

Exercise & Children

*Exercise keeps muscle and bones strong and reduces the risk of type 2 diabetes. Get your kids on their feet and moving by making exercise a part of their daily routine, says **Cindy Ng, Senior Physiotherapist, Singapore General Hospital***

When we talk about exercise, we often think about jogging, working out in the gym or lifting weights. But exercise for children is as simple as playing and being physically active. Kids are exercising when they are doing PE, playing soccer or doing a split at dance practice, and even when they are skipping, cycling and playing tag ('catching').

When you watch a child in action, you will notice three elements at play:

- Endurance – when he runs from another kid while playing tag
- Strength - when he crosses the monkey bars
- Flexibility – when he bends down to tie his shoelaces

Endurance is developed when someone regularly engages in aerobic activity (aerobic means “with air”). The heart beats faster during such exercises as the person breathes harder. When done regularly and for continuous periods of time, aerobic activity strengthens the heart and improves the body’s ability to carry oxygen to all our cells. Aerobic activities include basketball, cycling, swimming, soccer and running.

Improving **strength** is not confined to lifting weights. Push-ups, stomach crunches as well as pull-ups can help tone and strengthen muscles. Children are strengthening their muscles when they climb frames, attempt a handstand, or wrestle with their friends.

Stretching exercises improve **flexibility**, giving muscles and joints the chance to bend and move easily through their full range of motion. Kids who move around a lot will find many opportunities to stretch, just like when they reach out for a toy up high on a shelf or roll over backwards.



Photo Credit: Rashidi Saleh

HOW MUCH EXERCISE?

According to the American Academy of Pediatrics (AAP), the average child is watching about three hours of television a day. And the average kid spends five and a half hours on all media combined, says the Kaiser Family Foundation.

In other words, they’re sitting around a lot more than they used to. No wonder obesity has become more widespread among children. Parents must ensure that their children are getting enough exercise. But how much exercise should children get?

The National Association for Sport and Physical Education (NASPE) in the USA recommends the following for children:

| Age | Minimum Daily Activity | Comments |
|-------------|--------------------------|--|
| Infants | No specific requirements | Physical activity should encourage motor development |
| Toddler | 1 ½ hours | 30 minutes planned physical activity and 60 minutes unstructured physical activity (free play) |
| Preschooler | 2 hours | 60 minutes planned physical activity and 60 minutes unstructured physical activity (free play) |
| School Age | 1 hour or more | Break up into bouts of 15 minutes or more |

ON YOUR FEET!

It is recommended that young children should not be inactive for prolonged periods of time - not more than one hour unless sleeping. School-age children should not be inactive longer than two hours.

One of the best ways to encourage children to be more active is to limit the amount of time they spend in sedentary activities such as watching TV or playing video games. Children two years and older should not be allowed to watch more than one to two hours of good quality television programming daily.

BE A ROLE MODEL

Parents should also try to be role models for active lifestyles and provide children with opportunities for increased physical activity. Incorporate activity into everyday routines, such as climbing the stairs instead of taking the lift and walk or cycle to a nearby coffeeshop instead of driving.

Team sports are also a very good way for kids to get their daily activity requirement, although competitive sports is not for everyone so never threaten or compel your child to compete. Refrain from making exercise a punishment. Forcing your child to go out and play may increase resentment and resistance.

Most of all, keep it fun and varied so your child will come back for more! The table below gives some examples of physical activity

WATCH OUT!

If a child has diabetes, monitoring glucose level is essential to

prevent hypoglycaemia. An extra snack or a reduction of insulin dose may be recommended by the physician. The benefits of exercise for children with diabetes include strengthening bones, muscles and joints, improving self-confidence, improving insulin sensitivity, weight management and better management of medical conditions.

High blood glucose or hyperglycaemia must also be addressed. When a child exercises, he needs more energy and the body may release extra glucose to cope with the activity. Insufficient insulin may cause increased glucose in the blood and cause excessive thirst (dehydration) and weakness.

For type 1 diabetes, diabetic ketoacidosis or dangerously high levels of ketones can occur due to insufficient insulin and fat is used as an alternative fuel. Ketones are toxic acids that build up in the blood. They appear in the urine when your body does not have enough insulin. They are a warning sign that your diabetes is out of control or that you are getting sick

Some useful tips:

1. Consult the physician before getting involved in any moderate to high intensity exercise or sports.
2. Eat right.
3. Be punctual with medications and insulin injections.
4. Avoid injecting into the muscles that are predominantly used in the physical activity.
5. Bring along a healthy snack and water during any physical activity.

Supervision is necessary especially when prescribing resistance training. Elastic bands, gym balls and elastic tubings can be used for resistance training. These are to prevent injuries to the joints and muscles of a growing child.

| Daily Activities | Play | Recreation | Free Time Activities | Strength & Flexibility | Activities to reduce |
|--------------------------------|--|---|----------------------|------------------------|---|
| Playing outside | Running/Playing tag or 'catching' games or hide-and-seek | Rollerblading | Bike-riding | Dancing | Watching TV |
| Taking the stairs | Jumping/Skipping rope | Soccer | Taking nature walks | Yoga | Playing computer games |
| Walking more | Cycling | Badminton | Ice-skating | Push-ups | |
| Helping around the house | Dancing | Swim | Bowling | Pull-ups | |
| Walking and playing with a pet | Climbing Stairs | Basketball | Canoeing | Obstacle courses | Sitting for more than an hour at a time |
| Riding a bike | Playing video games that require dancing and moving | Soccer | Rollerblading | | |
| | | Frisbee Kite flying Dancing Gymnastics | Swimming | | |