

FAMILY BASED INTERVENTIONS IN CHILDHOOD OBESITY

INTRODUCTION

Obesity in childhood is a key health issue around the globe in developed and developing countries including Malaysia. The rate of increase in childhood obesity is not as rapid as that of adults but nonetheless still high. Many studies conducted in Malaysia have demonstrated increasing prevalence ranging from 6% to 11%. It is associated with significant health problems in childhood and adolescence and is a risk factor for the development of chronic diseases like hyperlipidemia, hypertension, diabetes, osteoarthritis, cardiovascular diseases and sleep-disordered breathing. Obesity can also impact a child's social competence, emotional well-being and self-esteem.

Classification of obesity in childhood is complicated and has to take into account the fact that height is still increasing and body composition is changing. According to the CDC guidelines, children and adolescents be considered overweight if BMI exceeds the 85th percentile and obese if BMI exceeds the 95th percentiles,

The mechanisms responsible for the increasing prevalence of childhood obesity are not entirely understood, but lifestyle changes associated with **increased caloric intake and decreased energy expenditure** probably play central roles especially in genetically predisposed individuals. Less commonly it may be due to an underlying medical problem such as metabolic and endocrine disorders or genetic abnormalities.

When discussing the causes of obesity, we mustn't be tempted to point fingers and assume that obese adults and their children have free choice with regard to food intake and energy expenditure and are therefore responsible for their "state". Rather, we need to understand that genetic and environmental factors can alter the neurohormonal environment, thus driving the propensity for both increased energy storage and decreased energy expenditure.

THE ROLE OF DIET

Obesity results not from a high absolute energy intake which may match energy needs in a growing physically active child, but from an intake which exceeds energy needs on a regular basis. Multiple studies have shown that young children compensate well for excessive energy intake (EI) at one meal by reducing EI at next meal. However, this efficiency declines with age even in childhood. This may explain why the prevalence of obesity tends to be highest in older children when unfortunately eating habits have become established. During infancy, formula feeding and early weaning are associated with a rapid weight gain which is a strong risk factor for childhood obesity.

MANAGEMENT

The management of obesity requires a **MULTIDISCIPLINARY APPROACH** that includes lifestyle modification, nutritional education and physical activity/exercise recommendations. It is pertinent however to keep in mind that only when exercise is combined with dietary modification, that it helps to promote and maintain weight loss.

For the purpose of this article mainly lifestyle modifications & activity recommendations will be discussed.

Being physically active has many benefits including:

- Reducing blood pressure
- Improving cholesterol profile
- Improve insulin sensitivity
- Helps develop & maintain healthy bones
- Improve psychological well-being including gaining more self -confidence & higher self-esteem

One of the important strategies in management is family based behavioral interventions.

Parental and family involvement in pediatric obesity interventions is considered crucial due to their ability to be agents of change primarily through shaping the home environment, modeling healthy eating and activity behaviors and using enhanced parenting skills acquired through family based intervention as follows:

A. Supporting healthy eating behaviors

- Prepare healthy meals
- Serve fruits & vegetables at meals and for snacks
- Limit high energy density foods in the home
- Limit access to fast food restaurants
- Limit eating away from the kitchen & dining
- Replace beverages with water
- Serve healthy portion sizes
- Involve child in preparing meals

B. Supporting physical & lifestyle activity

- Make a weekly activity schedule
- Provide equipment for exercise
- Make use of local parks & playgrounds
- Plan fun activities for the family
- **Be a model** & encourage children to take stairs instead of escalators or elevators
- Go for walks as a family
- Limit screen time to < 2 hrs / day.

C. Supporting healthful behavior change

- Encourage healthy behaviours
- Praise healthy behaviours
- Model healthful behaviours for child
- Create a family based rewards system

PHYSICAL ACTIVITY / EXERCISE RECOMMENDATIONS FOR CHILDREN

Physical activity plays an important role in the prevention of childhood obesity as it increases energy expenditure and offers a multitude of other benefits. Remember, the primary goal should be behavioural outcome and not weight related outcomes. Note, that in these guidelines the emphasis is on physical activity and not necessarily structured “exercise” program.

The following are guidelines from the AHA.

AHA(American Heart Association) Recommendation

All children age 2 & older should:

- Participate in at least 60 mins of enjoyable, moderate-intensity physical activity every day that are developmentally appropriate and varied
- If not possible to engage in full 60 mins, try to provide 2 x 30minute periods or 4 x 15-minute periods appropriate to their age, gender and stage of physical and emotional development.

SUMMARY

While it is popularly thought that children will simply “outgrow” their overweight status, the reality is that it is one of the most compelling risk factors for overweight in adulthood. This necessitates early intervention as pediatric overweight may not “resolve” spontaneously with age. Prevention is crucial to combat this emerging health threat.

Consultation with a medical professional should be arranged as deemed appropriate or if there is any concern regarding health status of the child.

References

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