

FOOD FOR THOUGHT

Keeping Our Children's Bodies and Brains Healthy

Maria Sorbara Mora

MS, CDN, CEDS-S, C-IAYT

Common Comments About Our Kids Diet

- “My kids want to eat all the time.”
- “All they want to eat is sugar!”
- “My children snack a lot.”
- “My kid is a very picky eater.”
- “I don’t want my kids to eat junk food/processed foods/unhealthy foods”.
- “I want my kids to be healthy eaters.”
- “I don’t want my children to have weight problems as adults.”
- “They never drink water!”
- “I notice my young adult has stomach aches often.”
- “My child eats the same things every day.”
- “My child is never hungry”

Common Comments About Our Kids Energy

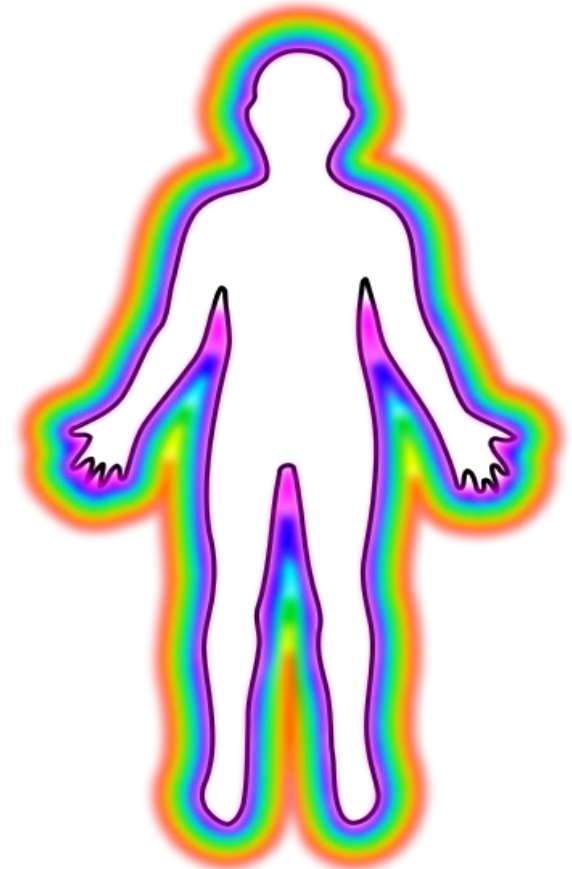
- “My child can’t focus”
- “My kids don’t move enough.”
- “Sometimes my kids do nothing for hours.”
- “My child has trouble sleeping.”
- “Activity is good for young adults.”
- “I notice my kid is fidgety.”
- “I wish my child was happier.”
- “My young adult is always tired.”
- “Moody, Moody, Moody!”
- “I wish my child was more organized.”

Knowledge
is
Power

Our Children Are Very Busy
GROWING

The Growing Body

- Tissue Synthesis
 - ◆ Their hearts are literally getting bigger!
 - ◆ Process utilizes energy (called ATP) from glucose.
 - ◆ Maintenance of cells depends on fat and protein.
- Protein/Muscle Synthesis
 - ◆ They are getting stronger!
 - ◆ Amino Acids created by process that uses glucose.
- Bone growth
 - ◆ They are getting taller!
 - ◆ Osteoblasts utilizes ATP energy and calcium.
- Hormone Production
 - ◆ They are becoming young adults!
 - ◆ Hormones made from amino acids and fats
 - ◆ Estrogen tells bodies to store fat in certain areas.
 - ◆ Testosterone tells bodies to increase protein synthesis.
- **Children's growing bodies need different things than adult grown bodies.**
 - ◆ Sometimes more sugar/carbs, fats, calories, etc.



The Growing Brain

→ Neurogenesis:

- ◆ The process of brain growth (until about 25 years old).
- ◆ Need fat for neural transmission.

→ Neuroplasticity

- ◆ The ability for the brain to reorganize neural connections.
- ◆ Easiest before 25 years old.
- ◆ Need fats for cognition.

→ Brain chemicals (mostly made of amino acids):

- ◆ Glutamate & GABA-Makes neurotransmitters.
- ◆ Serotonin-Promotes calm and hope.
- ◆ Dopamine- Arousal, stimulation, “Feel good hormone”
- ◆ Endorphins- Pain relief
- ◆ Noradrenalin- Regulates arousal, attention, cognitive function and reaction to stress and stressors.

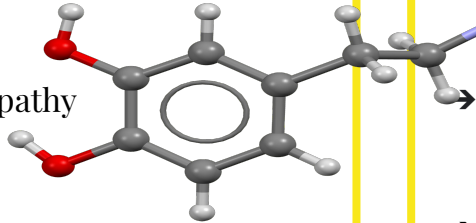


THE BRAIN'S MAIN SOURCE OF ENERGY IS GLUCOSE (FROM THE BLOODSTREAM)

Can We Take A Minute?

The Role Of Dopamine

- Dopamine is dubbed the “feel good chemical”
- Dopamine helps keep us:
 - ◆ Motivated, Focused, Productive
- Dopamine is one of the key neurotransmitters for:
 - ◆ Mood regulation, Pleasure , Joy/Happiness
- Low levels of dopamine impact:
 - ◆ Our enthusiasm
 - ◆ Drive
 - ◆ Leads to feelings of apathy
 - ◆ Fatigue
 - ◆ Procrastination
 - ◆ Memory issues
 - ◆ Inability to concentrate and complete tasks
- Dopamine made in the brain with Amino Acids.
- ADHD Brains have lower levels of dopamine.



The Role Of Serotonin

- Serotonin aids in satisfaction, happiness and optimism
- Serotonin plays a key role:
 - ◆ Mood
 - ◆ Sleep
 - ◆ Digestion
 - ◆ Wound healing
 - ◆ Bone health
 - ◆ Sexual desire
- Low levels of serotonin may be associated: Depression, Anxiety, Sleep problems, and Digestive problems.
- Serotonin is made in the brain and gut by amino acids.
- Serotonin is released in the body via carbohydrate consumption.
- ASD Brains have lower levels of serotonin.

Body, Brain and Blood Sugar

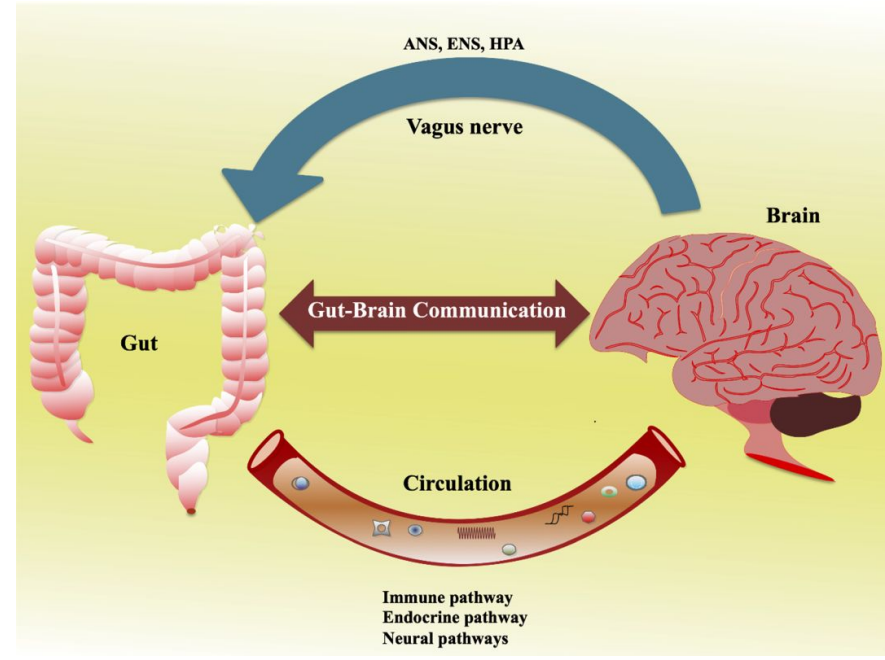
- Blood glucose is the sugar found in circulating blood .
- Reservoir of quick and available energy.
- The body and brain's primary source of energy.
- It comes from the food you eat that have simple and complex carbohydrates.
- Because glucose is the main energy source for the brain, it is regulated tightly.
- Too much or too little glucose to the brain is DEADLY (diabetic coma).
- When your blood glucose goes up, it signals your pancreas to release insulin.
- Insulin and glucagon tell the body to store extra sugar as fat.

→ Unsteady blood sugar affects physical energy levels, cognition, focus and mood.



The Gut-Brain Connection

- Enteric Nervous System
 - ◆ The second brain
- More serotonin is made in gut than in brain.
 - ◆ Link between GI issues anxiety and depression.
- Microbiome balance
 - ◆ Prebiotic Fiber and Probiotics
- Immunity
 - ◆ Important immune function made and maintained in the gut.



How's That For Nutrition Science?

Body/Brain Manifestations

- ADD/ADHD
- ASD
- Learning Difficulties
- Emotional Dysregulation
- ODD
- OCD
- Anxiety
- Depression
- Substance Use Disorders
- Gut disorders (Celiac, Colitis, Crohns, IBD, SIBO)
- Eating Disorders (Anorexia, Bulimia, BED, ARFID)
- Metabolic issues (Diabetes 1 & 2, PCOS)



Nutrition Tips For Growing Bodies and Brains

Eating With Your Circadian Rhythm

- Don't Skip Breakfast!!
- Eating Breakfast within the first 30-60 minutes after waking up.
- Eating every 3-4 hours after breakfast.
- Planning meals AND snacks throughout the day.
- Skipping meals can lead to night time overeating, decreased overall energy, inability to focus.



Circadian rhythms are physical, mental, and behavioral changes that follow a 24-hour cycle and respond to light and dark.

Get Your Zzzz

- **Tryptophan helps you feel sleepy:**
 - ◆ Turkey
 - ◆ Milk
 - ◆ Yogurt
 - ◆ Cheese/Cottage Cheese
- **Complex Carbohydrates increases serotonin:**
 - ◆ Oatmeal
 - ◆ Crackers
 - ◆ Pretzels
- **Magnesium makes your muscles relaxed:**
 - ◆ Chia seeds
 - ◆ Almonds
 - ◆ Cashews
 - ◆ Oats
- **Establishing healthy sleep hygiene in our children is crucial for growing brains and bodies.**

Staying up late and insomnia increases the stress hormone cortisol in your body. This can lead to anxiety, eating issues and weight gain.
Neurotransmitters are made at night.



Bedtime snacks:

- Turkey and cheese roll ups with crackers/pretzels
- Oatmeal with milk and almonds
- Yogurt with cashews and granola
- Chia seed pudding and sliced almonds
- Cereal with nuts and milk

Balanced Not “Healthy”

- Proteins
 - ◆ Animal: Fowl, beef, lamb, pork, fish, seafood, eggs.
 - ◆ Dairy: milk, yogurt, cottage cheese, cheese
 - ◆ Plant: nuts, beans, legumes, nut butter, hummus, soy-based, edamame, tofu
- Carbohydrates: breads, cereal, oats and oatmeal, rice, corn, quinoa, barely, potatoes, sweet potatoes.
- Fats: Olives, olive oil, tahini, mayo, avocado, coconut, salad dressing, soft cheeses like cream cheese, brie, butter.
- Fruits and vegetables: fresh, frozen, canned, dried, freeze dried.

Plating meals like this is helpful to practice what is in a balanced meal.



- **Meals should be balanced with:**
 - ◆ Protein
 - ◆ Carbohydrates
 - ◆ Fat
 - ◆ Fruits and /or Vegetables

Snack it Up

→ Examples

- ◆ Low fat or full fat yogurt and fruit
- ◆ Smoothies with nut butter/fruit
- ◆ Trail mix
- ◆ Nut butter and banana
- ◆ String cheese and crackers
- ◆ Hummus and carrots
- ◆ Turkey Jerky and Plantain chips
- ◆ Hard boiled egg, avocado mash, rice cake
- ◆ Ricotta with honey and berries
- ◆ Turkey and cheese roll ups with pretzels
- ◆ Protein bars:
 - Nugo (gluten free/nut free)
 - Mini Perfect
 - Kind bars
 - Mini Go Macro

→ Snacks should ALSO be balanced:

- ◆ Protein/Fat Combination
- ◆ Fruit/Veg/Complex Carb



GI Support

→ **Fiber and Prebiotic fibers helps maintain proper and digestion and gut health.**

→ Fiber

◆ Soluble

- Oatmeal, foods made with oats
- Insides of fruits

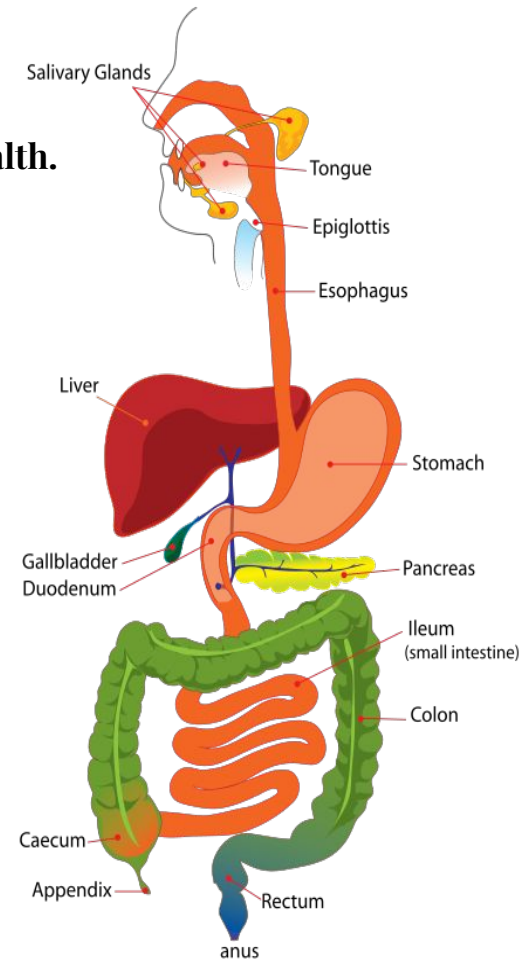
◆ Insoluble

- Skins of fruits
- Vegetables
- Whole grains
- Seeds (flax, chia)

→ Probiotic Rich Foods:

- ◆ Yogurt
- ◆ Keifer
- ◆ Kombucha
- ◆ Sourdough bread
- ◆ Miso
- ◆ Kimchi
- ◆ Tempeh

**Probiotic
powders/gummies can
also be used.**



Food and Movement

- **Eat foods high simple and complex carbohydrates before exercise/sports/activity-**
 - ◆ Banana
 - ◆ Pretzels
 - ◆ Toast
- **Eat foods high protein after exercise/sports/activity**
 - ◆ Nuts and nut butters
 - ◆ Eggs
 - ◆ Turkey sandwich
 - ◆ Protein Bar
 - ◆ Yogurt
- **HYDRATE!!!**



Fabulous Fats

- **Eat plenty of mono and polyunsaturated fats for the developing body and brain.**
 - ◆ Avocado
 - ◆ Guacamole
 - ◆ Nuts
 - ◆ Nut butters
 - ◆ Seeds (chai, flax, sunflower)
 - ◆ Olives
 - ◆ Salmon (and other fatty fish)
 - ◆ Tahini
- Omega supplements (capsules, liquids, gummies)



Food For Focus and Mood

- **Foods high in protein make “feel good” brain chemicals and keep you alert:**
 - ◆ Animal/Plant Proteins
- **Foods with Omega 3 Fatty Acids decrease the risk of depression:**
 - ◆ Fatty Fish, nuts, seeds
- **Leafy Greens and Cruciferous Vegetables increase brain chemicals leading to positive mood, alertness and energy.**
 - ◆ Lettuce
 - ◆ Brussels Sprouts
 - ◆ Cauliflower
 - ◆ Broccoli



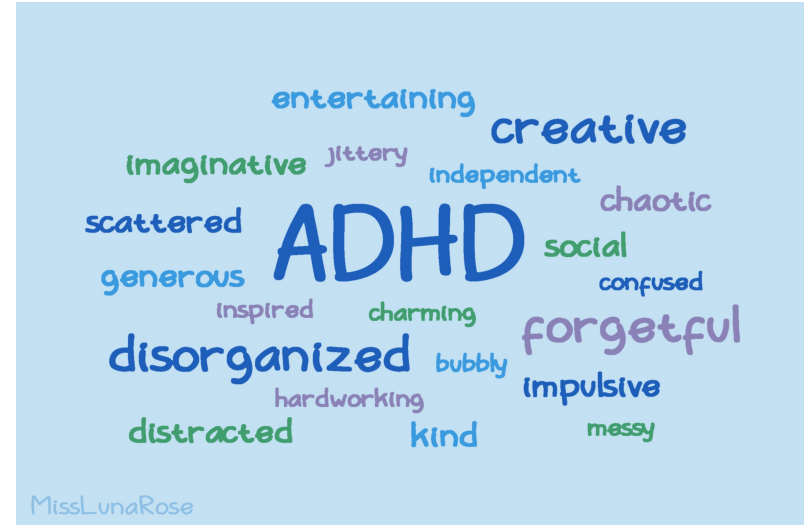
- **Snack Ideas;**
 - ◆ Smoked salmon, cream cheese and lettuce on crackers
 - ◆ Chia seed pudding with nuts
 - ◆ Broccoli and cauliflower dipped with hummus made with tahini

Special Considerations

Eating for the ADD and ADHD Brain

- ADHD brains have lower dopamine levels
 - ◆ Protein-rich foods are used to make dopamine.
 - ◆ Ex: lean beef, pork, poultry, fish, eggs, beans, nuts, soy, and cheese, yogurt, cottage cheese.
 - ◆ ADD protein rich foods when eating foods with sugar (PB and nutella with banana).
- Cut down on Food additives MSG, Artificial colors Red and Yellow.
- Structure is hard
 - ◆ Mini meals over large meals and snacks
 - ◆ Set reminders to eat.
- Take stimulants AFTER eating breakfast and Time a balanced snack or meal when meds wear off.
- Cook Together (its mindful and sensory)
- MTHFR mutation and Methylfolate

Methyl Folate, Magnesium and Omega Fish Oils



Exercise is so important for the ADHD brain.

Eating for ASD

- ASD Brains have lower serotonin levels.
 - ◆ Carbohydrates increases serotonin.
- Food Exposures:
 - ◆ May have sensitivities to the taste, smell, color and texture of foods.
 - ◆ Find what works and stick with it.
 - ◆ Slowly introduce one new food at a time.
- Balance may be difficult
 - ◆ They may limit or totally avoid some foods and even whole food groups.
 - ◆ Consider balance in a day instead of meals.
- Keep It Simple/Bland:
 - ◆ Dislikes may include strongly flavored foods, fruits and vegetables or certain textures such as slippery or soft foods.
- ASD and Eating disorders

Research shows that vitamin B6, C and magnesium supplements significantly improved symptoms in autistic individuals.



Eliminating gluten and casein may help to change symptoms and behaviors of autism.

Underweight, Picky Eaters and ARFID

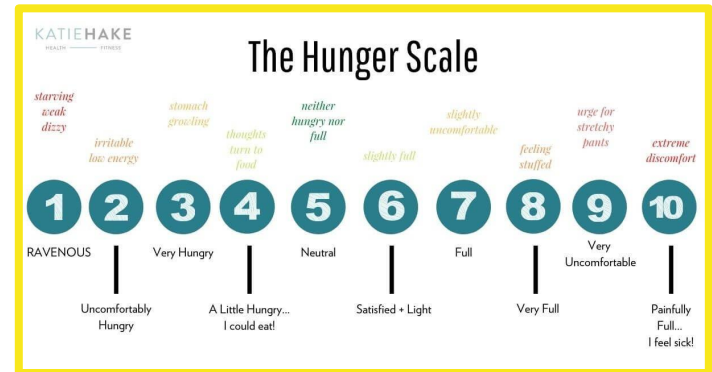
- Exposures!!
- Calorie enhancers: Can add to eggs, baked products, sauces, yogurt:
 - ◆ Benecalorie
 - ◆ Duocal
- Fruit/veg powders:
 - ◆ Enso Supergreens
 - ◆ Garden of Life Raw Organic Perfect Food Green Superfood Original Powder
- Supplements
 - ◆ Ensure/Boost
 - ◆ Orgain
 - ◆ Kate Farms
 - ◆ Core Power/FairLife



- Make Smoothies using foods kids like (fresh/frozen fruit, juice, nut or seed butters, dairy) AND add supplement as a base, calorie enhancers, powders or vitamins.

Weight Management For Growing Bodies and Emotional Overeating

- Larger bodies still need proper nutrition
 - ◆ Do not restrict calories or food groups.
- Focus on balance (work with a 2:1:1 pro/cho/fat ratio).
- Focus on adding fiber foods.
- Focus on JOYFUL movement.
- Focus on eating WITH circadian rhythm.
- Do not skip or skimp on meals or snacks.
- Practice mindful eating and thoughtful pacing.
- Educate on fullness cues.
 - ◆ How do you know when you're hungry/full?
 - ◆ How does your body let you know?
 - ◆ Use a hunger scale



Ask Me A Question!
