**[Carol Savage](https://www.facebook.com/carol.savage.16)** posted in MTHFR Gene Mutation.

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[**Carol Savage**](https://www.facebook.com/carol.savage.16)**‎**[**MTHFR Gene Mutation**](https://www.facebook.com/groups/230824260340671/)

MULTICHEMICAL SENSITIVITY…and MTHFR  
  
Methyltetrahydrofolate [MTHFR]  
The MTHFR Enzyme is in charge of making L-Methyl Folate which is the final product of that enzymatic reaction.  
  
L-Methyl folate [5-MTHF]  
L-Methyl folate [5-MTHF] is needed to convert HOMOCYSTEINE into Methionine.  
  
PICTURE: Chemical Processes involved in PHASE I and PHASE II metabolism within the LIVER  
  
HOMOCYSTEINE  
With an insufficient amount of L-Methyl Folate there may be a buildup of HOMOCYSTEINE. Too much Homocysteine can cause all sorts of problems such as:   
1. Increased blood clotting   
2. Irritation and damage to the intima [inner lining of blood vessels]   
3. Interfere with cartilage development and healing   
  
As a result of the elevated HOMOCYSTEINE the person will be at greater risk of blood clotting, strokes and coronary artery disease just to name the most obvious problems that can occur due to too much Homocysteine.  
  
S-AdenylMethionine [SAMe]  
If Homocysteine cannot adequately be converted into METHIONINE, then subsequently there will be insufficient S-AdenylMethionine [SAMe]. Now we are talking about a pathway frequently called the "Methylation Cycle" but it HAS another name… "The SAMe Cycle".  
  
The major purpose of the "Methionine/SAMe-Cycle" is to make SAMe.  
SAMe is needed as a cofactor in many biochemical reactions where a Methyl Group is need to be added to a molecule to either make it active or more frequently INACTIVE.  
  
LIVER  
In the liver, one of the important processes affecting the breakdown of medications occurs during the second II PHASE of liver metabolism. One of several processes that take place during PHASE II of liver metabolism is "Methylation".   
  
PHASE I  
Oxidation  
Reduction  
Hydrolysis  
Hydration  
Dehalogenation  
  
PHASE II  
Sulfation  
Glucoronidation  
Glutathione Conjugation  
Acetylation  
Amino Acid Conjugation  
Methylation\*  
  
If the person has insufficient ability to Methylate and inactivate molecules [toxins] in the liver, then the body will not be able to eliminate them. Consequently there will be a buildup of these unwanted molecules and the person's health will suffer.  
  
MULTICHEMICAL SENSITIVITY  
People with MultiChemical Sensitivity may have a greater problem eliminating medications [molecules] that need to be broken down and eliminated from the body. If the person’s LIVER cannot methylate some of these molecules then those molecules will build up in the body and cause harm.

