



Lecture 43:

Childhood Obesity

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Epidemiology:

- The prevalence of obesity has increased dramatically in children in the past 2 – 3 decades.
- Childhood obesity is one of the most serious public health challenges of the 21st century.
- A big concern of health care professionals and parents.

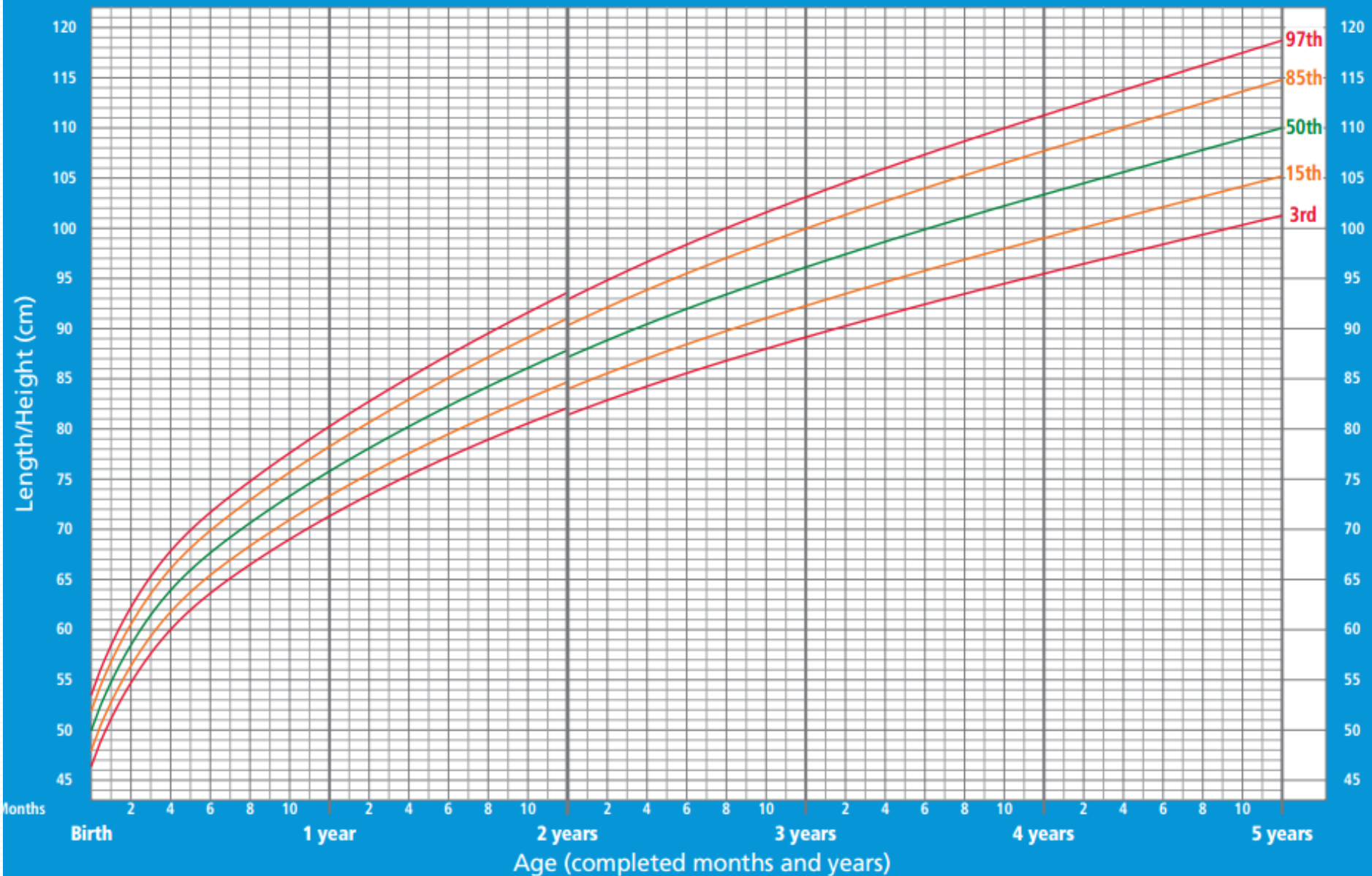


- According to WHO, in **2013** the number of overweight children under the age of five, is estimated to be **over 42 million**. Close to **31 million** of these are living in developing countries.
- About **40%** of children are overweight and **65%** of them will become overweight adults.
- In the USA and Ontario: **nearly one in three children are overweight or obese**, and the numbers are even higher in African American and Hispanic communities, up to 40%.

How To Measure Obesity in Children:

- It is not easy to measure overweight and obesity in children and adolescents because their bodies undergo a number of physiological changes as they grow.
- According to WHO:
- **0 – 5 years old:** WHO child growth standards.
- **5 – 19 years old:** WHO Growth Reference Data.
- **Over 19 years old:** BMI.

0 – 5 years old:

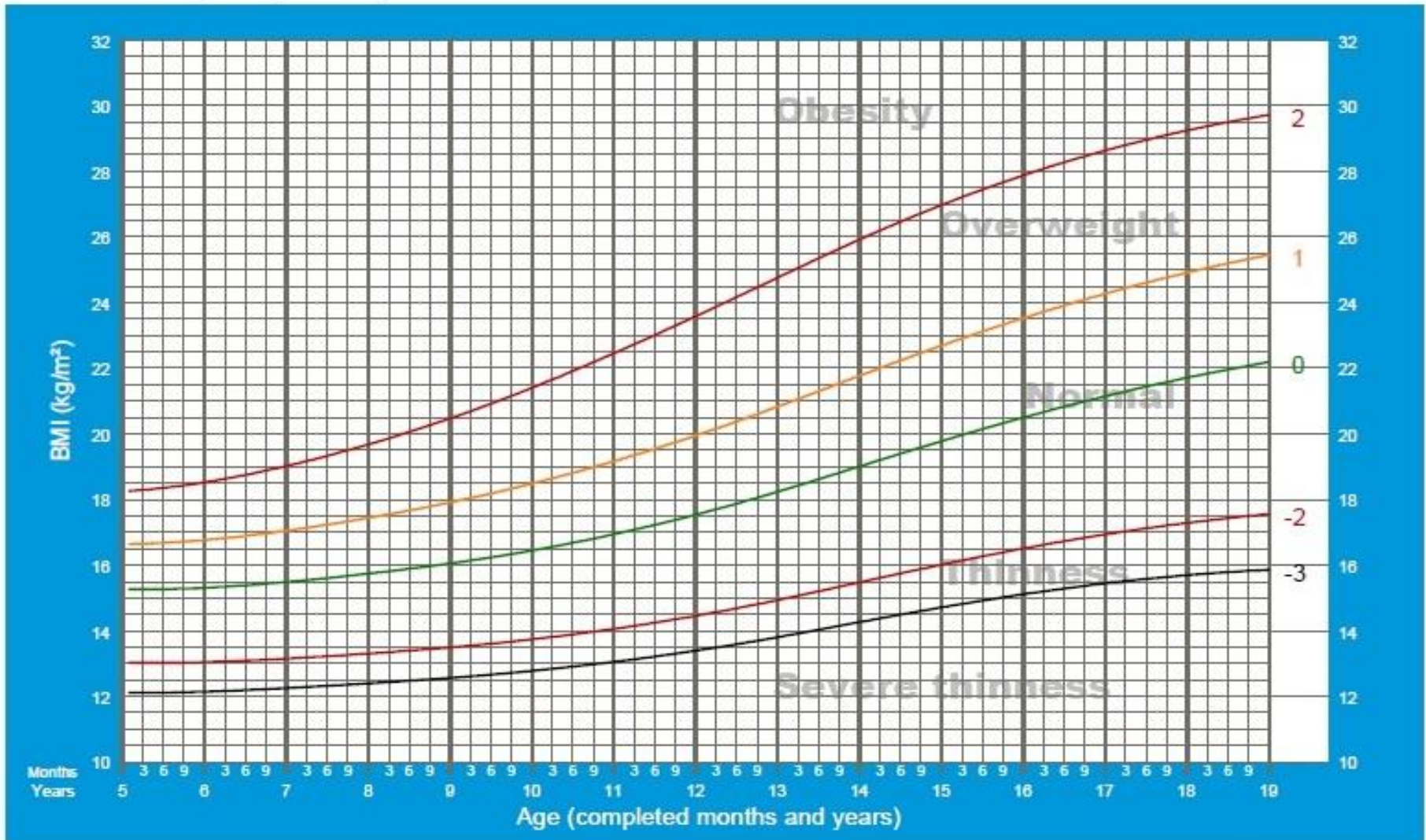


5 – 19 years old:

- **BMI-for-age** (5-19 years)
 - boys
 - girls
- **Height-for-age** (5-19 years)
 - boys
 - girls
- **Weight-for-age** (5-10 years)
 - boys
 - girls

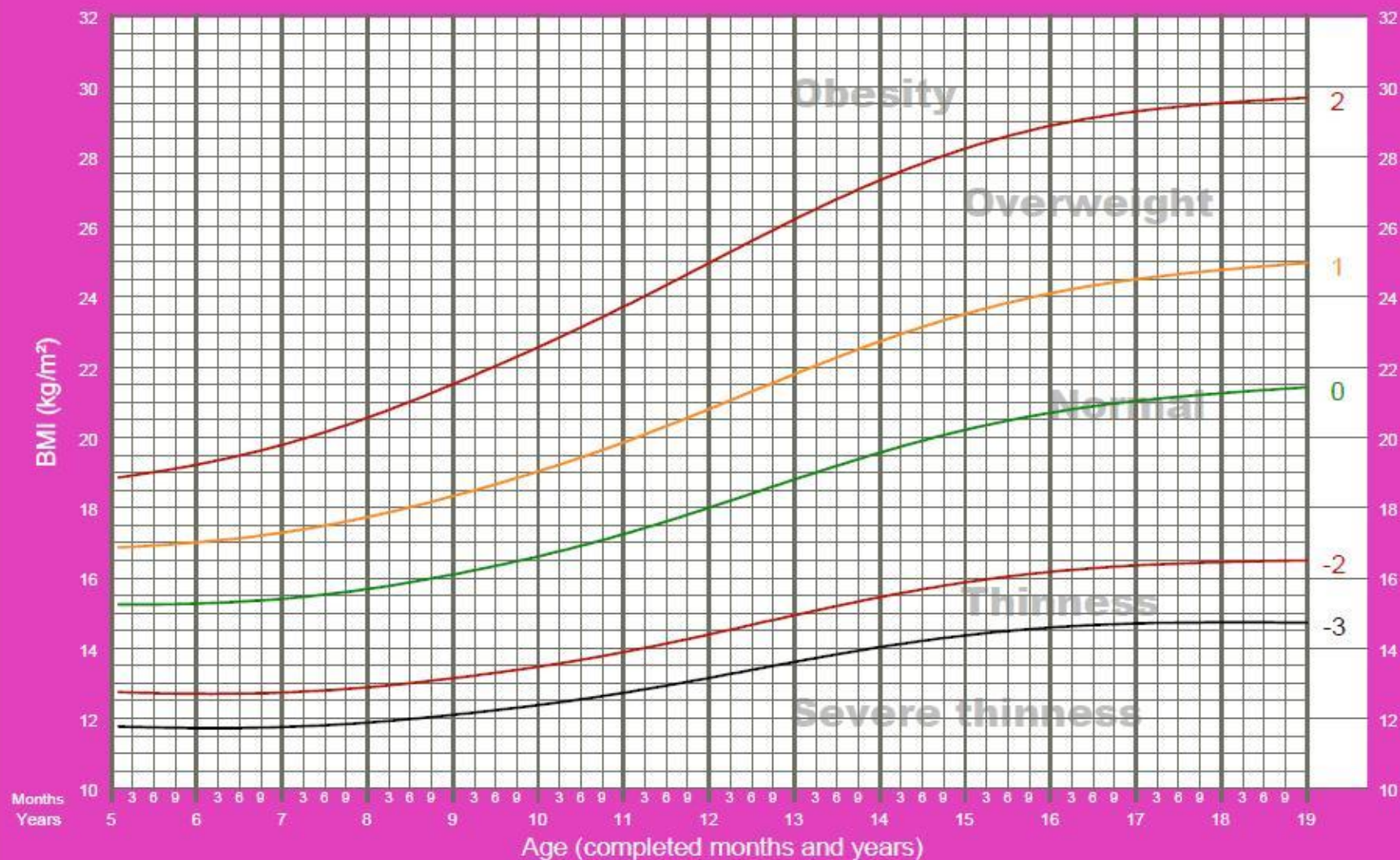
BMI-for-age BOYS

5 to 19 years (z-scores)



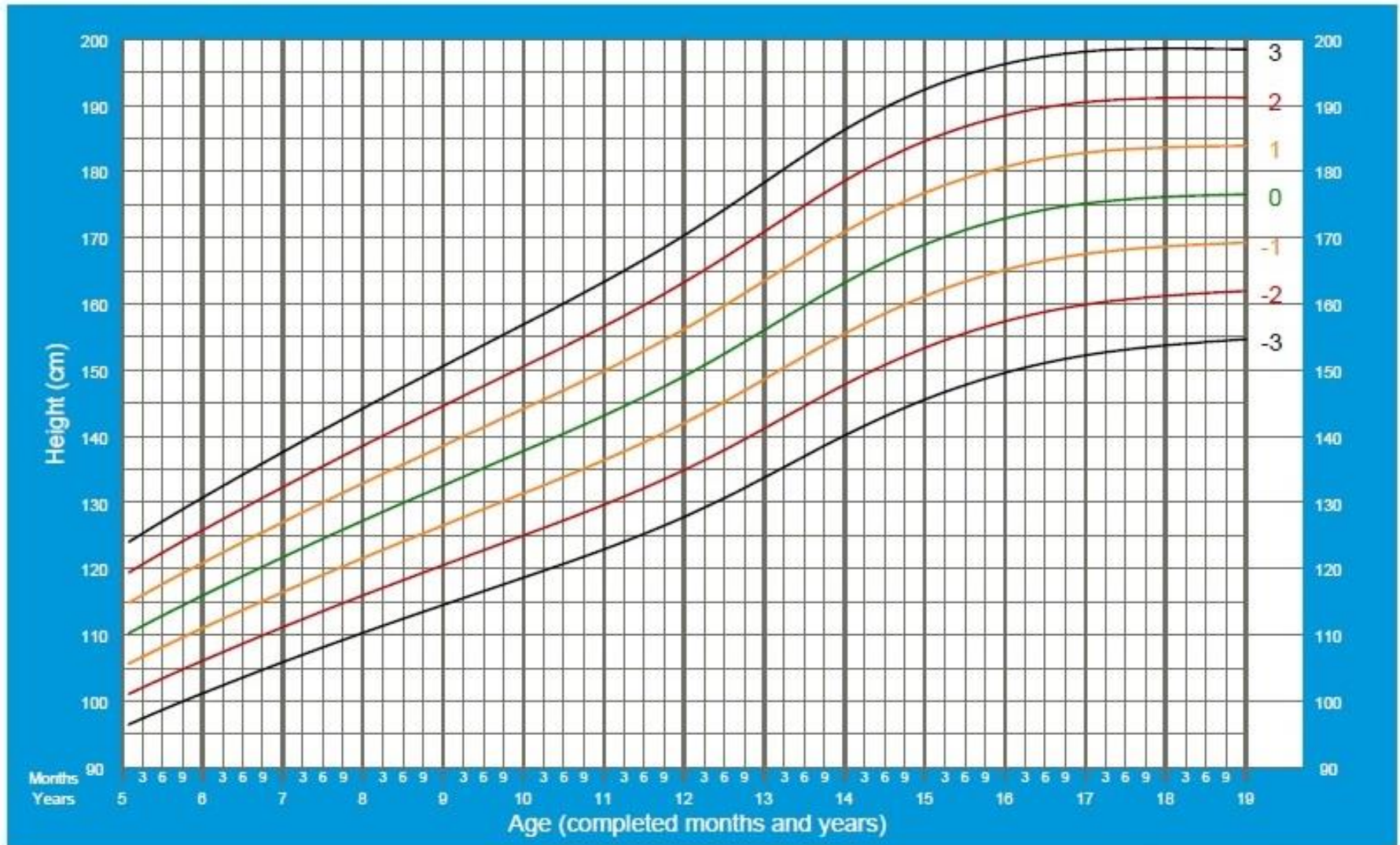
BMI-for-age GIRLS

5 to 19 years (z-scores)



Height-for-age BOYS

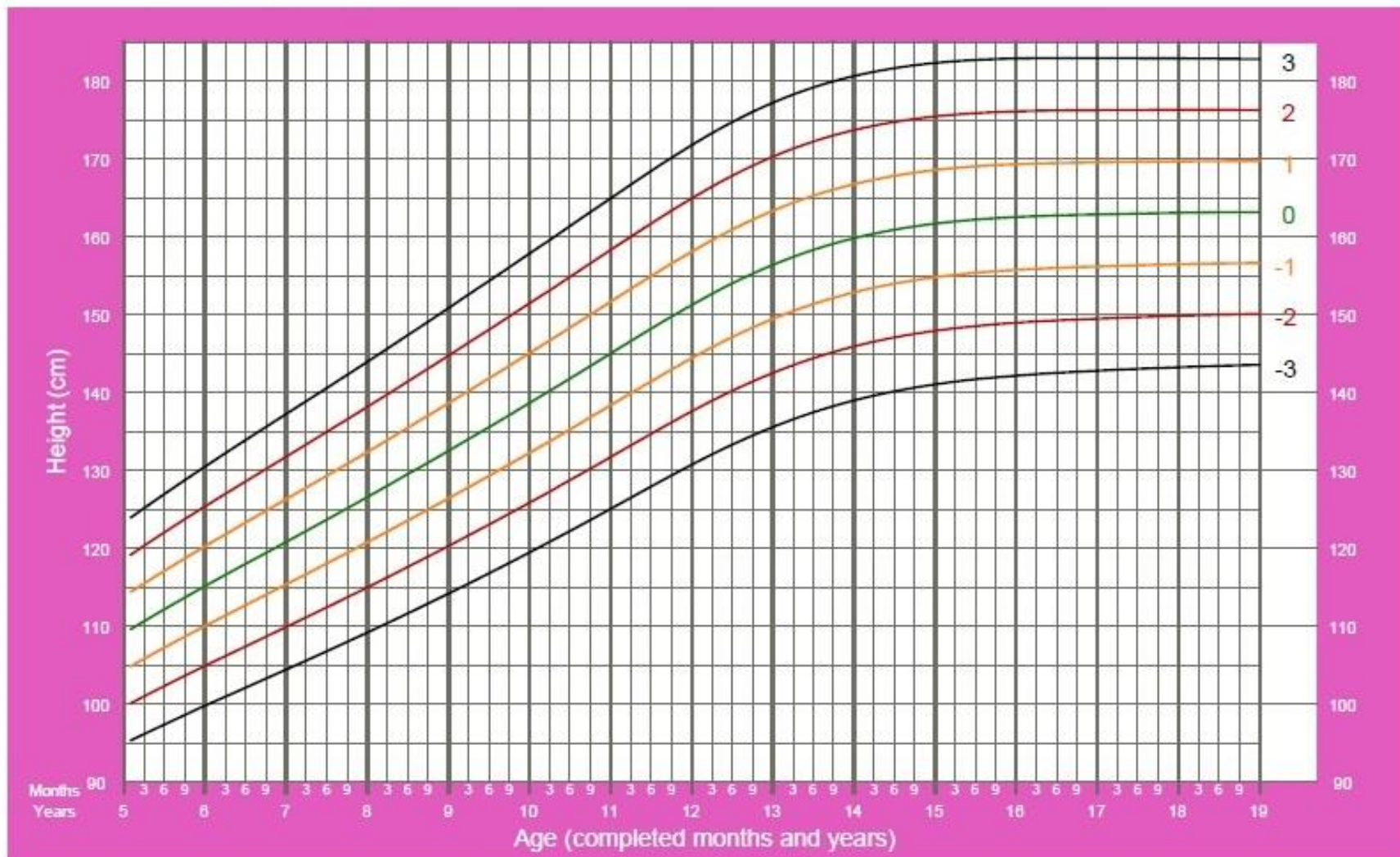
5 to 19 years (z-scores)



2007 WHO Reference

Height-for-age GIRLS

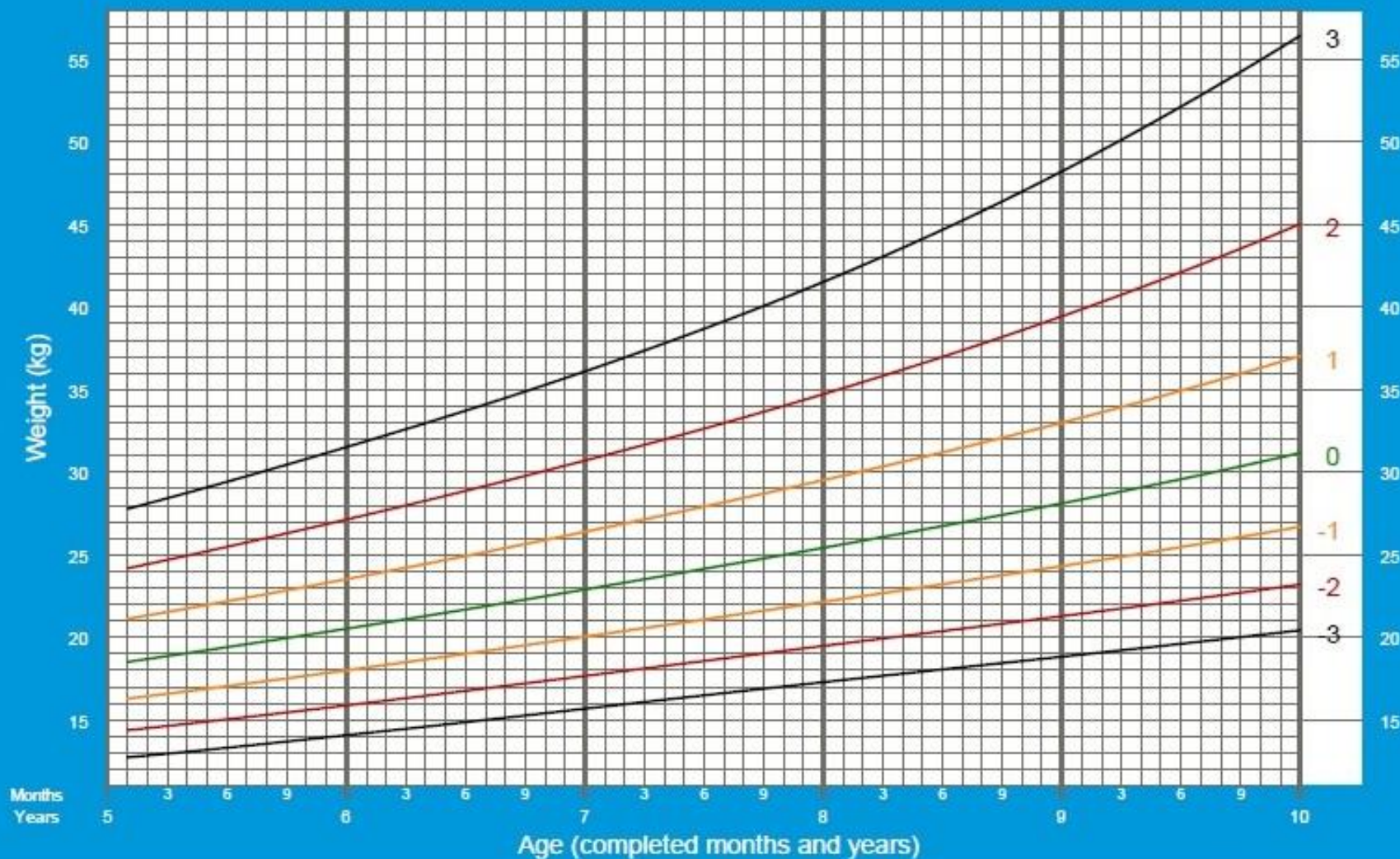
5 to 19 years (z-scores)



2007 WHO Reference

Weight-for-age BOYS

5 to 10 years (z-scores)



2007 WHO Reference

Weight-for-age GIRLS

5 to 10 years (z-scores)



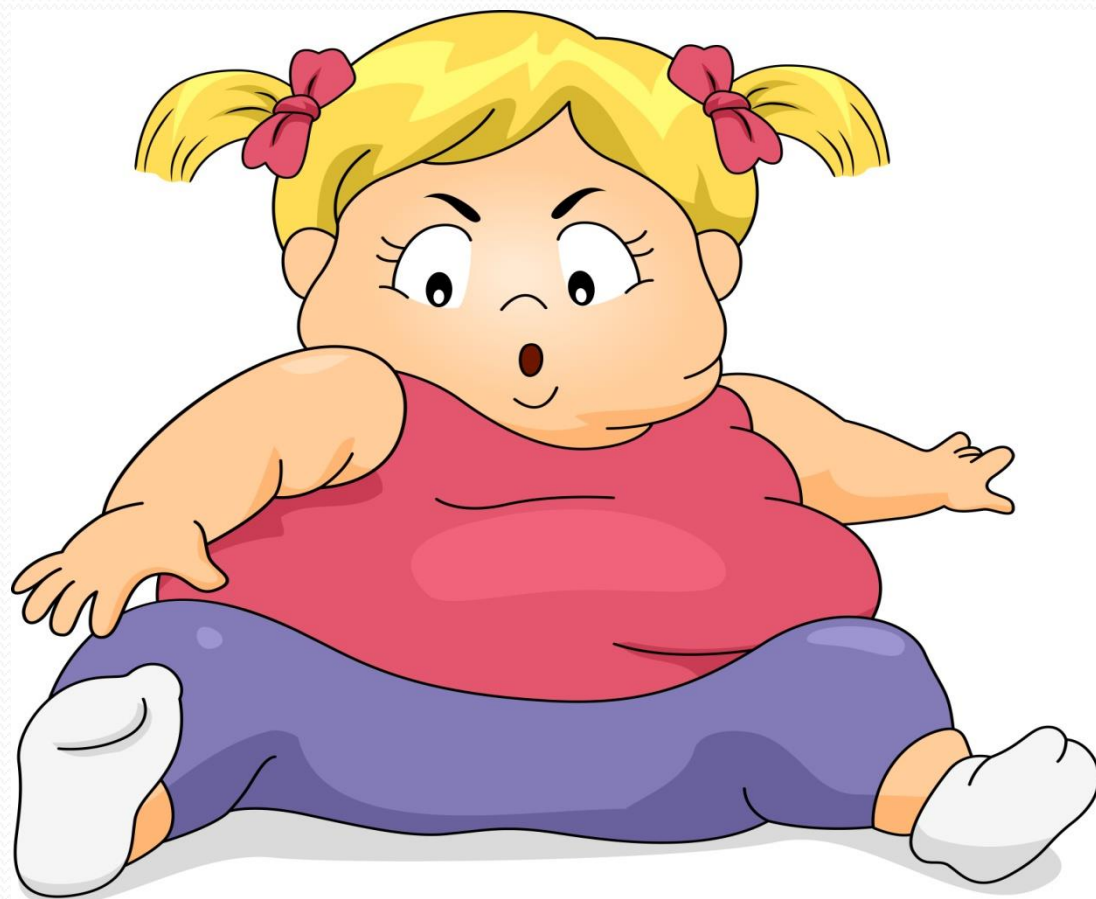
2007 WHO Reference

Causes of Childhood Obesity:

- The main cause of childhood obesity is an imbalance between calories intake and calories expenditure.

Contributing Factors:

- 1) **Increased intake** of energy-dense and nutrients-depleted foods.
- 2) **Decreased physical activities.**





3) **Genetic diseases:** e.g. Prader-Willi Syndrome.

4) **Hormonal disorders:** e.g. Cushing Syndrome.

5) **Family factors:** a child from a family of overweight people may be more likely to put on weight.

6) **Psychological factors:** some children overeat to cope with problems or to deal with emotions, such as stress, or to fight boredom. Their parents may have similar tendencies.

7) Socioeconomic factors:

- a) People in some communities have limited resources and little access to supermarkets. As a result, they may opt for convenience foods that don't spoil quickly, such as frozen meals, crackers and cookies.**
- b) People who live in lower income neighborhoods may not have access to safe places to exercise.**

CHILDHOOD OBESITY Infographics

70%

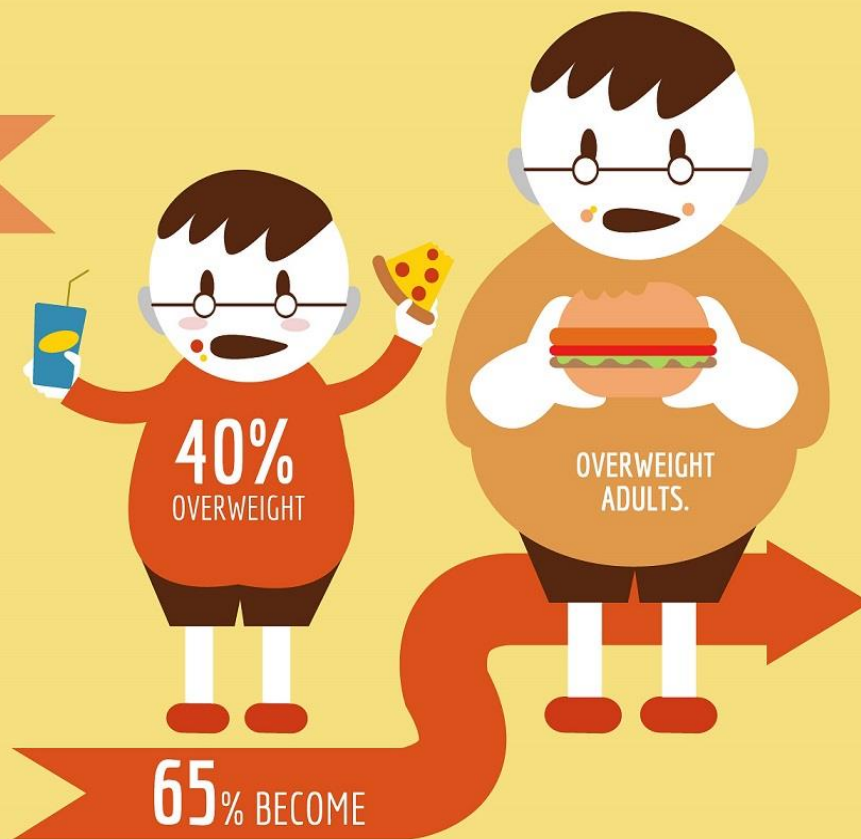
4Hours. PER DAY



40%
OVERWEIGHT

OVERWEIGHT
ADULTS.

65% BECOME





Consequences of Childhood Obesity:

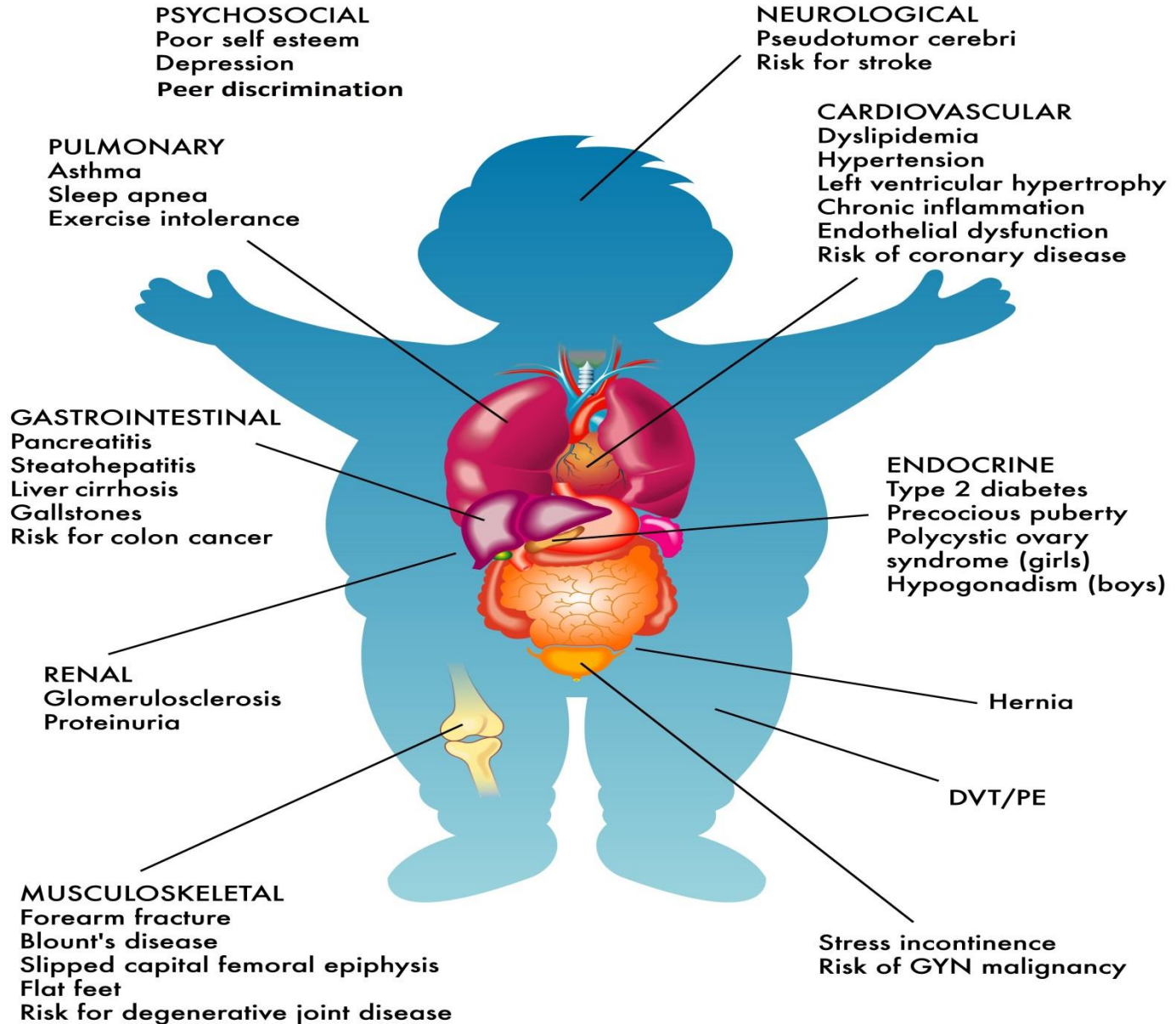
Obese children and adolescents suffer from both short-term and long-term health consequences.

The most significant consequences of childhood obesity do not usually become apparent until adulthood:

- cardiovascular diseases.**
- diabetes.**
- musculoskeletal disorders.**
- certain types of cancer (endometrial, breast and colon).**

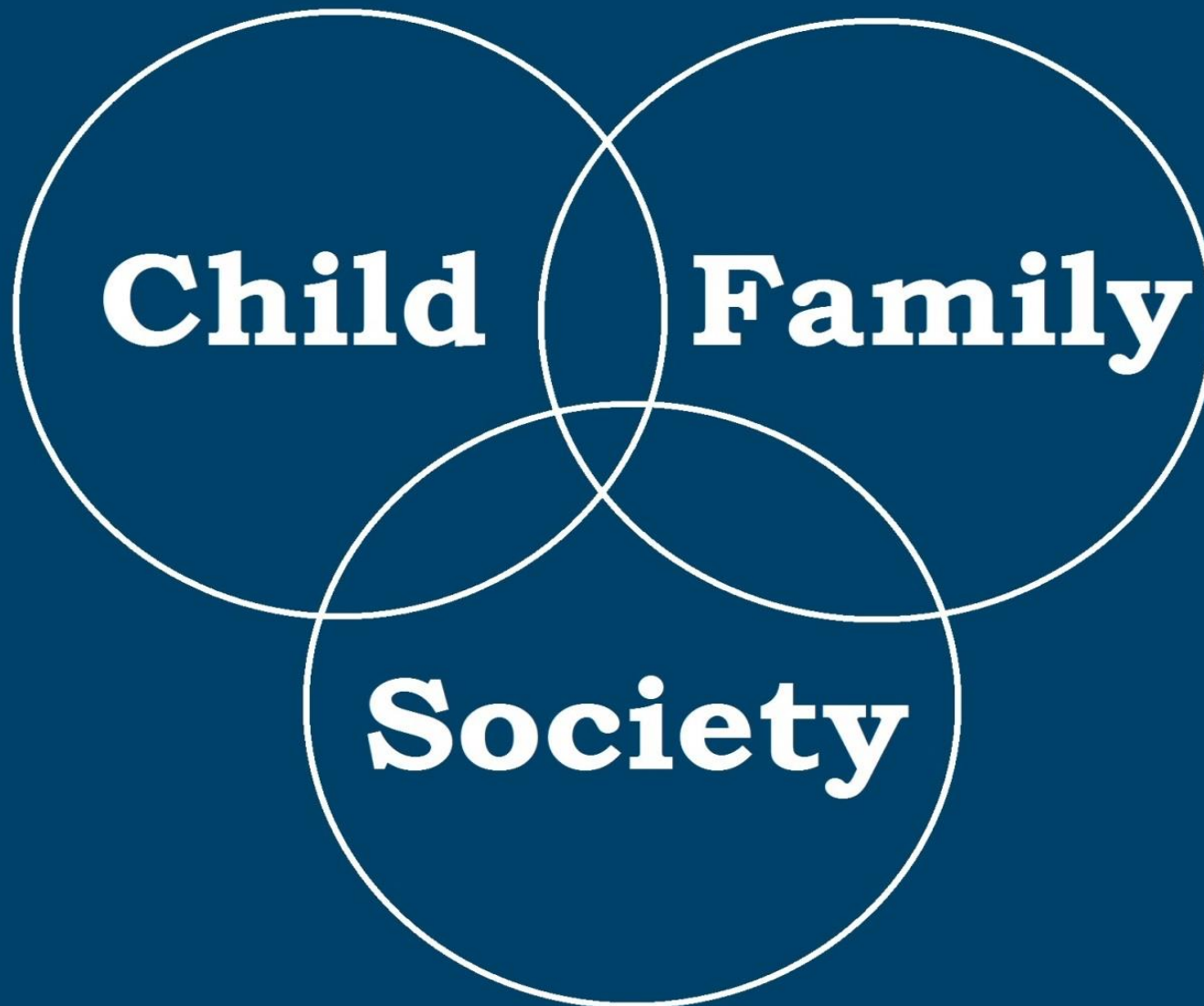
Childhood Obesity

medical complications



What Can We Do?

- To gather the best possible advice on dealing with the crisis of childhood obesity, WHO established a group called **Commission on Ending Childhood Obesity** in May 2014 .
- Curbing the childhood obesity epidemic requires sustained political commitment and the collaboration of many public and private sectors.



Recommendations:

- **1)** Increase consumption of fruit and vegetables, legumes, whole grains and nuts.



- 2) To promote healthy eating, use the idea of “funny foods”.



- **3)** Limit the intake of saturated fats and sugars.



- **4) Be physically active .**

According to WHO (for age 5 – 17):

- **At least 60 minutes a day.**
- **Moderate- to vigorous-intensity.**
- **Mostly aerobic.**
- **Muscle and bone strengthening activities for at least 3 times per week.**



- **5) Lead by example. Children learn from US! If you are physically active and an exercise person, your children are more likely to be active and be exercisers!**



- **6) Plan family activities that provide everyone with exercise, such as walking, biking, or swimming.**



- **7) Involve your children when doing grocery shopping.**



- **8)** Keep children out of any conflicts.



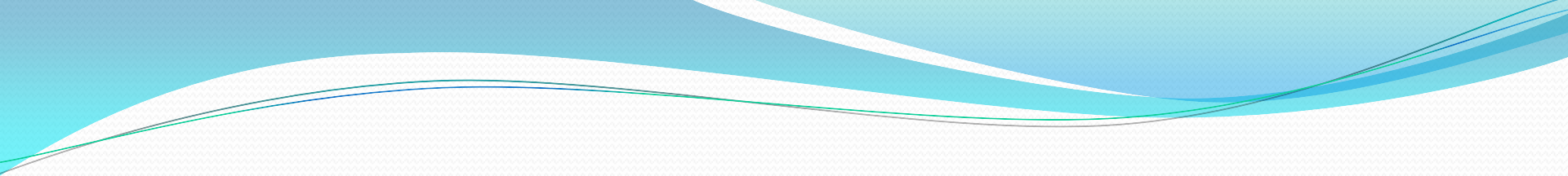
- **9) Decrease time spent on or with gadgets:** try to reduce the amount of time you and your family spend in sedentary activities, such as watching TV, surfing Internet, or playing video games.



Other Measures Worldwide:

- **Increase availability of healthy foods for children in all settings (Can, Den).**
- **Improve nutrition of foods sold near schools or places where children frequent (Den, Scot).**
- **Increase children's knowledge of healthy eating (Den, Eur)**

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- **Increase food skills (Den, Eur, Spain).**
 - **Increase exposure to new fruits, vegetables and other healthy foods (Eur).**
 - **Educate parents about child and/or adult nutrition (Scot, Spain, BC).**
 - **Enhance parental food skills (BC, NS).**

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- **Encourage industry to offer healthier foods through reformulation, reduced portion size, etc. (Eng, Aus, Scot, Spain, US, NS, ON, QC).**
 - **Support community efforts to limit the number of fast-food outlets (Eng, Scot).**

- **"Baby Gym"** program to provide venue for parents to engage in physical activities with their young children (Eur).
- Increase sports opportunities or access to community sites for recreation (US, BC, QC, Eng).



Homework:

- 1) Describe seven general recommendations to prevent childhood obesity.
- 2) Describe the factors that may lead to childhood obesity.



