

## **NUTRITION AND LIFESTYLE – SPORTS FOR CHILDREN IN SINGAPORE by Dr Charu Narayanan**

Children doing sport is a step towards maintaining optimal physical and mental health. Obesity is rising in the developed world and with it come the risks of chronic disease such as diabetes and heart disease. Getting our children active involved in sport at an early age can lay the foundation for lifelong healthy habits. There are immense benefits of activity for mental health and well-being. For 5 -12 year old children, at least 60 minutes a day of exercise/ sport is recommended. Less active children are more likely to be overweight. Some of them may feel stigmatized; their confidence may be lower and they may be more likely to have disordered sleep. Furthermore, they are likely to be involved in less social activity. A lot of physical activity brings with it the need to take extra care of some aspects especially in the hot weather here in Singapore.

### ***Offer nutritious meals and snacks -***

Nutrition needs of active children can be met by a varied diet that offers enough calories not just for growth but also for the extra demands of sports and physical activity. Carbohydrates from vegetable and cereals, protein from animal sources and beans/ pulses, healthy fats from nuts and oily fish make up macronutrients and provide building blocks for energy production and repair. Micronutrients are also required for optimal health and these constitute vitamins and minerals. Important vitamins include Vitamin A, B, C, D, E, K and folic acid. Zinc is worth a mention as an important mineral. These act as promoters of various enzyme systems in our body, acting as antioxidants, immune boosters and repairing damaged cells. They also help maintain bone and muscle strength and keep the heart and nerve function optimal. It follows that deficiency of these in sporty children presents earlier due a higher demand.

### ***Don't forget the micronutrients -***

Animal sources such as dairy, eggs, meat and fish, wholegrain cereals, fruits and vegetables as well as sunlight (Vitamin D) provide micronutrients .

### ***What if my child turns vegetarian or vegan –***

Vegan or vegetarian child may need extra support with iron supplementation along with a Vitamin C source to aid absorption. They may struggle to maintain adequate Vitamin B12 levels as well and in this situation, supplements can help. Adequate calcium can be obtained from dairy, vegetables, nuts and seeds.

### ***Fussy children –***

These children may lose out on nutrition – often going in for carbohydrate rich and micronutrient poor food choices. As the demand for fuel is higher, sporty children are likely to experience fatigue more easily and recover less quickly from intense exercise. They may fall prey to recurrent infections.

### ***Sugars –***

Occasional sweets are not a problem but our children today have easy access to sugar rich snacks, processed food and sugary drinks (sorely lacking in nutrients). This may not occur at home but may be outdoors eg from vending machines close to sporting venues or when they go on sport related trips out of town. Children should be educated about these foods only providing 'empty calories' with adverse effects on their performance at sport if routinely consumed as substitutes for healthy snacks.

### ***Establishing healthy eating patterns –***

It cannot be stressed enough that as parental role models for our children, we should be choosing and shopping for food carefully as well as demonstrating regular an active lifestyle to them.

### ***Timing of meals -***

Skipping breakfast is not a good idea with intense activity planned for the day. A meal should ideally be eaten 2-3 hours before intense sports with small carbohydrate and protein containing smaller snacks during the activity. Otherwise the child may suffer with weakness or lightheadedness during exercise. Preferably 30 – 60 minutes interval before commencing activity after a snack is best. Don't forget to offer a nutrient dense meal with adequate protein at the end to replenish glycogen and muscle protein used up during exercise.

### ***Some ideas for healthy snacks include –***

Fruit

Vegetables sticks with humus

Natural yoghurt with chopped fruit and a dash of honey

Reduced salt/sugar baked beans on whole meal toast

Guacamole, whole meal pitta

Rye crispbread with low fat cheese and grapes

Unsalted nuts or seeds

Low fat milk

Fruit smoothie (made with low fat milk/ soy/ almond milk and banana / berries)

Oatcakes with peanut butter and other nut butters

***What about supplements?***

Be safe when it comes to extra protein shakes or supplements as these may have ill effects. A healthy varied diet with adequate protein should suffice. There are concerns around excessive protein and its effects on bone density and effects on kidney function in the long term. The best source of vitamins and minerals remains food.

***Hydration -***

Hydration is particularly important as water is a medium for all enzymatic processes to occur in the body and required for energy production and cell repair. This is important in the hot weather here. Children have a larger water proportion in their body compared to adults and are at a greater risk of dehydration. Pursuing outdoor sport in hot weather carries a higher risk of dehydration and symptoms may include heat stroke, headaches, nausea and fatigue as muscle strength and aerobic capacity are affected.

***Suggested drinks for hydration -***

Drinking water is often not a habit and inculcating this from a young age is a good idea. Water, milk, no added sugar fruit juice and smoothies are acceptable drinks. Some sports drinks may have a high sugar content or contain caffeine which is undesirable for children. Homemade isotonic drinks prepared with water, a pinch of salt and some honey can be less expensive and work just as well. Milk can also be a complete post-workout drink rich in calcium, protein and electrolytes ( if there is no dairy intolerance).

It is important to recognize that children have different needs to adults due to rapid brain growth and hormonal changes especially at puberty. Lack of care with regard to nutrition will therefore have an impact on general health, growth and athletic performance.