

Preventive Dentistry
5th- Year- Dental Students
Al- Isra'a University
2019- 2020

Lec 17: Nutritional Counseling in Dental Practice

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Nutrition counseling A process by which a health professional with special training in nutrition helps people make healthy food choices and form healthy eating habits. The nutrition counselor provides information, educational materials, support, and follow-up to help the individual make and maintain the needed dietary changes.

A nutritional analysis and questionnaire are the best way to obtain information about the types and quantities of foods consumed and to identify ***eating patterns*** that should be ***analyzed*** and ***interpreted*** in relation to oral and dental health.

Nutrition counseling in dental practice need to be started even before teeth eruption and in the following years.

- **Pregnant women:** to ensure that their diet includes the proteins, vitamins, calcium and phosphorus needed for the development of healthy tooth buds.
- **Infants, toddlers and young children:** to encourage breastfeeding as the ideal means of meeting the infant's nutritional requirements and developing the maxillae, while avoiding the risk of extensive premature decay. If the mother should choose to bottle feed her infant, the dentist should provide advice on how to prevent the harmful effects of caries. Nutritional instruction should continue after the teeth appear in order to promote good eating habits and the health of the entire masticatory system.
- **Adolescence and adulthood:** Diet counseling should focus upon reducing oral risks from diet and promoting good nutrition for healthy teeth.

Nutritional Status Assessments:

Nutritional assessment is the interpretation collected data to determine whether a person or groups of people are well nourished or malnourished (over-nourished or under-nourished).

Data collection are achieved by:

- 1- Anthropometry
- 2- Biochemical/biophysical methods
- 3- Clinical methods
- 4- Dietary methods

Anthropometric Measurements:

Anthropo means (human) and metric means (measurement). Anthropometric measurements are used to assess either growth or change in the body composition of the people.

Body Mass Index for Children (BMI): is calculated with a child's **height** and **weight**. It measures the amount of tissue mass (muscle, fat, and bone) in the child.

$$\text{BMI} = \frac{\text{weight (kg)}}{\text{height}^2 \text{ (m)}} \quad \frac{\text{kg}}{\text{m}^2}$$

For children and teens, BMI is **age-** and **gender** -specific and is often referred to as **BMI-for-age**. The amount of body mass vary according to age and between boys and girls. After BMI is calculated it is expressed as a **percentile** which can be obtained from either a graph or a percentile calculator (Figures). This value is then used to categorize the child as being as either ***underweight, normal weight, overweight, or obese***. The Centers for Disease Control and Prevention (CDC) recommends BMI categorization for children and teens between age 2 and 20 year.

Category	Percentile Range
Underweight	Less than 5%
Healthy weight	5% - 85%
At risk of overweight	85% - 95%
Overweight	Equal or more than 95%

Dietary Intake Assessments:

It is a comprehensive evaluation of a person's food intake. The three most common methods used to assess dietary intake are the following:

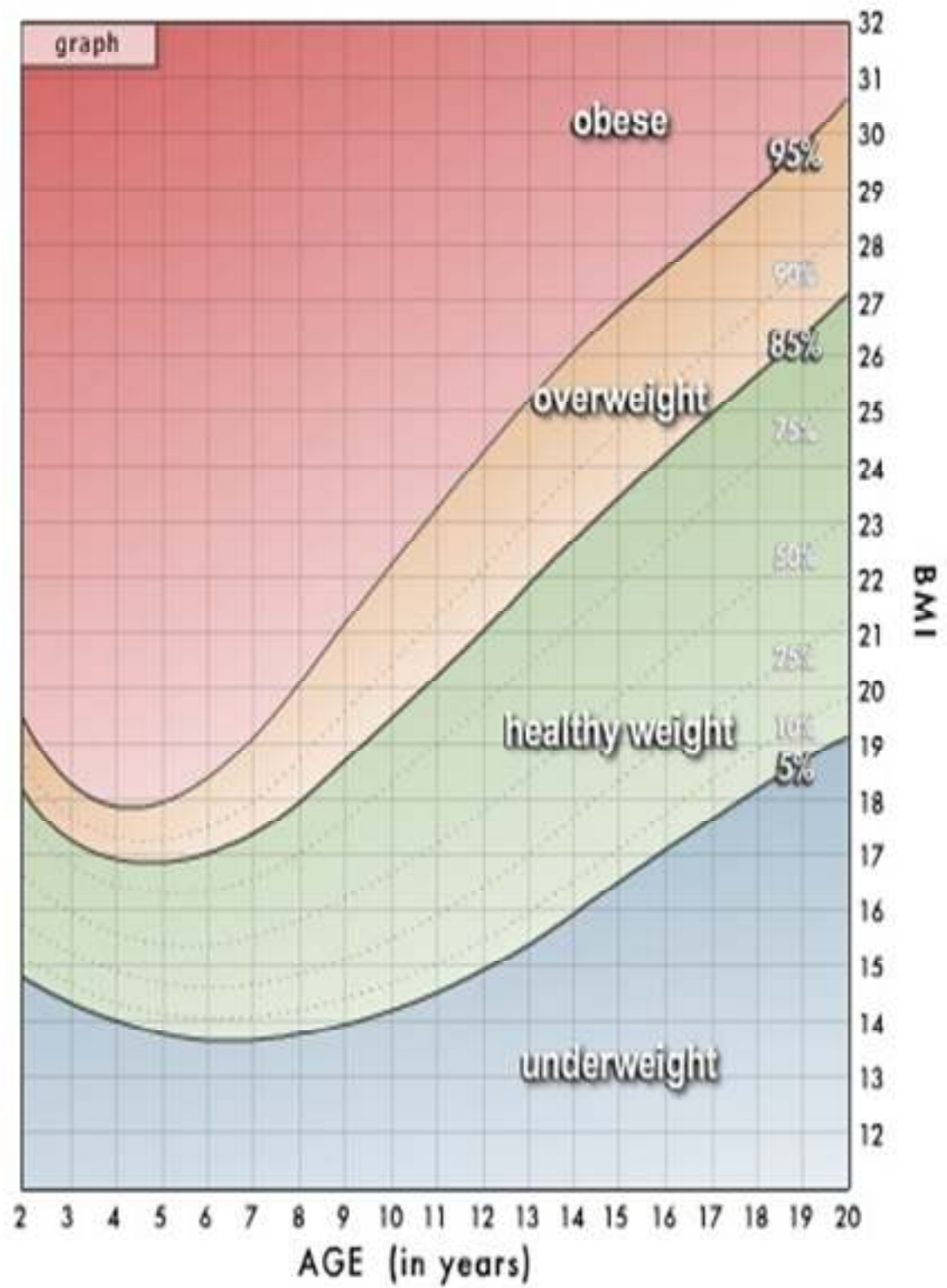
1. **Diet Record** (food diaries): Subjects record all food and beverages consumed over a certain period usually 3- 7 days. The consumed items can be measured using a scale or other household items, such as measuring cups or spoons, or estimated using a portion-size guide. Trained staff must provide detailed instructions on how to record intake and the completed records need to be entered into a software program, such as Nutrition Data System for Research (NDSR), for analysis.
2. **24-Hour Recall:** Subjects are asked to report all foods and beverages consumed in the past 24 hours. This can be done via telephone or face-to-face interview. Trained staff must conduct the interview to prompt for details, such as cooking methods and portion sizes. The data needs to be entered into a software program, such as NDSR, for analysis.
3. **Food Frequency Questionnaire (FFQ):** Subjects report how frequently certain food and beverage items were consumed. Most FFQ versions ask portion size questions of every food item, as well as general questions about common cooking practices (e.g. type of fat typically added while cooking). Most FFQs are available in paper or electronic format and take about 1 hour to complete. Computerized software programs calculate nutrient intake by multiplying the reported frequency of each food by the amount of nutrient in a serving of that food.

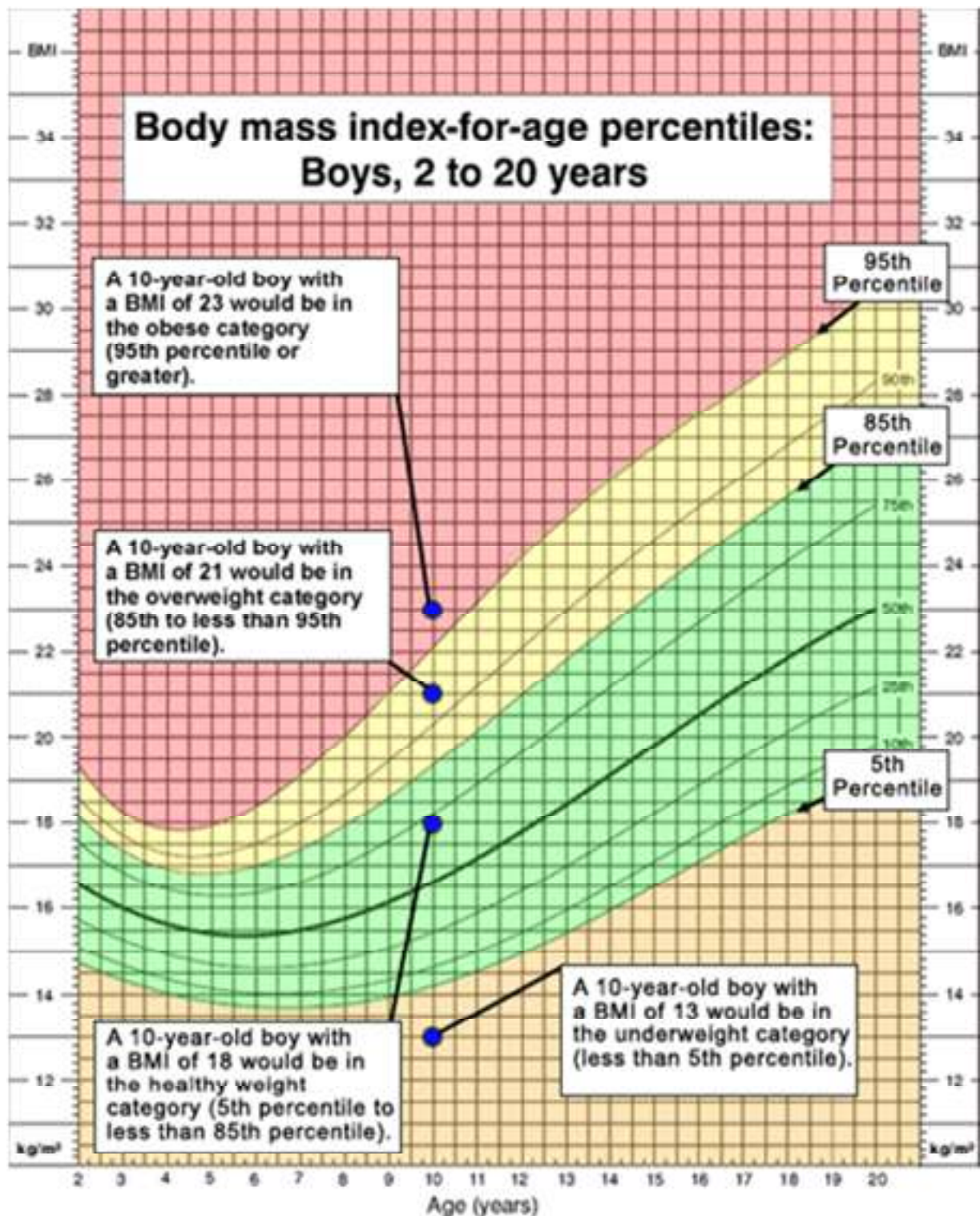
Dietary analysis allow the evaluation of:

- Cariogenic potential of diet (; the frequency, consistency of carbohydrate intake).
- Nutritive value (; energy and nutrients availability), achieved by special software programs to convert each food item to its nutrients content. Results are compared with Recommended Dietary Allowance (RDA).

Following dietary analysis the patient are advised and instructed for a certain plane. The approach of counseling is either directive (the decision is made by the professional) or in directive (as the professional or counselor only clarify the dietary need to the patient, and only the patient take the decision). Patients need to be motivated and encouraged to change their dietary habits.

BOYS



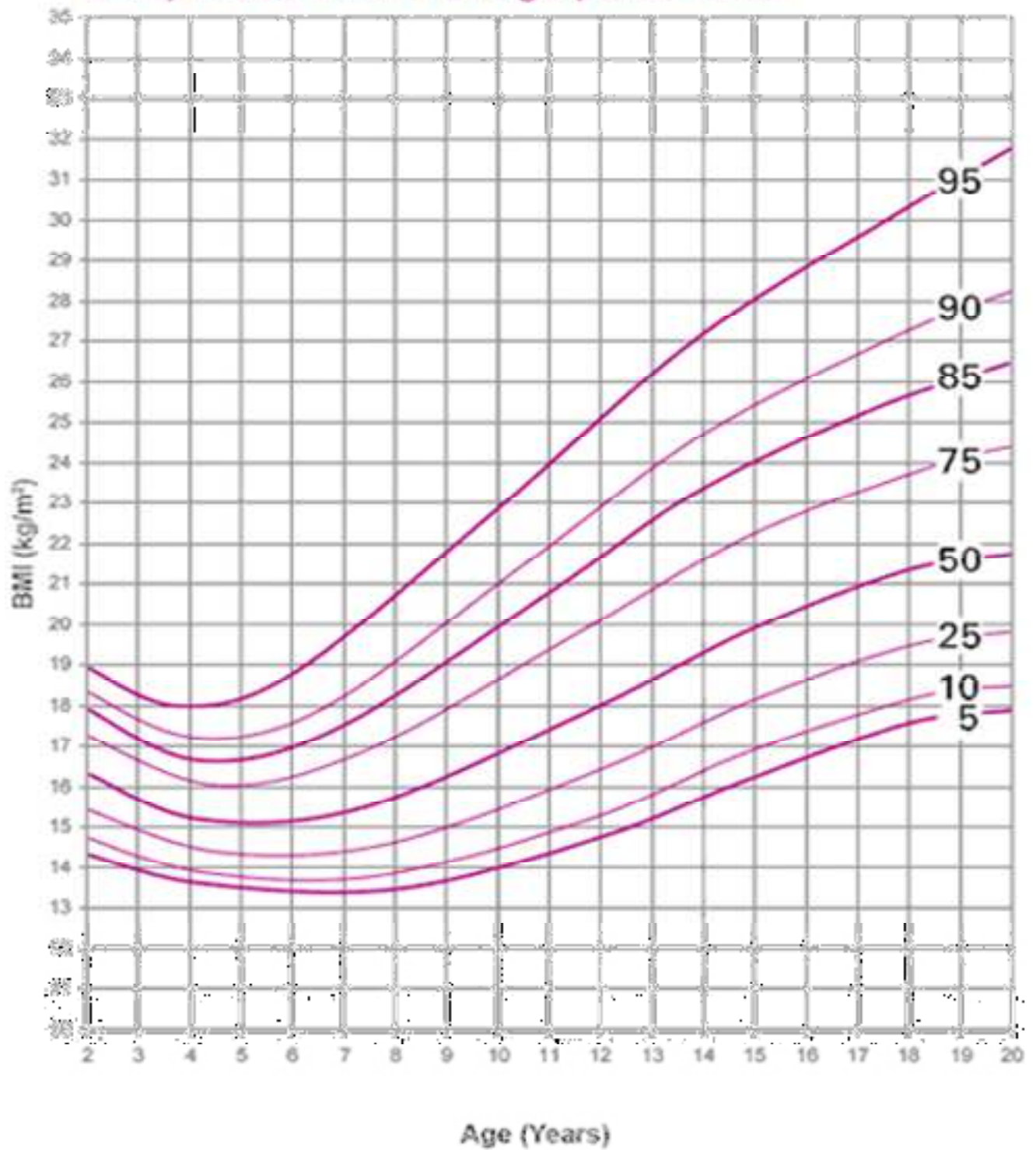


GIRLS

BMI Chart (Girls Age 2-20)



2 to 20 years: Girls Body Mass Index-for-age percentiles



Food Diary

Name _____

Date _____



Food Diary

Use this diary to record what you have to eat and drink every day. Don't forget a balanced diet is best and aim to get your 5 a day of fruit and vegetables.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast							
Mid Morning							
Lunch							
Mid Afternoon							
Evening Meal							
Supper							

[illegible]

Dish	Frequency									Amount			
	<1/mo	1/mo	2-3/mo	1/wk	2-4/wk	5-6/wk	1/day	2/day	3/day	Portion size	S	M	L
Steamed rice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bowl	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steamed multi-grain rice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Bowl	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dried seaweed roll (Gimbap)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Roll	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fried rice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Dish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

