Incidence of childhood obesity is on the rise since last few decades and is still continuing to rise. Unfortunately the parents are not well aware of the danger. Seeing their babies putting on weight they are rather content. Yet the traditional look of healthy and plump baby has proved its adverse consequences beyond doubt. Infants and children obviously need extra nutrition and nurturing for their growth and they consume the best within the family set up for their growth. A big question is - are they consuming the calories which they actually need ? Are they following the right growth pattern? Very often they consume, more correctly to say, are compelled to consume more than they need.

What is childhood obesity?
“Obesity is defined as a condition of abnormal or excessive fat accumulation in adipose tissue to that extent that health may be impaired” (WHO). A boy is said to be fat if he has 25 percent extra fat and for a girl it is 30 percent extra (Lohman 1983).

Background
In early 1990, WHO noticed that obesity in general has become public health problem in North America and West Europe, but no clear cut data was available regarding childhood obesity. A committee was then formulated by WHO consisting of nutritionists, pediatricians, public health specialists, and epidemiologists to look into global information on childhood obesity. An International Obesity Task Force (IOTF) was formed in 1996 to look into the epidemiology of childhood obesity.

Epidemiology
The incidence of childhood obesity in USA has raised from 5.0 percent to 13.9 percent for the age group of 2-5 years and for age group of 6-11 years the rise is from 6.5 percent to 17.4 percent, for adolescent it is from 5.0 percent to 17.4 percent. WHO report (1998) pointed the same inclining trend in Middle East, Central and Eastern Europe. Practically the rate has doubled in last three decades.

WHO has declared childhood obesity as global epidemic. A study in India by Ramachandram and others in schools of Chennai shows 22 percent of school children are overweight and obese in affluent schools, while the picture is only 4.5 percent in less paid schools.

Not all obese infants become obese children, neither all obese children become obese adults, but unfortunately obese children are at increased risk to become obese adults.

How a nurse will diagnose obesity?
A nurse must know some quick methods of measuring obesity at clinic. For clinical purpose, the best way is to take the subcutaneous skin-fold measures. For triceps, skin fold of subcutaneous fat at an equidistant point between acromion and olecranon is measured with calipers. A sum of 10-25 mm skin-fold of both triceps and calf is taken optimal for boys, and for girls it is a sum of 16-30 mm.

Body mass index is another quick way to measure obesity.
BMI = Weight(kg) / Height(m²)

As BMI changes with height, it changes rapidly in childhood. BMI more than 25 is considered overweight and more than 30 is considered obese. Though it is a very good screening tool, it is not considered a very accurate method for children as it fails to measure fat-obesity and muscular hypertrophy. Another on-the-spot measure to diagnose obesity is waist-hip measures, if it is > 0.9 , the child is obese.

Problems
The fear of childhood obesity is already there. Besides that, the most evident risks are -

- non-insulin type II childhood diabetes has markedly increased which predominantly was known as
adulthood diabetes.
- more rate of childhood hypertension
- more rate of childhood coronary heart disease
- more incidence of childhood respiratory obstruction disease
- more cases of slipped femoral epiphysis, joint problems in adolescents for excess weight bearing
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- more cases of slipped femoral epiphysis, joint problems in adolescents for excess weight bearing
- more incidence of flat foot
- early puberty is on rise; even a girl of 8-9 years is experiencing menstruation. Overweight girls have tendency to be glucose intolerant in their pregnancy giving birth to bigger babies and in turns, girl babies amongst those newborns are becoming pre-diabetic even before their own pregnancy (Parson and others)
- low self esteem of the victim, because of teasing by peer groups which in turn has increasing rates of childhood depression.
- picking habits from other's share in children with habit of over eating

Causes
Obesity results from combined factors like genetic, environmental, behavioral, and their interactions. Secondary childhood obesity with definite genetic or metabolic or endocrine causes are much less in incidence. Primary obesity with exogenous origin is the most important type where behavioral pattern, environment and eating habits are vital factors. The main culprits are those who eat more but move less. Children in general respond to external cues to eat rather than hunger sensation. Availability of more and more tasty, palatable, calorie-dense appetising food directly and indirectly cause more calorie intake. Over eating pattern of parents induces the same habit to their children. Busy schedule of parents push their children to adopt unhealthy and wrong practices. Sedentary activities like watching television or movies or chatting contribute more towards low energy expenditure. Urbanisation forces children for limited activity. Physical training sessions in schools are short listed now-a-days. Burden of studies has snatched the pleasure of leisure in childhood.

Treatments and role of nurses
Public health researchers agree that prevention is the strategy to control the endemic of childhood obesity. Hence identifying the obesogenic factors in clinics or during home visits is the nursing challenge ahead. Nurse has to convince the family members that aim is to slow down the weight gain, as with normal growth pattern child's body weight would be adjusted over a period of time. Nurse, here is a guide to the family in treatment regime which are as follows-

Diet management
- Optimal nutritional support is necessary.
- Restricting extreme calorie is never suggested as it adversely affects growth and development and the concept of normal eating.
- Thali concept, i.e A combination of cereals, vegetables, fish/ meat, fruit, curd/ milk, is better for daily consumption.
- Avoid nibbling habit in between meals.
- Lengthy breast feeding lessens fatness in infancy.
- Curtail calorie, but never the bulk for the children, and add fat soluble vitamins in diet.

Behavioural management
- Decrease sedentary habits, especially watching TV for a longer time.
- Adjust child in family food pattern.
- Never allow junk food for main food.
- Incorporate behavioural process slowly and gradually, preferably one at a time.

Family involvement
Nurses have major responsibilities in this point. As children grow within the family, nurse will make the parents understand that they are the role model to their kids. Within the family, supportive approach is a therapy rather than to misidentify the child as 'fat one'. Treatment targets the totality of family system. Assessing family's readiness and awareness is the nursing responsibility.

Amendments in child rearing practices is also emphasised. It is never the victim's sole responsibility. A gay family gathering at the end of the day even the busiest schedule is vital, kids should not sit on the sideline. Solution lies in the balance between calorie intake physical activity.