



Day 1

Part 1 – Histamine Intolerance and Mast Cell Disorders

Histamine and mast cell disorder– What is it?
Histamine Overview: synthesis and Metabolism:
DAO (Diamine Oxidase) enzyme
Histidine Decarboxylase (HDC) - H Pylori, Allergic rhinitis
Histamine-N-Methyltransferase (HNMT)
Histamine as Neurotransmitter
Classification of Histamine Receptors
Histamine and Neuro Disorders (Tourettes and OCD)
Asthma
Genomics/SNPs Affecting Histamine
Methylation Connection

Part 2

Histamine Disorders: histamine intoxication-Scombroid,
Intolerances (The bucket) and Food triggers
DAO Blocking foods and medications
Mast Cell Overview: mediators and degranulation
MCAS Signs & Symptoms: restless leg syndrome, etc
Mast Cell Activation Disorder Classifications; clonal, non-clonal
Histamine Intolerance (HIT) Vs Mast Cell Activation Syndrome (MCAS)
Related conditions/disorders
 Postural Orthostatic Tachycardia Syndrome (POTS), Ehlers Danlos Syndrome (Eds), OA
 MS, mood disorders,

Part 3

Root causes and Triggers of Histamine and Mast Cell degranulation
 Specific to women: Estrogen, progesterone, HRT and DHEA
 Hypoxia, Infections, Lyme Disease, MARCons, Alpha-melanocyte Stimulating Hormone
 (alpha-MSH), and Biotoxin Illness
The Gut Health Connection
 Histamine in Gastric Acid, Short Chain Fatty Acids
 Gut Microbiota and Probiotics: Caution-Histamine, Microbiota and Fermented Foods
 Leaky Gut, LPS, Antihistamines/ Proton Pump Inhibitors, Oxalates and Salicylates
MCs and Neuro-immune Network: The Gut-Brain Connection

Day 2

Part 4

Methylation Review: S_AMe, HNMT
Metalloproteins (metallothionein) – ceruloplasmin
 Connection to Heavy Metals, Food sensitivity, Glutathione
Oxidative Stress, Vitamin B6
Kryptopyrroluria (KPU)/Pyroluria: Pfeiffer Protocol
 Pyroluria Questionnaire
Histadelia - Undermethylation: overview
MAO in Histamine Breakdown
Associate Blood labs
Histadelia (high histamine): Undermethylation
Histapenia (low histamine): Overmethylation

Part 5

Stress and Traumatic Experiences; childhood trauma, serotonin
Cortisol, CRH/F, Stress-induced Hypo-cortisolism,
 Brain effects/dementia
 Methylation, BH₄, and Mast Cells, COMT
MC Neuroendocrine Triggers:
 Leptin, Melatonin, neurotransmitters, Pineal gland, etc
 Sleep, circadian hormones, growth factor, neuropeptides

Histamine Intolerance & Mast Cell Activation Overview Cheat-Sheet (Handout)

Part 6

Classification and Diagnosis of Mast Cell Diseases/Mastocytosis
 IgE/non-IgE, Clonal vs Non-clonal, monoclonal (MMAS), c-KIT: Receptor Tyrosine
 Kinase, Mastocytosis (and related classifications), Hereditary alpha Trypsinemia (H α T)

Day 3

Part 7

Histamine and MCAS dysfunction
Vitamin D connection
Glutathione
Genetics Variants
Serum diamine oxidase (DAO)
MCAS, Primary, Secondary, & Idiopathic ?
Histamine Intolerance Tests
Advanced intestinal barrier assessment testing: LPS
 Low LPS Levels
Mast Cell Testing
 Diagnostic Challenges, Issues & Concerns
 Tryptase and IgE
 Oxalates Issues, OAT and Lectin

Part 8

Treatment overview
Triggers: food, supplement, drug and non-food triggers
Support Meds and therapies
Mast Cell Stabilizers - Tyrosine Kinase Inhibitors
Diet support More on “The Bucket”
Biogenic Amines: Low Tyramine Diet
DAO Boosting Foods
Other Diets: Low Lectin Diet, Low Oxalate diet, Low FODMAP diet, Low Salicylate diet, Gluten/casein free and other allergy elimination diets, Candida diet, Low sulfur diet

Part 9

Natural Treatments for MCAS
Classification and priorities of support supplements
Sources of mast cell stabilizers: 1st, 2nd and 3rd line of defense in MCAS
can delete below?
1st line: Vitamin C, Quercetin, Green tea, Curcumin, Resveratrol, DAO enzymes
2nd line: Luteolin, Ginkgo biloba, Silymarin, Shea oil, Ellagic acid, Pycnogenol, Magnolia/Honokiol, Parthenolide (Feverfew)
3rd line: Fisetin, Rutin, Genistein (isoflavone), Mangostin, Xanthium, Isatis (indoline), andrographis and sulforaphane
COMT SNP
Anti-inflammatory support
Palmitoylethanolamide (PEA)
PEA inhibition of MC
Anadamide (AEA)

Day 4

Part 10

Pain/Anti-inflammatory Support

Cannabidiol (CBD) pain related benefits and mechanism

Tetrahydrocannabinol (THC) pain related benefits and mechanism

Hemp

Tx of Pain In MC Disorders

Compounds Targeting NF-kB in Mast Cells

Bromelain: mechanism of action

Spice derived compounds that may counter inflammation

Mast Cells and Circadian Rhythm - Pineal Gland: calcification, melatonin and PG calcification?

Bioactives Down-Regulating MC Release: AMPK, Cyclic GMP, and Hydrogen Sulfide

Down-Regulation of MC Degranulation: biotin, berberine, and lipoic acid

Nutraceuticals, Sulforaphane, Spirulina (Blue/Green Algae) and Low Histamine Protein Powders

Part 11

Add'l Mast Cell Stabilization Support

Kaempferol, Black Cumin Seed, Magnesium, zinc

Helpful Probiotic Example Brands

Natural Anti-histamines: Zeolite, Stinging Nettles, (Urtica Dioica), and Butterbur

SAMe & Methionine Support

Sample Combo Products & Homeopathic Support

Air quality

MAST CELLS and COVID-19, and Chronotherapy

Sample Script for Explaining to Family and Friends

MCAS Issues - Bottom Line

Additional Resources: further reading: books, articles & video