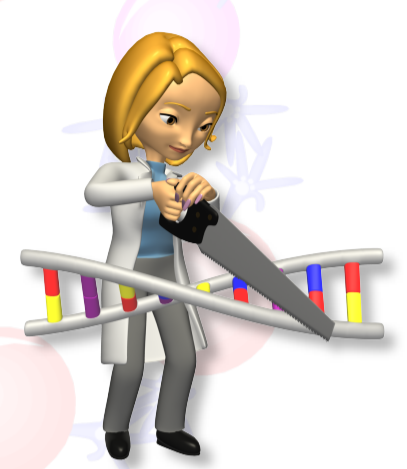


Methyl groups are small carbon-hydrogen units within organic molecules which participate in most of the important physiologic processes in our body. They help create, build, rebuild, protect, energize, etc. Billions of methylation processes take place each second in our bodies. How we allocate our methyl groups, and how well we recycle them, dictates how we feel, how we heal, how quickly we age, how much energy we have...

It is not easy to make a complicated concept easy. This map offers links to experts -- researchers and clinicians -- who try to do that.

WHY IS METHYLATION SUB-OPTIMAL?

Genetic polymorphisms in pathways
 Deficiency of required nutrient cofactors
 Aging, decreases of estrogen, IGF-1
 Shunting of methionine down glutathione pathways
 Increased need for glutathione due to oxidant cascade
 Epigenetic blocking of GSH pathways by gluten, casein, thimersol, more



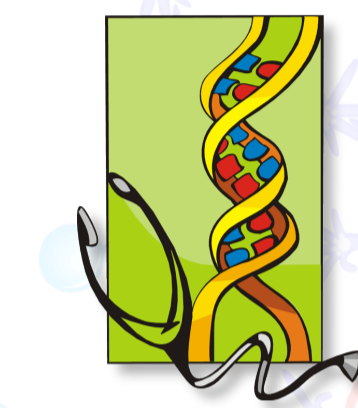
**METHYLATION:
 GENETICS OF EHS, AUTISM
 NUTRIENTS, PHARMACEUTICALS, TOXINS**

Nutrition and Methylation



- [Gene-nutrient interactions](#)
- [Nutrition and the Epigenome](#)
- [Homocysteine and methylation, review](#)
- [Homocysteine, methylation, folate, depression](#)

Diagnostic Testing



- [Homocysteine](#)
- [Genetic testing](#) ★ [MTHFR defect](#)
- [Whole blood histamine](#)
- [Functional Diagnostics](#)
- Urine [Methylmalonic acid \(B12\)](#)
- [Estrogen ratio \(methylation capacity\)](#)
- CBC [Neutrophils \(B12, folate\)](#)
- [Mean cellular volume \(B12\)](#)
- [Total WBC, RBC \(B12, folate\)](#)

[Dr. Amy Yasko: Sample Methylation Pathway Analysis](#)

Important methylation functions

- [PharmRev](#)
- [Histone Methylation](#)
- [Nutrition and the epigenome](#)
- [Methylation and Homocysteine](#)
- [Walsh: Overmethylation, Panic](#)
- [Walsh: Undermethylation, OCD](#)
- [Dr. Lawrence Wilson: Methylation](#)
- [Role of methylation in gene expression](#)
- [Dr. Jeff Bland: Systems Biology, Folates](#)

Video Links (Exc. Deth, Yasko)



- [Mark Hyman](#)
- [Kendal Stewart](#)
- [Konynenburg: Methylation](#)
- [Video: methionine-Methyl cycle](#)
- [Video: methylation, homocysteine](#)

WHY IS METHYLATION IMPORTANT?

- Neurotransmitter manufacture, balancing
- Methylation of homocysteine for recycling
- Myelination, pruning
- Membrane fluidity, phospholipid methylation
- DNA protection, repair
- Hepatic detoxification
- Antioxidant of antioxidants
- Energy production
- Activating mechanisms of attention control
- Synthesis: methylB12, CoQ10, carnitine, more

METHYL GROUP IS THE SIMPLEST COMPOUND IN ORGANIC CHEMISTRY.



Home: [Oscillatorium.com](#)
 Newest version [this map](#)
 Date of this update: 01-19-16

"... B12 levels are not a sensitive marker for adequacy of B12 function... Assessment of B12 status in practice involves measurement of a number of parameters, including the physical exam (depression, impaired balance, panic, neuropathy) the size of red blood cells (MCV), Hematocrit, homocysteine, and functional immunoassays. R. Hedaya

SEE MAP: METHYLATION, GLUTATHIONE, EMF

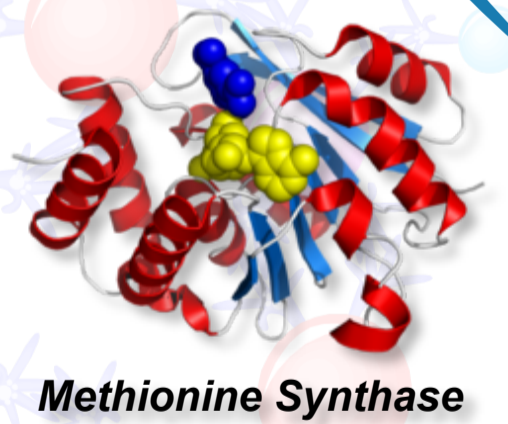
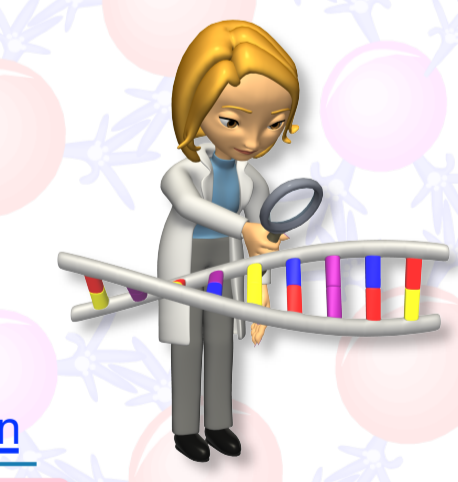
Free radical stress increases the need to make glutathione. Need for glutathione can turn off the methylation pathway, and repair slows down. Aging increases need for antioxidants, decreases the activity of the methylation pathway.

Articles

- [Methylation cycle](#)
- [Nutrition, methylation, depression](#)
- [Glutathione and methylation cycle](#)

Dr. Amy Yasko

- [Basic into](#)
- [Use of RNA](#)
- [Why we need it](#)
- [All Yasko documents](#)
- [Dr. Yasko: diagrams](#)
- [Graphic: Low methylation](#)
- [MTHFr, methylation, metals](#)
- [Video: Yasko Protocol, Autism](#)
- [Nutrigenomics, methylation, RNA](#)
- [Dr. Yasko: methylation cycle diagram](#)
- [Nutrigenomic analysis of methylation cycle](#)



Methionine Synthase

Dr. Richard Deth

[DAN Presentation](#)



[Vaccine Safety Presentation](#)