

# MTHFR Related Health Problems

## Definition

- Methyl TetraHydro Folate Reductase Deficiency
- Results in slower than normal methylation processes
- wiki →
- Heterozygous
  - Only one gene
  - Function 50 to 70%
  - 40% of population
- Homozygous
  - Both genes affected
  - 7 to 10% of normal function
  - 30% of population

## Types

- 50 variations
- Most Common
  - 677
  - 1298
  - 677 + 1298

## Attributes

- 677
  - Elevated Homocysteine
  - Cardio Vascular Disease
  - Stroke
  - DVT (deep venous thrombosis)
  - Peripheral Neuropathy
  - Still Births
  - Pre-Eclampsia, Neural tube, cleft lip
  - Depression, anxiety, IBS
  - Fibromyalgia
  - Chronic Fatigue
  - Dementia
  - Schizophrenia
  - Parkinson's
  - TetraHydroBiopterin Problems (BH4)
  - Migraines
- 1298
  - Symptoms of both defects
  - More Severe
  - Blood clots
- 677 + 1298
  - Clearing heavy metals
    - Lead
    - Mercury
    - Aluminum
  - Symptoms progress with time
  - Cancer risk increased
  - Renal failure
  - Addiction Potential
    - Drugs
    - Video Games
    - Pornography
- All have problems
- Aggravating Factors
  - Heavy metal exposure
    - amalgams
    - vaccines
    - fish
    - aluminum cookware
    - occupational
  - Poor Diet
    - processed foods
    - hydrogenated fats
  - Anesthesia
  - Other Enzyme Defects
  - Comorbid Disease
    - Diabetes
    - Lymphoma
    - Leiden Factor V
- Helpful Measures
  - Dietary
    - vegetables
    - berries
    - fruits
  - Exercise
  - Music

## Lab Testing

- Blood
  - Liver enzymes
  - Ferritin
  - Homocysteine
  - HS Crp
  - MTHFR Profile
  - Genetic
  - Nitro Tyrosine
    - Measures oxidative stress
    - Special Lab only
  - Glutathione
  - B12
    - May be high
    - body unable to use
- Urine
  - Heavy Metal Challenge
  - Urine Organic Acids
  - Toxin Screen
- Misc
  - GI Health
    - If GI symptoms present
  - Food Allergy

## Detoxification

- Nutritional Plan
- Body Cleansers
  - InfraRed Sauna
  - Clay Baths
- Rules
  - Fix bowel 1st
  - Do Slowly

## Toxin Control

- Avoid
  - Household chemicals
    - Art Scents
    - cleansers
    - Pesticides
  - Chronic Chemical Exposures

## Diet

- Avoid
  - Hydrogenated fats
  - Processed Foods
- Increase
  - Vegetables
  - Fruits

## Treatment

- Supplements
  - MB12
    - Not absorbed orally
    - Compounded
    - Inj. every 3 days
  - Methyl donors
    - DMG
    - TMG (Betaine)
  - Fatty Acids
    - Fish Oils
    - Flax Seed
  - Minerals
    - Zinc
    - Selenium
    - Magnesium
  - Vitamins
    - Vit E
    - Vit C
    - Amino Acids
    - B Complex
  - Herbs
    - Silymarin
    - Liver detoxifier
- Medications
  - Active Forms of Folate
    - MetaNx
    - Neevo
    - Deplin
    - Cerefolin
    - L methyl folate
      - Hard to find

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