

# LIVER DETOXIFICATION PHASES

## **Liver Function**

Everything we are exposed to, or take into our bodies gets processed through the liver. As the body's hardest working organ, the liver works tirelessly, performing many important tasks. In addition to producing and converting necessary hormones, it is also continuously neutralizing and detoxifying our systems from harmful substances. In this process the liver uses special enzymes to transform toxins from harmful substances to harmless substances that can then be processed out of the body. This detoxification process happens in three phases.

## **Phase I**

Phase I liver detoxification involves the cytochrome P450 supergene family of enzymes. Their role is to convert the fat-soluble toxins into more water-soluble molecules so they can be further metabolized during Phase II.

## **Phase II**

Phase II liver detoxification further engages the Cytochrome P450 enzymes to process the primary metabolite by way of conjugation. The conjugation process uses methylation, glucuronidation, acetylation, sulfation, glutathione conjugation and amino acid

conjugation to further biotransform the primary metabolites. The result is the biotransformation of a lipophilic compound into a water-soluble compound that is able to be removed in urine or bile.

## **Phase III**

Phase III liver detoxification involves further detoxification of the cells. The enzymatic complex proteins expel the toxins from the cells, particularly those that have been modified to become water soluble and less toxic due to the phases I and II detoxification complexes. Phase III involves antiporter activity, wherein xenobiotics are pumped out of the cells.

## **Liver Cleansing**

For deep and effective cleansing of the Liver, contact your holistic health practitioner to discuss various methods of liver/gallbladder cleansing. Cleansing the liver and gallbladder can have so many wonderful effects. By being less toxic, you can enhance your mental clarity, your energy level, your mood and sense of well-being. When toxins are unloaded and digestion gets back on track, all systems of the body are happier. ♦