

Dietary Considerations for Children with ADHD

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Overview

- ▶ Nutrition concerns for children with ADHD
- ▶ Popular diet interventions and supplements
- ▶ Concerning food ingredients
- ▶ What changes can families make?

Common Parent Concerns

- ▶ Picky Eating
- ▶ Lack of Appetite
- ▶ Weight Gain (too much or too little)
- ▶ Children like routines
- ▶ Medications affect appetite – can make children lose their appetite. When meds wear off children are often very hungry



Practitioner concerns

- ▶ Overweight/underweight
- ▶ Abnormal lab values
- ▶ Medication side effects



Feingold Diet

- ▶ Popularized in the 1970's
- ▶ Elimination diet – removes artificial dyes, artificial flavorings, some preservatives, artificial sweeteners, foods containing salicylates (a number of fruits, veggies, nuts)
- ▶ Originally designed to treat asthma

- ▶ Found to be largely ineffective at treating ADHD symptoms
- ▶ Difficult to follow, very restrictive
- ▶ More beneficial when combined with removal of other foods that may be bothersome to a child (ex: chocolate, sugar, caffeine)

Medical Foods

- ▶ Diet is intended to target a specific behavior or medical condition
- ▶ Specific diet consumed and administered with physician supervision
 - ▶ Not necessarily food – the diet is created from “food-based elements”
 - ▶ May be a pill or formula
 - ▶ Advertised as pharmaceutical grade
- ▶ FDA does not approve or regulate medical foods
- ▶ Can be expensive, not covered by insurance
- ▶ Some people may benefit
- ▶ Not enough evidence to support this approach

Vitamins and Natural Supplements

- ▶ There is no substitution for or natural alternative to traditional ADHD medications.
- ▶ Supplementing with individual vitamins and minerals can be harmful. Do not supplement unless blood levels have been tested and a doctor has recommended it.
- ▶ Natural supplements are not regulated.
- ▶ Most common micronutrients deficiencies can be corrected with diet.
- ▶ No evidence that fixing vitamin and mineral deficiencies will impact ADHD symptoms.

Omega Fatty Acids

- ▶ Some kids with (and without) ADHD are deficient in omega-3 fatty acids and heart-healthy plant oils (omega-6)
- ▶ Some research shows that ADHD symptoms improve after taking an omega supplement.
 - ▶ Fatty acid supplements can cause GI distress
 - ▶ Kids need to be tested for a deficiency before supplementing
 - ▶ Adding 2 weekly servings of fatty fish and heart healthy plant fats to a child's diet should provide adequate omega fatty acids



What Are Omega-3 Fatty Acids?

- ▶ EPA and DHA
- ▶ EPA – fish, fish oils, marine sources
- ▶ DHA – eggs (especially enriched eggs), anchovies, salmon, herring, mackerel, tuna, halibut, various DHA fortified foods.
 - ▶ Flaxseed oil is a precursor to DHA
- ▶ Supplements may not be totally safe
- ▶ Offering foods that contain EPA and DHA is quite safe

Gluten Free?

- ▶ GF foods are designed for individuals who have an allergy or sensitivity to gluten. Most people are not allergic to gluten.
- ▶ Kids with ADHD do not benefit from eating gluten free foods.



Sugar

- ▶ Villainized as the cause of bad behavior
- ▶ Occasional instances of children showing true sugar intolerance
- ▶ Research shows that it doesn't directly affect behavior
- ▶ **However**, diets high in sugar are often low in vital nutrients
 - ▶ Lots of added sugars in foods and drinks marketed to children



Food Additives

- ▶ More than 10,000 food additives allowed in the US
 - ▶ Modify taste, texture, nutrients, appearance
 - ▶ Generally Recognized as Safe – doesn't require USDA approval
- ▶ Buy and serve more fresh and frozen produce
- ▶ Fewer processed meats
- ▶ Avoid microwaving in plastic
- ▶ Use glass or stainless steel containers when possible



Food Dyes

- ▶ Artificial food dyes can affect behavior and ADHD symptoms
- ▶ Dyes are added to many foods advertised to children
 - ▶ Blueberry muffins, breakfast cereals, snack cakes, pop tarts, Cheetos, M&M's, gummies, kool aid and other fruit flavored drinks
 - ▶ Often added to make it look like real fruit instead of chemicals
- ▶ Many food dyes have been banned in Europe
- ▶ Big 3 food dyes: Red 40, Yellow 5, Yellow 6



What might a typical child's diet look like?

Breakfast – sugary cereals, pastries, processed breakfast meats, juice drinks

Lunch – Lunchables, chips, cookies, sweetened/colored applesauce, flavored milk, juice drinks

Snacks – chips, cookies, candies, snack cakes, processed meats, soda, juice drinks

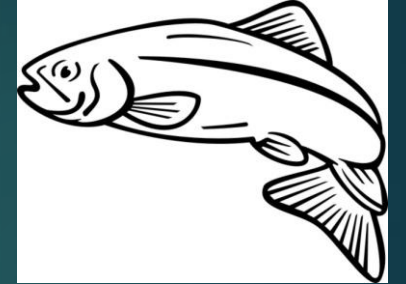
Dinner – fast food, large portions of meat, large portions of refined starches, vegetables with pre-packaged sauce, ketchup, BBQ sauce...

Dessert?



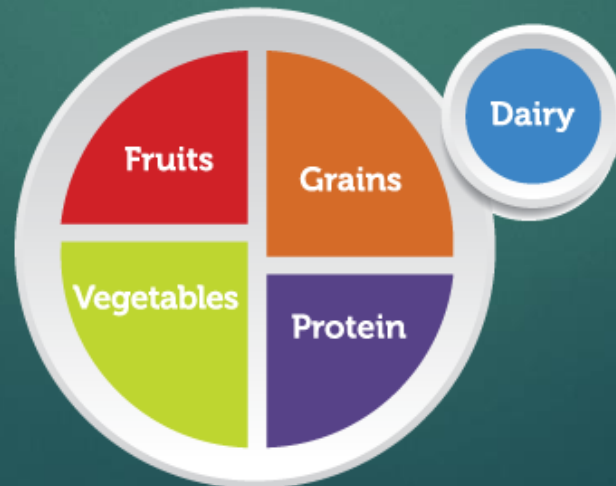
How can we change what kids are eating

- ▶ Read food labels
- ▶ Cut out extra sugars and food dyes
- ▶ Limit foods with long ingredient lists or words you can't pronounce
- ▶ **Offer fruits and/or vegetables with every meal**
- ▶ Provide fish 1-2x/week
- ▶ Add nuts, seeds, whole grains
- ▶ Drink more water
 - ▶ Limit soda, juice, flavored milk, lemonade, etc.
- ▶ Practice cooking together as a family



Establish a meal routine

- ▶ Meals and snacks offered at the same time every day
- ▶ Make breakfast count if meds interfere with appetite
- ▶ Clear expectations
 - ▶ Be consistent!
- ▶ Ensure that more of the healthy options are available





I'm not ready to change everything. What should I cut back on?

- ▶ Fast food
- ▶ High fat red meat
- ▶ Processed meats
- ▶ Potato chips
- ▶ Packaged snack foods
- ▶ Soft drinks

Family centered change

- ▶ Families who make changes together are more successful
- ▶ Less pressure and isolation for a child
- ▶ Asking children to change on their own is not age appropriate
- ▶ Kids know where you hide the junk food
- ▶ Promotes long term lifestyle change
- ▶ Everyone benefits!!!



Summary

- ▶ Diet can't correct ADHD, but some changes may affect behavior
- ▶ Elimination diets are for children with food allergies
- ▶ Supplements may not be safe, always check with physician
- ▶ Adding omega-3's and heart healthy plant fats to the diet may provide a benefit
- ▶ Sugar is not the cause of hyperactivity, but diets high in sugar are often low in important nutrients
- ▶ Avoid food dyes and overly-processed foods
- ▶ Provide whole foods whenever possible – fruits, vegetables, whole grains, nuts, lean meats
- ▶ Make changes the whole family can do together

Questions?



References

1. Ghanizadeh, A., Haddad, B. (2015). The effect of dietary education on ADHD, a randomized controlled clinical trial. *Annals of General Psychiatry*, 14(1), 1-7.
2. Heilskov Rytter, et al.(2015). Diet in the treatment of ADHD in children – A systematic review of the literature. *Nordic Journal of Psychiatry*. 69(1).
3. Johnson, M., et al. (2017). Omega 3/6 fatty acids for reading in children: a randomized, double-blind, placebo-controlled trial in 9-year-old mainstream school children in Sweden. *Journal of Child Psychology & Psychiatry*, 58(1), 83-93.
4. Kanarek, R. (2011). Artificial food dyes and attention deficit hyperactivity disorder. *Nutrition Reviews*. Volume 69, 7. July 2011.
5. Kim, E. J., et al. (2014). Relationship among attention-deficit hyperactivity disorder, dietary behaviours and obesity. *Child: Care, Health & Development*, 40(5), 698-705.
6. LaChance, L., et al. (2016). Omega-6 to omega-3 fatty acid ratio in patients with ADHD: A meta-analysis. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*. 25(2), 87-96.
7. Leahy, L.G. (2017). Attention-Deficit/Hyperactivity Disorder: A Historical Review (1775-Present). *J Psychosoc Nurs Ment Health Serv*. 55(9), 10-16.
8. Nguyen, S., et al. (2014). Efficacy of EPA Enriched Phosphatidylserine-Omega-3 (Vayarin) on Children with ADHD. *Neurology*. 82(10), P7.336
9. Nigg, J. Holton K. Restriction and Elimination Diets in ADHD Treatment. *Child Adolesc Psychiatric Clin N Am* 23 (2014) 937-953
10. Pelsser, L., et al. (2009). A randomised controlled trial into the effects of food on ADHD. *European Child & Adolescent Psychiatry*, 18(1), 12-19.
11. Woo, H.D., et al. (2014). Dietary patterns in children with attention deficit/hyperactivity disorder (ADHD). *Nutrients*, 6(4),1539-1553.