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Essential Diet and Role of Physical Activities to Manage Stress in Children

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ABSTRACT

Making time to sit down as a family to eat a home-cooked meal not only sets a great example for kids about the importance of healthy food, it can bring a family together. A child's body gets all the sugar it needs from that naturally occurring in food. To keep stress at bay, it is best to feed your children the right amounts of food at regular intervals of time. Ensure that your kids have a healthy breakfast every day since this keeps the metabolism up and running. Added sugar just means a lot of empty calories that contribute to hyperactivity, mood disorders, and increase the risk for obesity, type 2 diabetes, and even suicidal behaviors in teenagers. Kids who enjoy breakfast every day have better memories, more stable moods, and energy, and score higher on tests. Eating a breakfast high in quality protein- from enriched cereal, Yoghurt, milk, cheese, eggs, meat, or fish- can even help theaters to lose weight. Some ways we can help our kids better manage stress and eat and live better include encouraging them to get adequate sleep and having consistent sleep and wake times; providing an array of nutrient-rich meals and snacks that are eaten sitting down at the kitchen counter or table at designated times; eating family meals often and with minimal distraction; encouraging kids to stay active and fit; limiting screen time and time spent sitting; and having go-to, enjoyable activities that help them de-stress. In recent years, there has been a shift in the lifestyles of various age groups, including children, especially in their late childhood. Unlike children a few decades ago, children today are leading increasingly sedentary lifestyles that involve time spent on computers and watching TV. This lifestyle leads them to neglect the physical activity that has been typical to this developmental period[5-6]. In times when children are less active, the significance of studies on the positive impact of sport on physical health, mental health, and cognitive functioning, is critical[7-11]. Such research aims to raise awareness of the gravity of the problem, as well as to create a holistic health program that promotes being physically active in different contexts, including with family and in school[12]. Limited physical activity, or often a complete lack thereof, leads to various health problems, including posture problems (such as idiopathic scoliosis), somatic conditions, being overweight and obese, problems with circulation, and even premature death[10,13,14,15,16]. There is increasing empirical evidence of a relationship between a lack of physical activity and mental health measures. For instance, research suggests that overweight adolescents who do not practice sports are more prone to risky behaviors, including suicide attempts. Regular physical activity also leads to better circulation and oxygen supply to the brain, an increase in bone and muscle density, and greater tolerance of stress.

INTRODUCTION

A healthy diet can also have a profound effect on a child's sense of mental and emotional wellbeing, helping to prevent conditions such as depression, anxiety, bipolar disorder, schizophrenia, and ADHD[1]. Eating well can support a child's healthy growth and development into adulthood and may even play a role in lowering the risk of suicide in young people. It's important to remember that your kids aren't born with a craving for French fries and pizza and an aversion to broccoli and carrots. This conditioning happens over time as kids are exposed to more and more unhealthy food choices.

The researcher found that stress-related eating, which was highly prevalent in the teens studied, was linked with several negative dietary and health behaviors. Stress-related eating was found to be more common among girls (43%) than boys (15%). Those who reported eating in response to stress were also more likely to be overweight, obese, or have excess belly fat than those who didn't report eating in response to stress. Among girls, less sleep, infrequent family meals, and frequent consumption of chocolate and sweets were more prevalent among stress eaters. Among boys, those who ate in response to stress also tended to eat more sausage, chocolate, sweets, hamburgers, and pizza. A previous small study published in *Appetite* found that among 5- to- 9-year-old children, those who released more of the hormone cortisol in response to stress had higher body mass indices (BMI) and consumed significantly more calories without being hungry than those who had lower increases in cortisol.

Encourage healthy eating habits[2]

Whether they're toddlers or in their teens, children develop a natural preference for the foods they enjoy the most. To encourage healthy eating habits, the challenge is to make nutritious choices appealing. Eating to beat stress involves elevating the chemicals in our brain that control our mood. Serotonin is a neurotransmitter made in the gut that acts on the brain. Low levels of serotonin in the brain lead to feelings of depression and anxiety, while higher levels make us feel happier, calmer, and less anxious. Medications prescribed by doctors to treat depression, like Prozac, Paxil, and Zoloft, are specifically designed to increase levels of serotonin in the brain. Some foods can help do this too.

Another brain hormone that lowers anxiety is oxytocin. Also known as "the social hormone," oxytocin is secreted by the brain's pituitary gland and gives you the sense of well-being you feel when you are in the company of good friends. It's a natural stress reliever.

The way oxytocin works are by lowering electrical activity in parts of the brain that are associated with anxiety. A pharmaceutical version of oxytocin used by obstetricians to induce labor is even being studied by researchers for its ability to treat high anxiety states like autism and post-traumatic stress disorder. However, medications are not the only way to improve mood. Here are certain foods that can help to manage stress in children. When we are stressed, the brain sends signals to the body to be ready for a physical response. The digestive system is also profoundly affected by stress.

- To keep stress at bay, it is best to feed your children the right amounts of food at regular intervals of time. Ensure that your kids have a healthy breakfast every day since this keeps the metabolism up and running. This is the best way to manage stress.

- To manage stress, fruits, and vegetables that contain magnesium, vitamin B, and C should be included in the diet. Bananas, nuts, avocados, green leafy vegetables, dairy products, and fish are very rich in vitamin B. Vitamin B helps one to feel energetic enough to fight stress.

- Citrus fruits such as tomatoes, kiwi, and oranges are rich in vitamin C and can help control stress.

- Include foods that are rich in magnesium in your child's diet to reduce anxiety and stress. Beans, peanuts, and green leafy vegetables are rich sources of magnesium.

Fermented Foods

- Some fermented foods, like sauerkraut, naturally contain healthy bacteria called Lactobacillus reuteri which signals the brain to release oxytocin.

- Sourdough bread and pumpernickel bread also contain these bacteria, and so does cheddar cheese. So, these might be good choices to consider when packing a school lunch. Bonus benefit: Lactobacillus reuteri also reduces harmful bacteria in the mouth that causes tooth decay.

Omega-3s

- In addition to their benefits for the heart, researchers are finding omega-3 fatty acids also appear to lower anxiety. These can be found in dietary supplements, but good food sources are oily fish like salmon and mackerel, and some shellfish like Manila clams.

- Other, possibly more kid-friendly choices include walnuts and chia seeds, which also contain these healthy fats.

Chamomile

- A soothing cup of tea is not just for adults. Chamomile flowers used to make a non-caffeinated herbal tea have a natural calming effect. A clinical trial conducted at the University of Pennsylvania showed that chamomile can reduce symptoms of anxiety.

Kids who enjoy breakfast every day have better memories, more stable moods, and energy, and score higher on tests. Eating a breakfast high in quality protein- from enriched cereal, Yoghurt, milk, cheese, eggs, meat, or fish- can even help teenagers lose weight.

Some ways we can help our kids better manage stress and eat and live better include encouraging them to get adequate sleep and having consistent sleep and wake times; providing an array of nutrient-rich meals and snacks that are eaten sitting down at the kitchen counter or table at designated times; eating family meals often and with minimal distraction; encouraging kids to stay active and fit; limiting screen time and time spent sitting; and having go-to, enjoyable activities that help them de-stress.

Make mealtimes about more than just healthy food[3]

Making time to sit down as a family to eat a home-cooked meal not only sets a great example for kids about the importance of healthy food, it can bring a family together. A child's body gets all the sugar it needs from that naturally occurring in food. Added sugar just means a lot of empty calories that contribute to hyperactivity, mood disorders, and increase the risk for obesity, type 2 diabetes, and even suicidal behaviors in teenagers.

Avoid foods that impair your child's mood.

- A diet high in processed foods, such as fried food, sweet desserts, sugary snacks, refined flour, and cereals can increase the risk for anxiety and depression in kids.

- Kids who drink four or more cups of soda or sweetened fruit drinks a day—including diet versions—have a higher risk for depression.

- Caffeine from soda, energy drinks, or coffee drinks can trigger anxiety in kids and aggravate feelings of depression.

Find Healthier Junk Food Alternatives[4]

Fast food is typically high in sugar, unhealthy fat, and calories and low in nutrients. Still, junk food is tempting for kids, so instead of eliminating it, try to cut back on the times your kids eat fast food and, on the times that they do, make the healthiest choices possible.

Table No. 1: Healthier Junk Food Alternatives

Kid-friendly junk food alternatives	
Instead of…	Try…
French fries	"Baked fries" grilled in the oven and salted lightly
Ice cream	Yogurt; sorbet; fresh fruit smoothies
Fried chicken	Baked or grilled chicken
Doughnuts or pastries	Bagels; English muffins; home-baked goods with less sugar
Chocolate-chip cookies	Graham crackers, fig bars, vanilla wafers, fruit, and caramel dip
Potato chips	Baked vegetable chips or, for older children, nuts

PHYSICAL ACTIVITIES

In recent years, there has been a shift in the lifestyles of various age-groups, including children, especially in their late childhood. Unlike children a few decades ago, children today are leading increasingly sedentary lifestyles that involve time spent on computers and watching TV. This lifestyle leads them to neglect the physical activity that has been typical to this developmental period[5-6]. In times when children are less active, the significance of studies on the positive impact of sport on physical health, mental health, and cognitive

functioning, is critical[7-11]. The aim of such research is to raise awareness of the gravity of the problem, as well as to create a holistic health program that promotes being physically active in different contexts, including with family and in school[12].

Limited physical activity, or often a complete lack thereof, leads to various health problems, including posture problems (such as idiopathic scoliosis), somatic conditions, being overweight and obese, problems with circulation, and even premature death[10,13,14,15,16]. There is increasing empirical evidence of a relationship between a lack of physical activity and mental health measures. For instance, research suggests that overweight adolescents who do not practice sports are more prone to risk behaviors, including suicide attempts. Regular physical activity also leads to better circulation and oxygen supply to the brain, an increase in bone and muscle density, and greater tolerance of stress.

It was also found that children who engaged in physical activity demonstrated better executive functions in terms of inhibition[9,18] and better planning abilities[22] than children who did not engage in any physical activity. Studies conducted with children aged 8–9 years confirmed that sport influences changes in the right anterior prefrontal cortex, which are related to cognitive control[23]. The findings suggest, that plan-structured sport activities, for example, tennis play, are associated with the development of inhibitory control.

Longitudinal research by Trudeau and Shephard[25] found a positive correlation between the number of hours devoted to sport and school grades. Children who devoted more time to sports were found to have significantly better grades[26]. Research by Carlson et al.[27] showed that girls who engage in sport for at least one hour per week had significantly better results in math and reading than girls who did not do at least one hour of sport. This relationship was not found to hold for boys in this study.

In studies involving interventions, a positive correlation has been demonstrated among German-speaking students when English lessons and sports activities were combined. This method of teaching improved the students' English language grades[28]. Other studies highlight the positive impact of physical activity on the development of a broader lexical network and the comprehension of the meaning of words, as well as a greater ability to detect syntactic errors[17-18], and spelling performance[29]. In addition, sport was found to positively affect language understanding among primary school students[30].

Key findings of most studies included in this review indicate that children's engagement in physical activity may be associated with changes to certain brain structures, leading to an improvement in memory function (working memory in particular), as well as cognitive control. Independent of the children's age category (early, mid, or late childhood), increased physical activity has been shown to improve cognitive function, especially in regard to working memory, V-S memory and cognitive flexibility[19,20,21,31,32]. Moreover, research suggests that physical activity positively influences verbal functions, which facilitates the learning of words in a new language, leading to richer networks of words and their meanings, and also improves spelling performance, language understanding, and the detection of syntactic errors.

Physical exercise increases circulation, which leads to better oxygen supply to the brain, as well as providing the brain with nutrients[33,34,35]. Engaging in sports has a positive influence on all systems: the motor, cardiovascular, respiratory, hormonal, immunologic, and nervous systems.

10 WAYS PHYSICAL ACTIVITY PROMOTES CHILD DEVELOPMENT:

• Physical growth

Exercise, like food, is a fundamental part of a child's physical growth. Exercise helps your child build stronger muscles and bones acting as a stimulus for the body to adapt to. Developing a good physical foundation from a young age includes healthy bone mass and density, which will reduce the risk of developing bone-related diseases such as osteoporosis later on in life.

• Better fitness

Physical strength is built through exercise and being strong has tons of benefits to a growing child, such as being able to walk longer distances without getting tired and having the strength to perform their daily tasks. Exercise also promotes flexibility and stability.

• Refinement of motor skills

For younger children, physical activity during playtime helps with the development of motor skills, which is responsible for helping them master the basic movements they need for

everyday life. The development of a child's motor skills means that basic feats such as feeding oneself, tying one's shoelaces and even writing can be attained much faster.

• Better posture

Slouching is a common problem in many children and exercise helps to counter this negative trend by improving a child's posture by increasing core and spine strength. Good posture goes a long way in life - it protects a child's spine from deformation due to excessive slouching and also reduces the chances of experiencing body aches due to bad posture.

• Weight management

Nothing burns calories as successfully as physical activity, making exercise an essential activity when it comes to weight management. While most parents feel the urge to pamper their child by letting them eat as much as they want, it should be known that obesity during childhood comes with a high risk of remaining obese as an adult.

• Maintaining of cardiovascular health

Chubby kids are seen as adorable by their parents, but all that extra fat comes with a health cost. Childhood obesity puts children at risk of developing cardiovascular diseases such as high cholesterol and metabolic conditions like type 2 diabetes later on in their life or worse, at a younger age.

• Cognitive development

Exercise isn't all about getting buff; it also helps with brain development! During exercise, nerve cells in the hippocampus and prefrontal cortex of the brain are triggered to multiply and form new connections. This results in improved concentration and better memory, which are traits that will definitely serve a school-going child's academic needs well!

• Better mental health

While exercise can seem like a dreadful chore to some children, the actual act of exercising becomes something of a cathartic experience once the child gets into the flow of exercise. Physical activity helps with stress and anxiety relief, and the rush of feel-good hormones it releases promotes better moods. Nothing warms the heart of a parent more than the sight of a happy child!

• Improved self-esteem

Along with improving a child's mental health and mood, exercise also boosts a child's self-esteem. Being good at a certain sport is definitely a confidence raiser for children. The fact that exercise helps with weight control also helps to promote healthy self-image in children. Finally, exercise is a great way for children to make friends and being part of a social group definitely contributes to a child's self-esteem.

• Social skills development

Exercise not only provides children with an opportunity to make new friends, it also helps them develop and nurture their social skills. Team sports, for instance, help children to hone crucial communication skills such as learning how to read non-verbal cues, practicing teamwork and adopting leadership roles.

All the developmental benefits of exercise have a significant impact on a child's long-term health. The physical, mental and emotional benefits derived from exercise will prepare a child well for his or her teenage and adult years. If you are wondering when to start making exercise a regular activity in your child's life, the answer would be: it's never too soon! Whether your child is currently a toddler, kindergartner or primary school student, exercise deserves a spot in their life. Here are some of the basics to get you started.

CONCLUSION

A child's body gets all the sugar it needs from that naturally occurring in food. Added sugar just means a lot of empty calories that contribute to hyperactivity, mood disorders, and increase the risk for obesity, type 2 diabetes and even suicidal behaviors in teenagers. Kids who enjoy breakfast every day have better memories, more stable moods and energy and score higher on tests. Eating a breakfast high in quality protein- from enriched cereal, Yoghurt, milk, chees, eggs, meat or fish can even help theaters to lose weight. Some ways we can help our kids better manage stress and eat and live better include encouraging them to get adequate sleep and having consistent sleep and wake times; providing an array of nutrient-rich meals and snacks that are eaten sitting down at the kitchen counter or table at designated times; eating family meals often and with minimal distraction; encouraging kids to stay active and fit; limiting screen time and time spent sitting; and having go-to, enjoyable activities that help them de-stress. The literature indicates that efficient cognitive functioning in pre-

adolescents requires not only an adequate intelligence quotient (IQ), but also high levels of executive function development (such as motivation, the ability to set goals, and self-control), which is fostered by engaging in sport. Of course, other activities undertaken by children, such as playing a musical instrument [24, 36], are also associated with cognitive functioning, but physical activity, as the most natural for children of that age, is most desirable. Article suggests that it is worthwhile to engage in sports in late childhood because it positively influences cognitive and emotional functions.

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