

Feeding Kids' Brains

Foods to Maximize a Child's Full Brain Potential

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ADD (attention deficient disorder) and ADHD (attention deficient-hyperactivity disorder) are well-known, household terms these days. Many holistic professionals believe these conditions are overdiagnosed, and that drugs are prescribed far too quickly. Study after study points to the strong connections between food and behavior as a main contributor in children that demonstrate ADD and ADHD symptoms. Could it be the gluten in your child's sandwich? A lack of good protein and veggies? How about the sugar in soda, the pesticides in commercial produce, or additives in processed snack foods? Paying attention to the foods your child consumes can make a dramatic improvement in focus and attention, which correlates to better academic performance and overall behavior.

It All Starts Here!

First and foremost, the health of the brain relies on proper nutrition. Virtually any nutrient insufficiency can result in impaired function.¹ Early studies show that children who lack optimal amounts of essential nutrients experience reduced attention span and intellectual ability.² A survey of more than 4,000 children aged 2 to 18, showed that they get most of their nutrients from fortified breakfast cereals and fruit drinks.³ It is safe to say that the "normal" diet of the American child is not providing what their body and brain needs to reach their full potential and prevent dysfunction. Several investigators have demonstrated that a correction of even subtle nutritional insufficiencies exert a substantial influence on learning and behavior.⁴ Thus, it is imperative to forgo the Twinkies and Ho-Hos, and replace them with real, whole, nutrient-dense foods like eggs, dark green vegetables, whole grains, and grass-fed meats. In addition, studies have clearly connected overexposure to pesticides with cognitive impairment in children. Unsafe levels of pesticide residues are commonly found in children from fruits, vegetables, and commercial baby food.⁵ Thus, organic produce, free-range meats, clean eggs, and filtered water are the best brain-supportive choices.

Could It Be a Food Allergy? Yes!

There is consistent clinical data that shows the deterioration of behavior with allergic reactions to foods and food additives. In fact, specialists in the field estimate that 75% to 80% of children with ADD or ADHD have allergies, food sensitivities, or a combination of both.⁵ One study showed that after a four week trial on a hypoallergenic diet (lamb, chicken, potatoes, rice, banana, apple, and vegetables), 82% of the hyperactive children improved, and a normal range of behavior was achieved in almost 30%. Other symptoms, such as headaches, abdominal pains, and tantrums also diminished. Interestingly, the symptoms reoccurred when the offending foods were reintroduced.⁶ Other studies have shown that attention also improves when allergenic foods and additives are eliminated.⁷

Dr. Benjamin Feingold, a leading researcher and pediatrician on the subject of food sensitivities and behavior, contends that eliminating all synthetic food additives can resolve hyperactivity. According to Feingold, 40% to 50% of hyperactive children are sensitive to artificial food colors, flavors, certain preservatives, and salicylates (chemicals similar to aspirin that are found in certain foods).^{8,9} These substances are believed to be linked to behavior disorders, such as hyperactivity, learning problems, and ADD in sensitive children and some adults.^{10,11} An impressive study was conducted back in the 1980s in the New York public school system. They initiated an experimental design in which sugar, food additives, and preservatives were gradually eliminated from the school cafeterias. During the four-year experiment, the mean academic performance percentile rating increased from 39% to 55%.¹² WOW! Although not every child reacts to these substances, there is enough evidence that makes a trial avoidance worthwhile. Regardless, these ingredients are undesirable, and their removal only benefits health.

The most common food-offenders tend to be artificial colorings, synthetic flavorings, dairy foods, gluten found in wheat and other grains, and sweeteners (namely sugar),^{6,13} although there are many other foods that a child can be sensitive or allergic to, such as citrus fruits, peanuts, soy, and corn. The easiest way to identify a child's reaction to a specific food is through a food elimination/challenge diet. A clue to keep in mind is that people tend to regularly eat, and often crave, the foods to which they are sensitive. Talk to a nutritionist or learn about how to identify these suspect foods in books like *The A.D.D. and A.D.H.D. Diet!* by Rachel Bell, or *The A.D.D. Nutrition Solution* by Marcia Zimmerman.

Sugar – Brain Enemy

Sugar is enemy number one when it comes to attention and focus! It has been shown in clinical research that destructive-aggressive and restless behavior is significantly correlated with the amount of sugar consumed.¹⁴ One main reason for this connection is that refined carbohydrates, which include sugar and its cousin white flour, cause hypoglycemia,¹⁵ or low blood sugar. Because glucose (blood sugar) is the primary fuel for the brain, when the level of glucose is too low, the brain is affected first.¹⁶ The sudden release of insulin and drop in blood glucose caused by refined carbohydrate intake stresses the body, causes a fight or flight response, and encourages the aggressive behavior, hyperactivity, anxiety, mental dysfunction, and attention problems found in ADHD.^{13,17} Furthermore, clinical research shows that a majority of hyperactive children have abnormal glucose metabolism.^{18,19} To prevent this low blood sugar state, meals and snacks need to be consumed on a regular basis and include plenty of protein (e.g. grass-fed meats, fish, and eggs), fat (e.g. avocados, butter, coconut oil), and fiber-rich complex carbohydrates (e.g. broccoli, cabbage, whole grains). It is particularly important to start the day with a protein-rich breakfast to get the body chemistry off to a good start.*

Brain “Cats”

There is a high chance that those with attention problems need to wake up their brain catecholamines, or “cats” for short.²² These are a group of neurotransmitters, with the primary one being dopamine. The most recent studies show that ADHD is linked to cat dysfunction because this condition is improved by medications that enhance the function of these substances.²⁰ Too few cats result in trouble with behavior, focus, and concentration. How do we increase cat production? Protein. Tyrosine, an amino acid rich in high-protein foods like beef, fish, and eggs, provides the raw ingredient that the brain uses to produce all the cats, and has been shown to support concentration and reduce stress.^{21,22,23} Other neurotransmitters also rely on amino acids. For example, tryptophan is necessary for serotonin production, a neurotransmitter also intimately involved in learning and behavior.²⁴ Ultimately, high quality protein is critical for overall brain chemistry balance.

Let's sum it up: First, breakfast is a must, preferably one that is high-protein, such as free-range eggs with nitrate-free bacon or turkey sausage. Three well-designed meals a day and snacks are critical to getting in as many of the necessary nutrients as possible. This means that each meal must contain healthy protein, fat, and complex carbohydrates – organic preferably. Skeletonized ingredients, like sugar and white flour, are a road block to brain function. Thus, commercial sodas and even most fruit juices should be eliminated, along with prepared junk foods that are so easy to grab-and-go. There are many healthier options to consider, such as hard-boiled eggs, jerky, trail mix, and more.* Keep your child's diet as clean as possible, so as to avoid synthetic additives and preservatives. Finally, identify any possible food allergens or sensitivities, even to seemingly healthy foods. Keep in mind, Vitamin Cottage is here to offer support through free nutrition consultations. We have 14 Nutritionists on staff to help design an individualized brain-boosting plan for you and your little tykes.

Feeding your children to maximize their brain potential may be challenging at first. However, when your child is less frustrated with school and following instructions with ease, it will all be worth every minute!

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Feeding Kids' Brains

The right food choices can positively impact a child's brain potential. Principles to follow include choosing nourishing foods, minimizing refined ingredients, avoiding additives and preservatives, sticking with low-allergy-potential foods, and emphasizing healthy fats, proteins, and brightly-colored vegetables.

Fantastic Frittata

3/4 cup potato, cut into 1 inch chunks
2 Tbsp organic butter
1 Tbsp olive oil
1 red onion, finely sliced
2 celery sticks, chopped
1 red pepper, halved, cored, deseeded, and chopped
1 cup baby spinach, washed (or lightly steamed broccoli florets)
6 organic DHA-rich eggs, beaten
1/3 cup cheddar cheese, grated
Salt and black pepper to taste

Boil potato in lightly salted water for 6 to 8 minutes or until just tender. Drain thoroughly. Melt the butter with the oil in a large frying pan. Add the onion, celery, and red pepper and fry for 5 to 6 minutes, until soft and slightly browned. Add the spinach and cook for another 2 to 3 minutes, until wilted. Stir in the potato. Season the beaten eggs with salt and pepper, then pour over the vegetables in the pan. Cook over medium heat on the stove top for about 5 minutes until the base is set. Sprinkle the cheese on top of the frittata. Place under a preheated broiler for 2 to 3 minutes until the cheese is melted and the top is set and golden brown. Serve warm. Recipe from *Good Food for Kids* by Dr. Penny Stanway.

Tangy Orange Smoothie

3/4 cup full-fat plain yogurt, almond or coconut milk
1 small organic orange
1 to 2 tsp. raw, unfiltered honey
2 to 3 ice cubes

Whip ingredients together in blender until smooth and enjoy.

Nutty Nut Butter

2 cups nuts, such as almonds or cashews
3/4 cup coconut oil
2 Tbsp raw honey
1 tsp sea salt

Place nuts and sea salt in food processor and grind to a fine powder. Add honey and coconut oil and process until "butter" becomes smooth. It will be somewhat liquid but will harden when chilled. Store in an airtight container in the frig. Serve at room temperature. Recipe found in *Nourishing Traditions* by Sally Fallon.

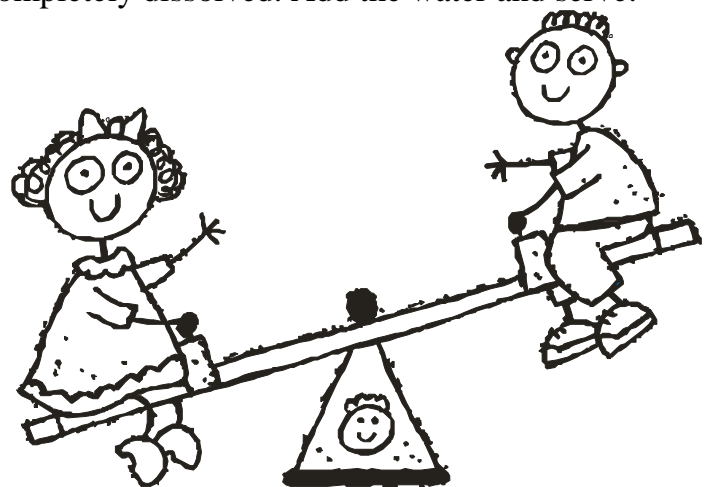
Sugar-Free Coolers

1/2 cup fresh lemon juice, or 1/3 cup unsweetened cranberry juice concentrate (or unsweetened juice concentrate of your choice)

1/8 teaspoon white stevia powder or start with 6 drops of the clear liquid extract and work up to your preferred sweetness

4 cups cool water or chilled carbonated water.

Mix the juice and stevia together until the stevia is completely dissolved. Add the water and serve.



Dippers and Dunkers

Cream cheese and pineapple dip: Mix 1/2 cup cream cheese with 1 Tbsp mayonnaise and 2 peeled, cored, and chopped rings of fresh pineapple (or canned in natural juices). Add 2 Tbsp of nitrate-free diced ham if desired.

Tuna dip: Blend 1/2 small chopped onion, 3/4 cup tuna canned in water, 1 Tbsp sour cream or mayonnaise, and 1 Tbsp chopped fresh parsley.

Hummus dip: Homemade or pre-made in a variety of flavors and brands like *Waleed's* organic roasted red pepper hummus.

Yogurt and date dip: Mix 3/4 cup thick creamy organic yogurt with 1/4 cup chopped pitted dates.

Suitable Dunkers: Whole grain bread or crackers, sticks of celery, carrot, cucumber, or red pepper, cauliflower, or canned baby corn, apple or pear quarters, cherry tomatoes. Ideas found in *Good Food for Kids* by Dr. Penny Stanway.

Popeye Casserole

This dish makes great use of leftover meat or poultry.

- 1 1/2 cup raw spinach, torn
- 2 Tbsp olive oil
- 2 Tbsp organic butter
- 1 Tbsp garlic, minced
- 2 thick diced cooked chicken, turkey, beef, lamb or pork
- 2 medium eggs
- 2 Tbsp heavy cream or thick coconut milk
- Ground black pepper
- 3 Tbsp Parmesan cheese or alternative

Preheat oven to 350°. Wash the spinach well and steam for 4 to 6 minutes. In a small skillet or frying pan, heat the olive oil and butter over medium-low heat. Add the garlic and cook until it browns. Add the spinach and diced meat or poultry and simmer, stirring occasionally, for 5 minutes. In a large bowl, mix eggs, cream, and pepper to taste. Combine the egg mixture, spinach-meat mixture, and Parmesan cheese. Pour it all into an oiled 8-inch baking dish and bake for 30 minutes. Serve warm or cold. Recipe found in *Carbohydrate Addicted Kids* by the Hellers.

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Teaching Kids Positive Eating Habits

Don't nag: Give your child the foods you have decided on and do not give into tantrums.

Be in unity: A child can tell if all family members are not on board with healthy eating choices.

Set the example: Making positive choices for yourself demonstrates to a child the value of eating healthfully.

Make eating fun: Instead of talking about the healthy qualities of a food, talk about its color or give them fun names, like "green worms" for green beans.

Get children involved: Let a child be a part of the decision-making process at the store (e.g. choose between two yogurts or pick a healthy breakfast item) When appropriate, have them help with meal preparation.

Make it look good: Arrange food to make funny faces or shapes and add lots of color.

Add variety early: As children grow older, they are more likely to dislike new foods. Experiment with variety early.

Be consistent: This is important for not only the parents, but for others caring for a child (e.g. grandparents, etc).

Be prepared: Never leave home without a healthy snack and filtered water for when a child gets hungry.

Stock only healthy choices: If only the healthiest food choices are available, the less desirable choices aren't even an option.

Sit down as a family: Studies show regular family meal time encourages better eating habits.

Teach choices and consequences: Find examples of what happens to your child or their friends when they eat lots of sugar (e.g. can't concentrate, get sick more often).

Avoid using food for rewards: Let food be used for nourishment. Separate behavior and rewards from food.

Some ideas from *Kid Smart!* By Cheryl Townsley