make sure to measure scoops and follow directions for serving sizes – the shake powder is pre-measured and you don't want to run out!

^{*}beverages – drink filtered water and herbal tea only, as much as you want to stay full

^{*} **food** -- choose from the lists provided. You may consume as many non-starchy vegetables as you wish to stay full (**not** pumpkin, sweet potato, or yam)



*please note if you are trying to lose weight, it is recommended to avoid all starchy vegetables and fruits as noted during the detox



Detox Summary:

What is a Functional Medicine Detox?

A functional medicine liver detox is a scientifically proven, clinically effective, carefully formulated nutritional based protocol that can address a host of ongoing mental, emotional, and physical symptoms at the root cause level by supporting the bodies' ability to clear out accumulated toxins that contribute to health issues.

A FM detox rebalances the body, jumpstarts internal healing mechanisms, and teaches you how to take preventative measures against chronic disease and create vibrant health using food and lifestyle practices.

Why Do A Functional Medicine Liver Detox?

We live in a world where toxins are unavoidable. The burden on our body grows daily from chemicals, heavy metals, pesticides, and more. Aside from the numerous environmental sources, our body has to deal with its own internal toxic build-up from viruses, bacteria, normal cellular metabolism byproducts, and free radicals that age us and cause inflammation. These effects of toxins are enhanced by poor nutrition, lifestyle, stress, and genetic variances. When our body is overwhelmed by toxic load and at its tipping point, we see symptoms and disease can emerge.

We can do our best to avoid toxic influences, but like we change our car or vacuum filters, we also need to clean our body's filter — **our liver** — in order to remove toxic buildup, promote optimal health and avoid disease. Removing toxic burdens, providing targeted nutrients, and using key supplementation optimizes the body's natural detoxification system and has a positive domino effect on improving health. While other practices contribute to healthy living such as daily food intake, sleep, exercise, stress management, mindset, nutritional supplementation, relationships, etc., a detox can jumpstart better health. Gradually adding more positive changes will enhance the effects of regular detoxification efforts to promote overall quality of life and longevity.

A Functional Nutrition Liver Detox Can Promote Rebalancing In:

- Metabolism and weight (promoting healthy weight loss)
- · Reduced inflammation levels
- · Healthy blood sugar levels
- · Hormone balance/estrogen dominance
- · Immune function
- · Joint/muscle pain
- · Allergies
- · Digestion
- · Gut health/microbiome
- · Brain fog/cognition
- · Skin appearance
- Energy
- · Mood
- · Libido
- · Sleep

This is a great place to start to take care of any symptoms you may be experiencing and boost your metabolism, immune health, mood, digestion, and more! congratulations on taking the step towards better health:)