

# Inside-Out Health: Breakthroughs in the Resolution of Inflammation

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# Dr. Rob's GI Restoration Protocols

## Remove & Replace First 30 Days

Ingredients	Dosage
Berberine HCL, Oregon grape, coptis root, Chinese herbs, ginger, licorice, skullcap (bowel symptoms)	Dose during or shortly after a meal (3-4 times daily)
Thyme oil, oregano oil, sage leaf, lemon balm leaf (respiratory symptoms)	Dose at each meal (3 times daily)
Betaine HCL, pepsin	Titrate up to a warming dose
Protease, amylase, lipase	Dose with each meal
Modified elimination food plan	
EPA/DHA	4 g. daily

M.A. Sikder, et al. *Phytother Res*, 2015:1812-17

A. Dziejic, R. Kubina, et al. *Molecules*, 2015:13705-13724

# Dr. Rob's GI Restoration Protocols

## Reinoculate & Regenerate Next 30 Days

Ingredients	Dosage
Powdered nutritional support for inflammation and GI support	Daily
Specialized Pro-Resolving Mediators	1500 mg acute 1000 mg sub-acute 500 mg wellness
D <sub>3</sub> 5000 (check 25-OH D <sub>3</sub> levels)	Daily with food
<i>Lactobacillus plantarum</i> 299v	Daily
Modified elimination food plan	30-60 days
Alpha-lipoic acid	600 mg daily
Low-allergy blend of soluble and insoluble fiber	5 g or more daily

*J of Nutr Biochem*, March 2, 2015

*BMJ*, Jan. 5, 2016

# Dr. Rob's GI Restoration Protocols

## Retain

- 1) Multivitamin/multimineral/phytonutrients
- 2) Omega-3 fatty acids
- 3) Vitamin D
- 4) Probiotics
- 5) Organic fruits and greens
- 6) Replenish your gut with IMO/(2FL), L-alanyl-L-glutamine, zinc, BCAAs
- 7) Modified elimination diet



# A comprehensive strategy to support the health and integrity of extracellular matrix tissues

## **Nutrients that impact matrix metalloproteinases:**

- Hops & berberine to synergistically modulate MMP-13
- Selenium to address MMP-1 and MMP-2
- Folic acid to impact MMP-9

## **Nutrients that affect the lifespan and health of connective tissues:**

- Niacinamide to address tissue-damaging PARS

## **Additional nutrients:**

- Zinc to reduce cytokine release
- Biotin to reduce NF-Kappa production

# Concussion Nutrition Protocol

Feed the concussion within 1 day of injury

- **Protein:** Helps heal the injury. Take 1g/kg of body weight
- **Creatine:** Gives the brain intense/immediate energy to heal cells
- **Reduce inflammatory damage** to brain with DHA, bromelain, quercetin, ginger, turmeric, resveratrol, grapeseed extract
- **Antioxidants:** Alpha-lipoic acid
- **Choline:** Critical for brain development
- **Vitamin D:** Neuroprotective
- **Zinc:** Enzyme for CNS
- **Magnesium:** Great weapon against delayed brain injury
- **Acetyl-L-carnitine:** Energizes the brain
- **Glutathione:** Body's #1 intracellular antioxidant

"Enhancement of learning and memory by elevating brain magnesium," *Neuron*, Jan. 28, 2010:165-77

"Presynaptic NMDA receptors biology of the NMDA receptor," CRC Press, 2009

"The effects of nutrients on brain function," *Nat Rev Neuroscience*, 2008 Jul:568-78

# Assessing Antigenic Intestinal Permeability

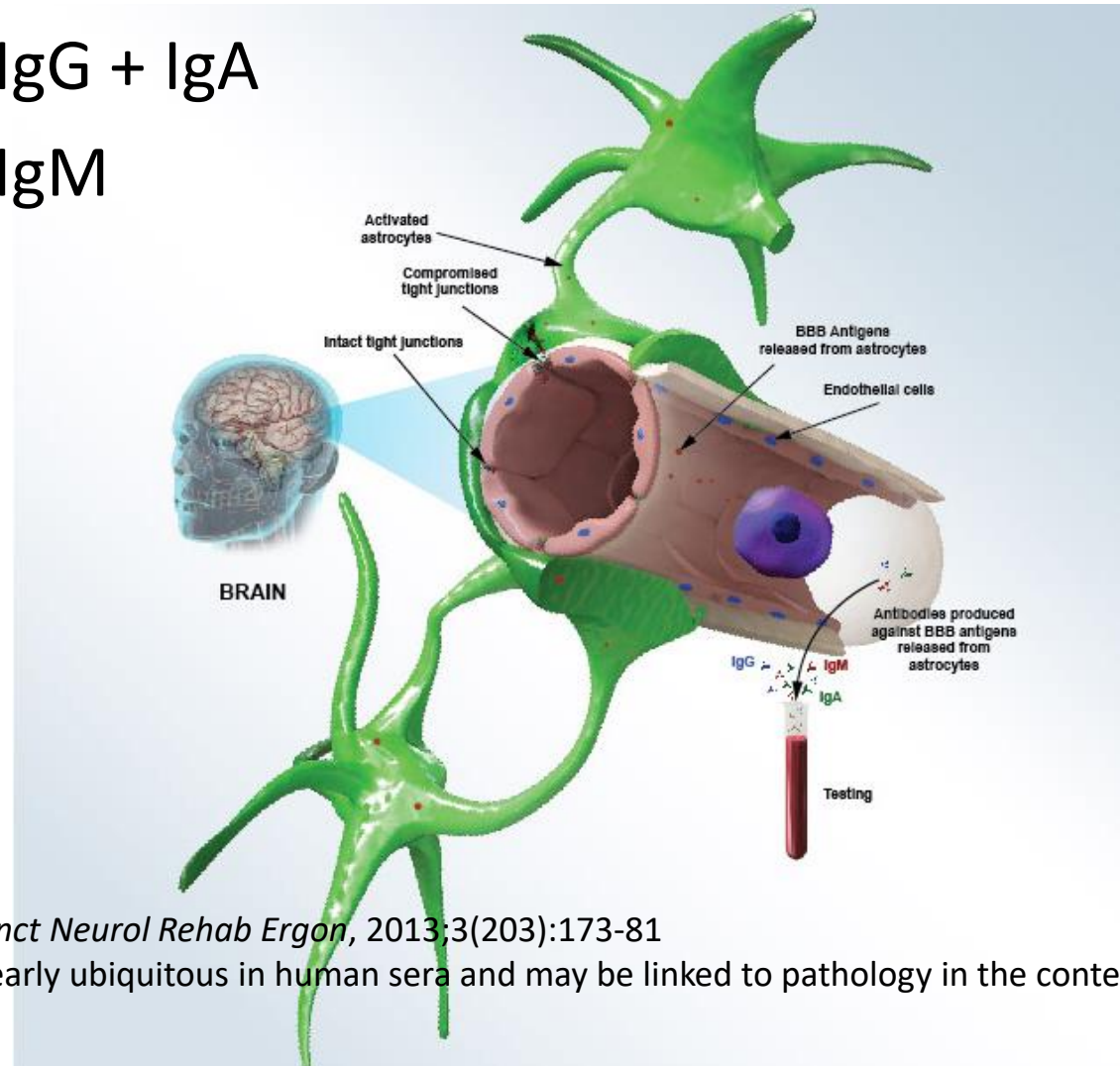
- Lipopolysaccharides IgG, IgA, IgM:
  - Gut dysbiosis (too much gram-negative bacteria in ratio to gram-positive bacteria)
  - Systemic LPS infiltration
- Occludin/Zonulin IgG, IgA, IgM:
  - Tight junction breakdown
- Actomyosin IgA:
  - Epithelial cell damage

Vojdani, A. "For the assessment of intestinal permeability, size matters," *Altern Ther Health Med*, 2013;19(1):12-24).

Evennett, N., Caerigioni, E., et al. "Smooth muscle actin as a novel serologic marker of severe intestinal damage in rat intestinal ischemia-reperfusion and human necrotizing enterocolitis." *J Surg Res*, 2014;191(2):323-330.

# BBB Permeability

- Blood Brain Barrier Proteins IgG + IgA
- Blood Brain Barrier Proteins IgM



Vojdani, A. "Brain-reactive antibodies in traumatic brain injury," *Funct Neurol Rehab Ergon*, 2013;3(203):173-81

Levin, EC., Acharya NK., et al. "Brain-reactive autoantibodies are nearly ubiquitous in human sera and may be linked to pathology in the context of blood-brain barrier breakdown," *Brain Res*, 2010;1345:221-32