



# BioLogic

Lunch Lecture Series

## Brain Fog in Chronic Illness

Reasons you may have brain fog and  
what to do about it!



**Todd Farney DC**



**“You are your brain; the health of the brain dictates everything about you. How you perceive events in life, your personality, how much you enjoy life, how you react to everyday occurrences, your emotional health, and so on – these are all determined by your brain’s health and function.”**

Dr. Datis Kharrazian “Why Isn’t My Brain Working?”

# What is brain fog?

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The brain does not feel pain when it is inflamed, instead you have brain fog.

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It is inflammation of the brain that interrupts the normal processing or cognition, leading to memory loss, an inability to focus, to track and to think.

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It is gaps in thinking and memory and that block you from the words that you want to say or to complete cognitive tasks like driving, planning or shopping.

## Symptoms of Brain Fog

Debilitating  
mental fatigue

Inability to think  
clearly

Reduced  
Cognition

Inability to  
concentrate

Inability to  
multitask

Decrease  
word recall

Loss of short-term or  
long-term memory

Not able to  
link thoughts  
to words

Distracted easily

Not able to  
finish a thought

# Conditions Associated with Brain Fog

Reduced Cerebral  
blood flow

Autism Spectrum  
Disorder

Fibromyalgia/Chronic  
Fatigue

MCAS/HIT

Neurodegenerative  
Diseases

Microglial Activation

Celiac Disease/Gluten  
Sensitivity

Any Chronic Body  
inflammation

# Four Main Factors in Brain Fog

- Brain nutrition
- Stress
- Blood sugar problems
- Brain Inflammation



# Other Factors to consider

Mitochondria dysfunction

Oxygen deprivation

Brain/Gut immune health – Leaky Gut/Leaky brain

Hormone imbalances

Inflammation in the body

Poor liver detoxification

Lack of Neurotransmitters

# Brain Nutrition

The brain needs three things to be healthy:

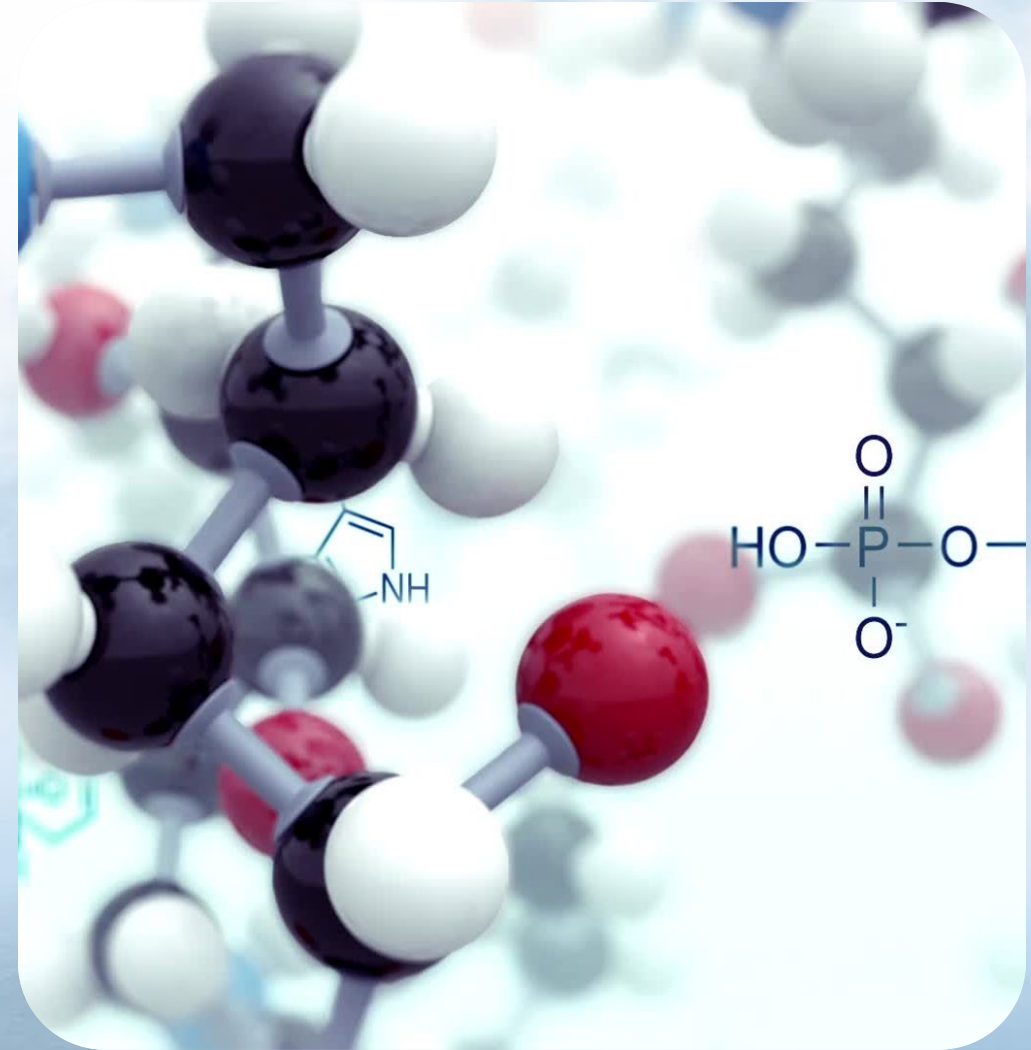
- 1) Oxygen
- 2) Glucose
- 3) Stimulation





# Brain Nutrition

- Oxygen is brought in through breathing and in conversion in the body.
- Several things can reduce the oxygen flow to the brain:
  - 1) Cardiovascular disease including congested blood flow
  - 2) Oxidative stress
  - 3) Anemia
  - 4) Poor Methylation
  - 5) Stress can inhibit flow
  - 6) Blood pressure (High or Low)



# Brain Nutrition

**Glucose is the main fuel source for the brain.**

**When the management of glucose goes bad the brain suffers.**

- Hypoglycemia – Associated with low cortisol
- Insulin resistance – Associated with high cortisol
- Glucose and insulin problems can alter moods and reduce Neurotransmitter production.

# Brain Nutrition

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A healthy brain needs stimulation and requires input and ongoing learning (plasticity).

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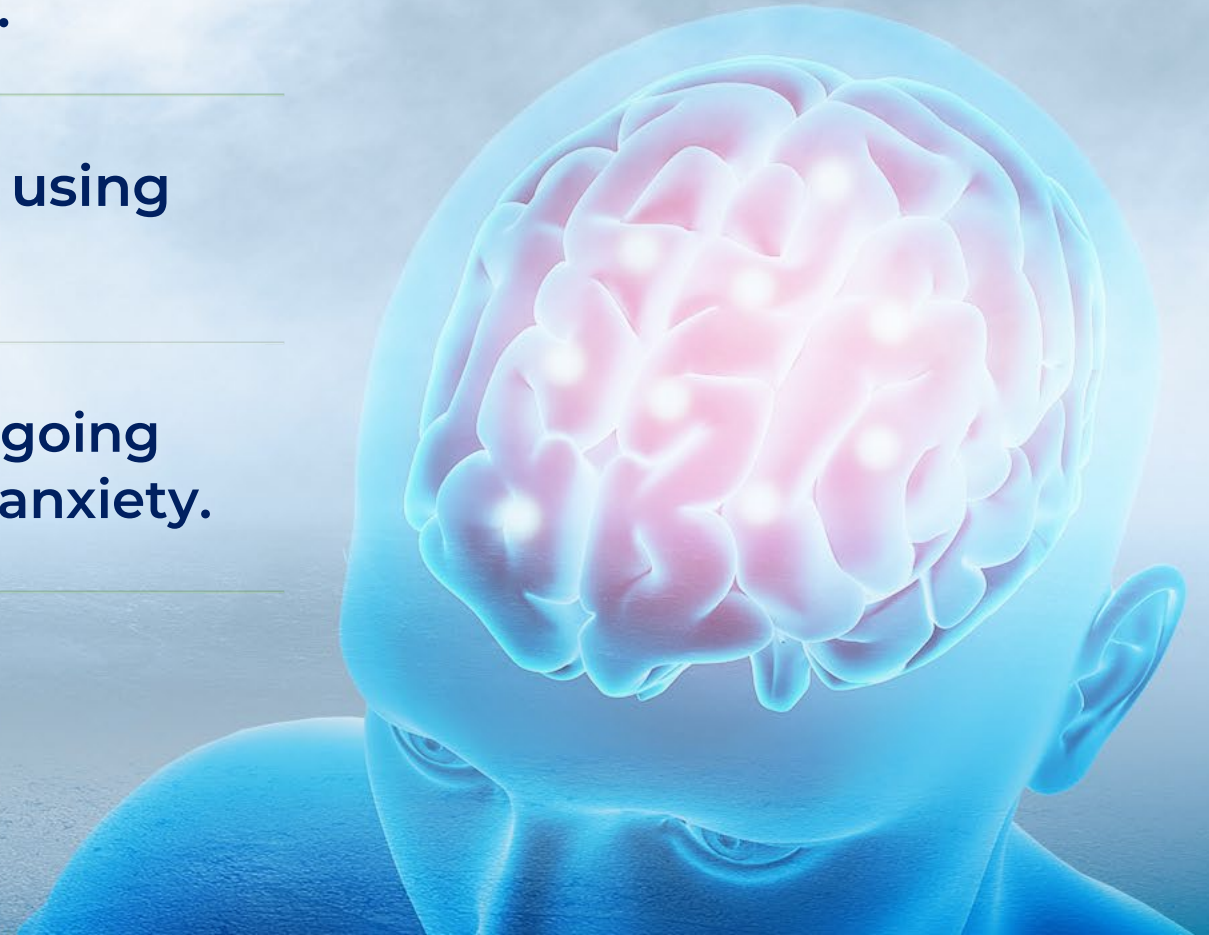
Positive plasticity - learning new skills, using the brain in a constructive way.

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Negative plasticity - PTSD can lead to ongoing activation of fight/flight from stress and anxiety.

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Practice makes perfect.



# Stress and Cortisol

“Nothing is more damaging to the brain than stress.”

Dr. Datis Kharrazian

Stress activates the immune system producing a cytokine called IL-6.

The Mid-brain is rich with IL-6 receptors and when activated will lead to the fight/flight response creating even more stress and inflammation in the brain.

Controlling this response and IL-6 will control the amount of brain inflammation.

Cortisol is released in response to stress and inflammation, further complicating the problem. Too much cortisol released over time will lead to insulin resistance and hormonal imbalance.

# Blood Sugar Imbalances

## Hypoglycemia:

- Lowered glucose levels due to mismanagement of insulin.
- Low cortisol or the ability to make it will lead to this condition.
- Irritability and fatigue in between meals and is relieved with eating.

## Insulin resistance:

- Elevated glucose, but sometimes low glucose
- Due to poor diet, stress and elevated cortisol.
- Fatigue after eating a meal.

# Brain Inflammation

## Several factors involved:

- Body inflammation
- Excessive alcohol consumption
- Activated Microglia cells (brain glue)
- Excess Zonulin causing leaky gut and eventually leaky brain
- Yeast, Fungus or bacteria overgrowth
- COVID
- Diabetes
- High Homocysteine and poor methylation





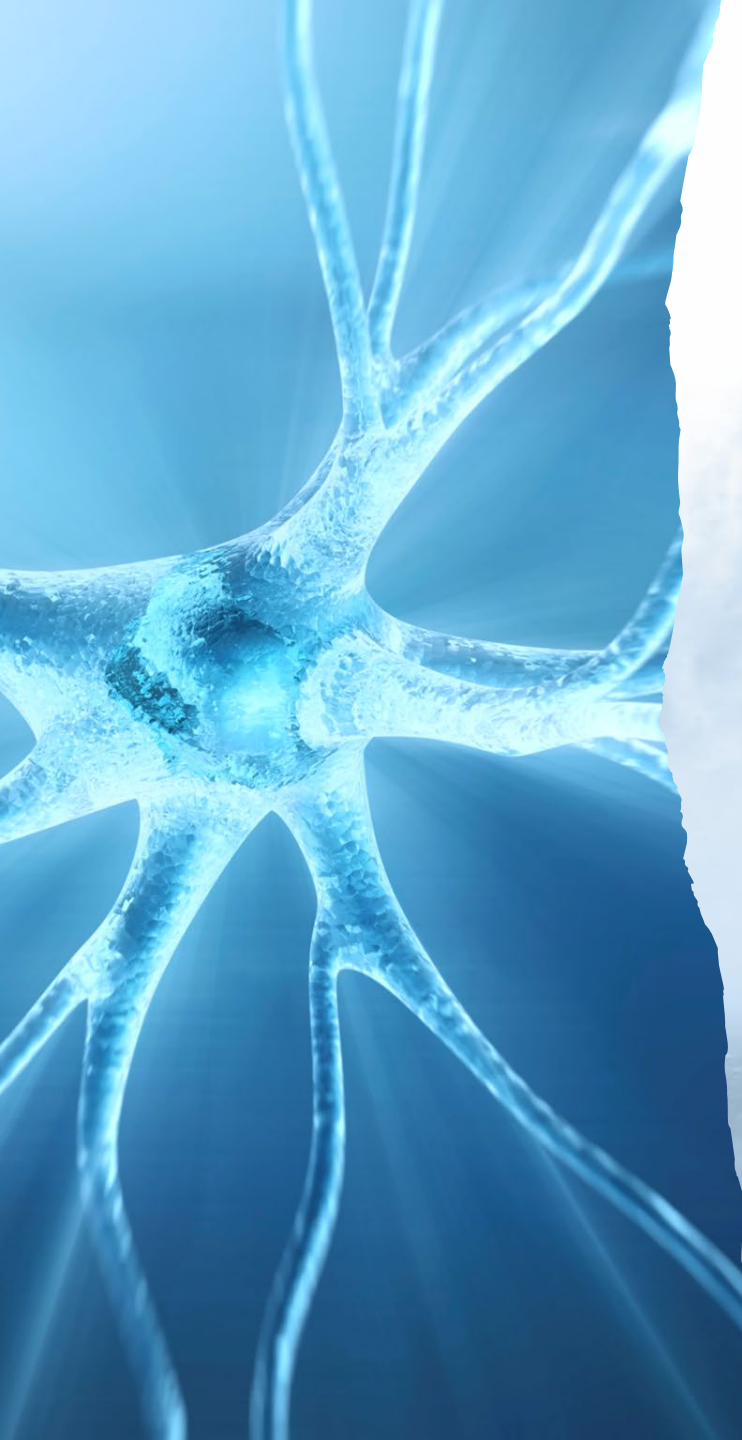
# Other Factors

- Mitochondria
- The wrong kind of bacteria in the gut
- Study of obese mice versus thin mice
- Polyphenols
- Insulin resistance can lead to brain inflammation.



# Other Factors

- Butyrate production
- Hormones
- Poor Detoxification and Liver
- Lack of Neurotransmitters from a leaky gut





# Support for Brain Fog

- Beemer and Hyperbaric Oxygen Therapy – Increase oxygen to the brain and improve blood flow.
- Infrared Sauna – Increases EZ water, hydrating your cells, improving detox and reducing viscosity in the lymph and blood.
- Grounding – Balances ions, increases blood flow and decreases inflammation. Helps increase EZ water, helping the nerves to communicate better as well as helping the cells to function better.
- LLLT – Decreases inflammation and improves mitochondrial function.

# Support for Brain Fog

- **Low inflammation Diet:**
  - Going on an anti-inflammatory diet for 6-12 weeks
  - Can improve the microbiome
  - Will decrease inflammation
  - Improve NT function
  - Support mitochondrial function
  - Getting rid of sugar, grains, lectins, milk
  - Increasing your Omega 3's will decrease inflammation.

# Support for Brain Fog

Improve Gut and Immune health –  
Repairing leaky gut and leaky  
brain to reduce the immune  
activated inflammation.

- Grass butter helps to build butyrate to support the right microflora.
- Polyphenols from red apples, blue and black berries to assist in making the right gut bacteria to build butyrate and balance the gut.
- Healing Leaky Gut, heals leaky brain and inflammation.

# Support for Brain Fog

- Sleep – Important to allow the brain to take out the trash, allowing for Mitophagy to break down the bad mitochondria, helps restore balance.
- Detox – Helps with inflammation and riding the body of toxins contributing to brain fog. Avoiding processed foods that create inflammation.
- Red Light therapy – helps to recharge the mitochondria.
- Getting outside – Provides Vitamin D, UV light and grounding if you are barefoot.
- NPT – Mitochondria and Bacteria release and communicate via biophotons. It is important to use Neuro Photonic Therapy to help improve this communication pathways and reduce deficiencies.

# Core Biologic Treatment Goals

## Three main goals:

- 1) Decrease the total burden on the body
  - 2) Improve overall communication systems
  - 3) Empower the body with energy resources
- By doing these we will help the body do what it was designed to do – heal, repair, rest, digest, and detox.

# Where to Begin

- Get testing to find out what could be causing your fog:
  - 1) Cyrex Labs – looking for antibodies to Zonulin, LPS, Occludin, Actomyosin, etc. looking for leaky gut.
  - 2) Glucose and Insulin blood panels
  - 3) Urine Mycotoxin or Metals panels
  - 4) Phelix lab bacteria testing.
- Try one or two of these solutions to see if they help you.
- *Contact us* to find out how we can help.
- We have everything that you need here to help with brain fog.

# References:

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# Questions?

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