

# THE 3 PHASES OF DETOXIFICATION

## Healthy Function

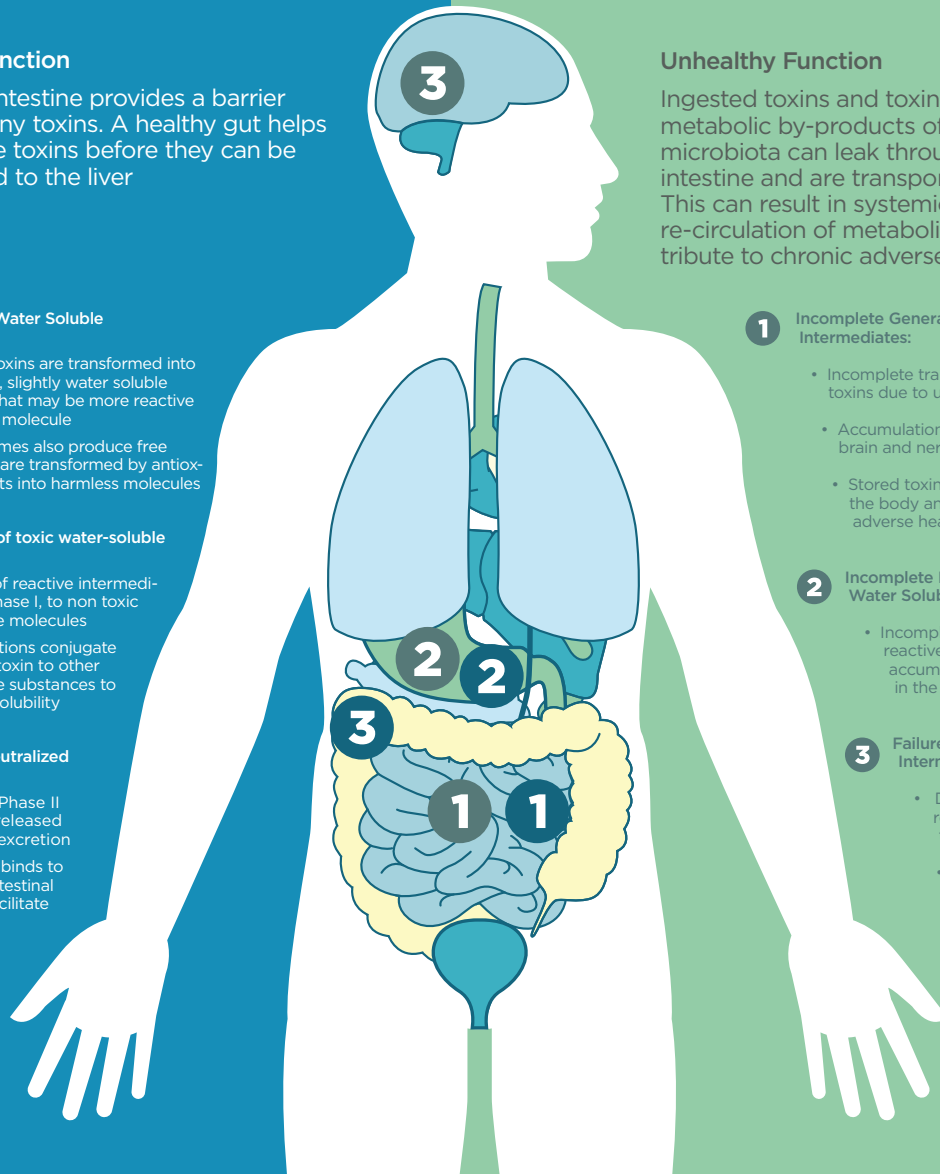
A healthy intestine provides a barrier against many toxins. A healthy gut helps to eliminate toxins before they can be transported to the liver

- 1** **Generation of Water Soluble Intermediates:**
  - Fat soluble toxins are transformed into intermediate, slightly water soluble substances that may be more reactive than original molecule
  - Phase I enzymes also produce free radicals that are transformed by antioxidant nutrients into harmless molecules
- 2** **Neutralization of toxic water-soluble intermediates:**
  - Conversion of reactive intermediates, from Phase I, to non toxic water soluble molecules
  - Phase II reactions conjugate (attach) the toxin to other water-soluble substances to increase its solubility
- 3** **Excretion of Neutralized Intermediates:**
  - Neutralized Phase II substances released into bile for excretion
  - Dietary fiber binds to biliary and intestinal toxins and facilitate excretion

## Unhealthy Function

Ingested toxins and toxins formed as metabolic by-products of an unhealthy microbiota can leak through a weakened intestine and are transported to the liver. This can result in systemic accumulation and re-circulation of metabolic toxins and contribute to chronic adverse health conditions

- 1** **Incomplete Generation Of Water Soluble Intermediates:**
  - Incomplete transformation of fat soluble toxins due to unhealthy liver
  - Accumulation of toxins in fatty tissues, brain and nervous system
  - Stored toxins may recirculate in the body and contribute to chronic adverse health conditions
- 2** **Incomplete Neutralization Of Toxic Water Soluble Intermediates:**
  - Incomplete biotransformation of reactive intermediates can lead to accumulation of 'activated toxins' in the body
- 3** **Failure to Excrete Neutralized Intermediates:**
  - Diets poor in fiber intake results in reduced elimination of circulating toxins
  - Toxins are re-absorbed and re-circulate in the body.



## HOW WE CAN START REDUCING OUR TOXINS EXPOSURE



**Keep A Clean Work & Home Environment**  
Do all you can to purify your work space or home.



**Protect Yourself When Needed**  
Remove all toxic and/or chemical substances, such as insecticides, dyes, and paints. If you're using these, be sure to wear protective gloves and gear. If these items can't be removed, use an air purification system.



**Nurture To Neutralize**  
Eat wholesome, healthy foods as a primary part of your diet. Try to avoid anything with refined sugar or high in preservatives. Consume meat from organically raised animals and organic produce whenever you can