SNS COLLEGE OF NURSING

SARAVANAMPATTI,COIMBATORE

UNIT-3

NUTRITIONAL NEEDS I

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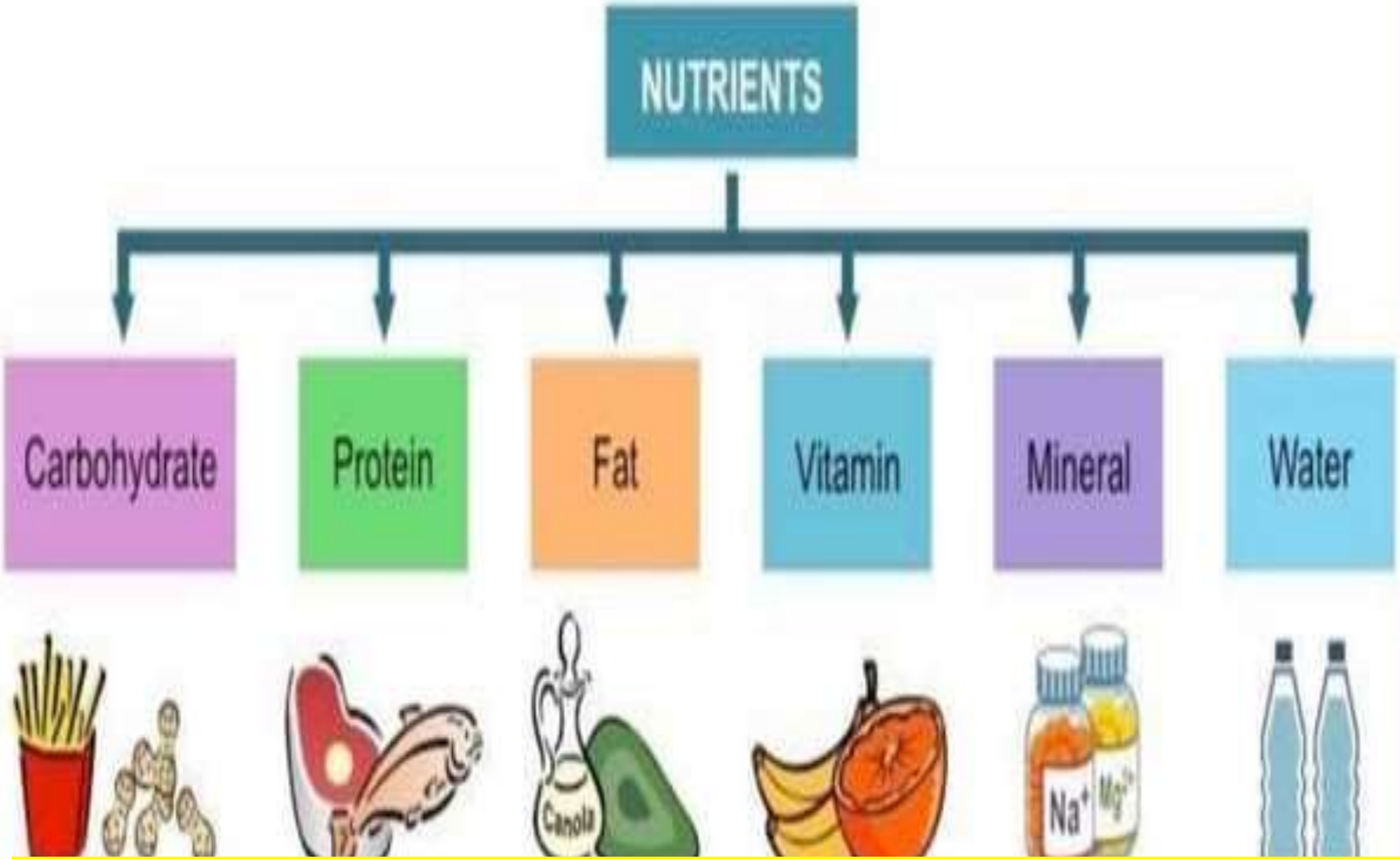
PROFESSOR

NUTRITIONAL NEEDS

NUTRITION

DEFINITION-

Nutrients are defined as the constituents of food, which perform important functions in our body. If these nutrients are not present in our body in sufficient amount, the result is ill health. Important nutrients include carbohydrate, proteins, lipids, vitamins, minerals & water.


NUTRIENTS
Carbohydrate
Protein
Fat
Vitamin
Mineral
Water
Canola
Na+
Mg++

IMPORTANCE-

- Supplies nutrients for energy. Energy nutrients include carbohydrate, fats,& proteins.
- Supplies nutrients to build & maintain body tissues.
- Food supplies heat & energy for work & play.
- Food supplies materials for regulation or control of body process & protection of the body.
- It gives a feeling of security.

FACTORS INFLUENCING DIETARY INTAKE

- ETHNICITY & CULTURE
- AGE
- RELIGION
- ECONOMIC STATUS
- PEER GROUP INFLUENCE
- PERSONAL PREFERENCES
- CUSTOMS & BELIEFS
- ALCOHOL ABUSE
- FOOD ADVERTISEMENTS
- PSYCHOLOGICAL FACTORS
- HEALTH STATUS
- MEDICATIONS

FACTORS AFFECTING CALORIC NEEDS

- AGE
- BODY SIZE
- ACTIVITY
- BODY TEMPERATURE
- ENVIRONMENTAL TEMPERATURE
- GROWTH
- GENDER
- EMOTIONAL STATUS

FACTOR AFFECTING NUTRITIONAL NEEDS-

- Physical , mental fatigue.
- Hurry, worry & fear.
- Unpleasant environment & experiences.
- Lack of exercise.
- Irregular meals.
- Long spacing of meal timings.
- Hospitalization.

ASSESSMENT OF NUTRITIONAL STATUS

1. ANTHROPOMETRIC MEASUREMENTS

1. HEIGHT
2. WEIGHT
3. MID ARM CIRCUMFERENCE (MAC)
4. TRICEPS SKIN FOLD (TSF)
5. MID UPPER ARM MUSCLE CIRCUMFERENCE (MAMC)
6. IDEAL BODY WEIGHT (IBW)
7. BODY MASS INDEX (BMI)

MID-UPPER ARM CIRCUMFERENCE (MUAC) MEASURING TAPES

RED : SEVERE ACUTE MALNUTRITION

YELLOW : MODERATE ACUTE MALNUTRITION

GREEN : NO ACUTE MALNUTRITION

Red:	0 – **11.5 cm**
Yellow:	**11.5 cm** - 12.5 cm
Green:	from 12.5 cm

TEST	STANDARD	
Triceps skin fold	Men	12.5 mm
	Women	16.5 mm
Midarm circumference	Men	29.3 mm
	Women	28.5 mm
Midarm muscle circumference	Men	25.3 mm

IDEAL BODY WEIGHT (IBW)

= HEIGHT - 100

Example : height of a patient is 170cm

IBW = Height - 100

= 170 - 100 = 70Kg

BODY MASS INDEX (BMI)

= WEIGHT IN Kg / HEIGHT IN METRE SQUARE

Unit is Kg / m^2

Example : Height of patient is 162 cm & weight is 68 Kg

BMI = Wt in Kg / Ht in m^2

= 68 Kg / (1.62 x 1.62) = 68 / 2.62

= 25.95 Kg / metre square

RANGES OF BMI

Weight Categories	BMI (kg/m²)
Underweight	< 18.5
Healthy Weight	18.5-24.9
Overweight	25-29.9
Obese	30-34.9
Severely Obese	35-39.9
Morbidly Obese	≥ 40

2. DIETARY HISTORY & HEALTH HISTORY

3. SCREENING FOR MALNUTRITION

DEGREE OF MALNUTRITION (DOM)

= (ACTUAL WEIGHT / EXPECTED WEIGHT) x 100

Example : actual weight = 20 kg, expected weight = 24 kg

DOM = (20 Kg / 24 Kg) x 100 = 0.83 x 100

DOM = 83%

WEIGHT FOR AGE – GOMEZ INTERNATIONAL CLASSIFICATION

Wt / age (%)	Degree of malnutrition
>90	Normal
75 – 90	I degree
60 – 75	II degree
<60	III degree

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4. PHYSICAL EXAMINATION

5. LABORATORY & BIOCHEMICAL TESTS

REGULAR HOSPITAL DIET-

FULL DIET- it is a regular well balanced diet. Its vegetarian or non vegetarian, this is for patients who do not have any special modification.

SOFT DIET- it is given to provide light and easily digestible food.

BLAND DIET- a bland diet consisting of foods that are generally soft low in dietary fibre, cooked & not spicy, the food are easily digestible, free from substances which might cause irritation of the gastrointestinal tract, used mainly for patient with gastrointestinal problems.

THERAPEUTIC DIET

Diet in disease must be planned as part of the complete care of the patient. Many modification may have to be made according to the disease and condition of the patient.

OBJECTIVE-

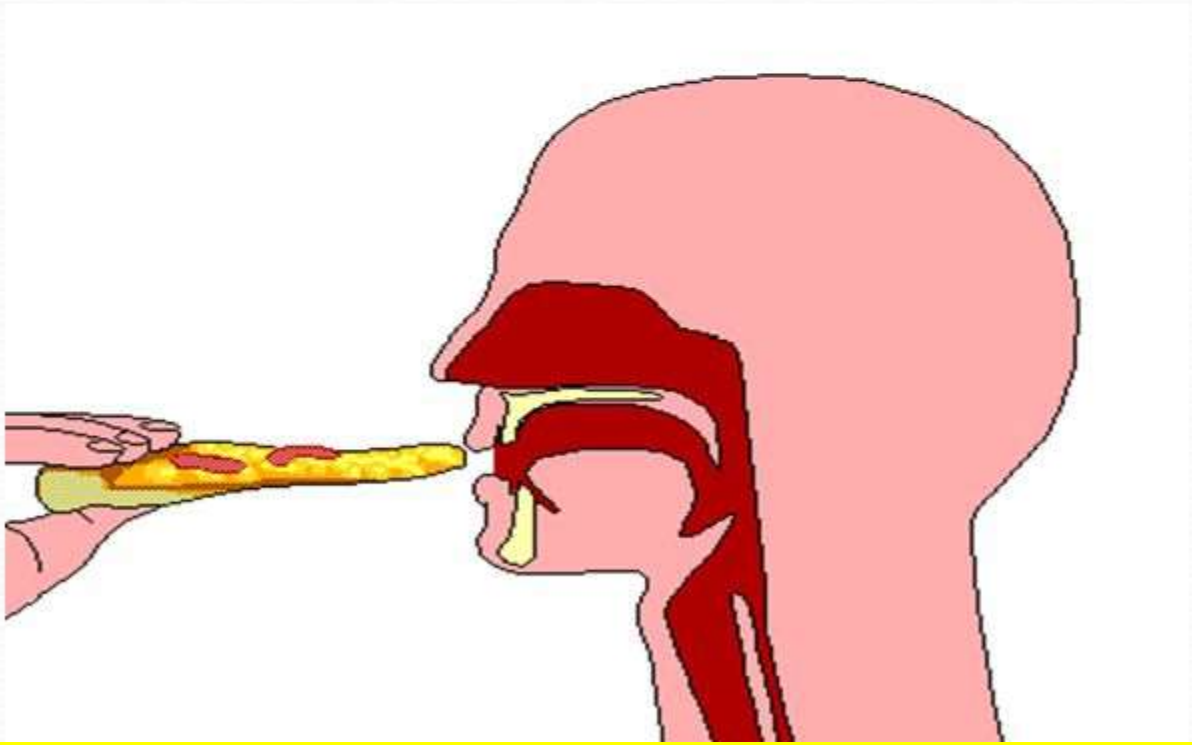
- To improve the general health
- To promote healing
- To prevent dehydration
- To facilitate tissue repair & growth.

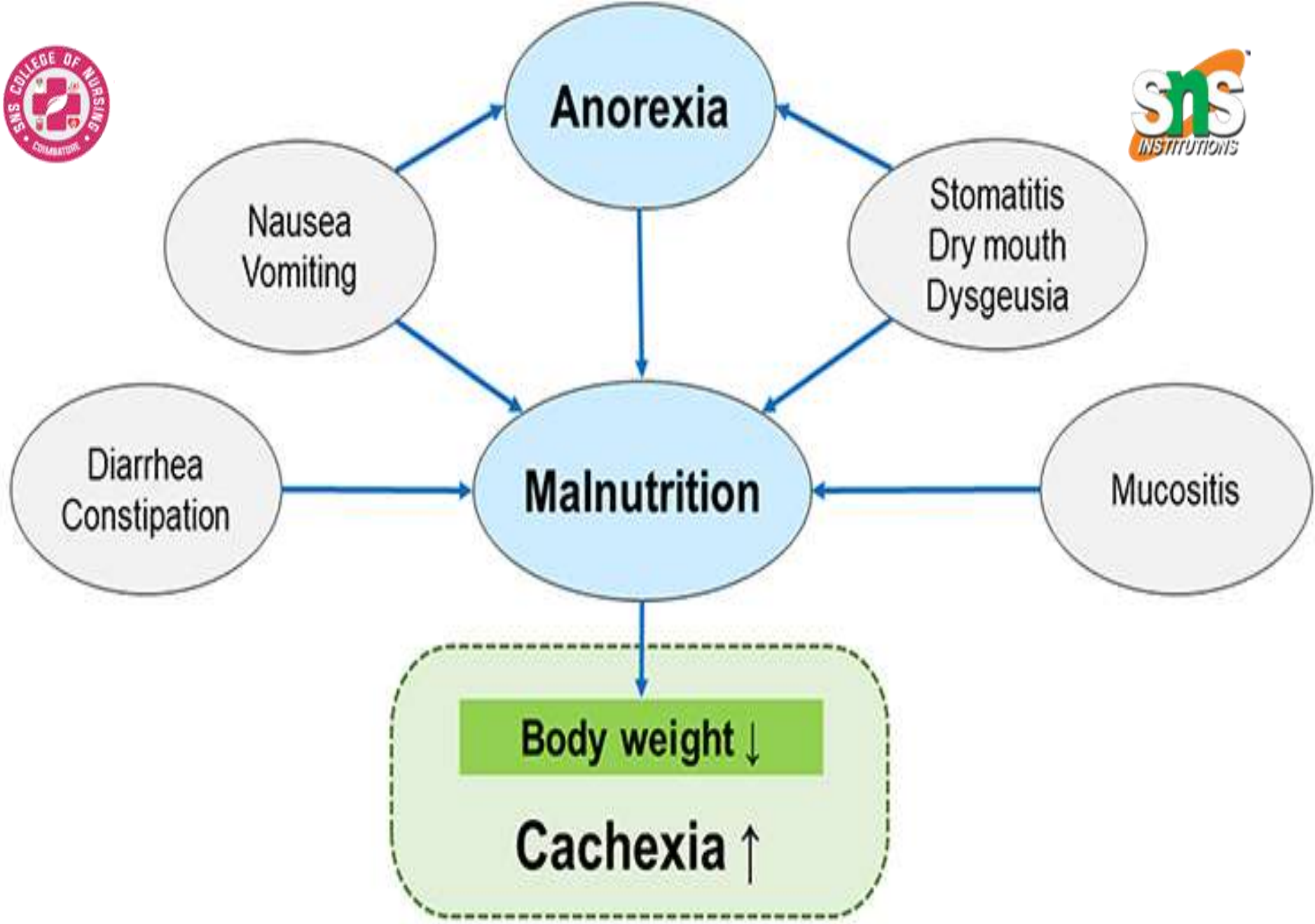
PRINCIPALS-

- The diet must be planned according to the habits of the patient based on culture, religion, socioeconomic status, personal preference.
- As far as possible, changes in the diet should be brought gradually and adequate explanation are given with the changes made, if any.
- Whatever diet prescribed , there should be variety of selection

Dysphagia

- Difficulty in swallowing which may affect any part of swallowing pathway from the mouth to the stomach




Anorexia
Nausea
Vomiting
Stomatitis
Dry mouth
Dysgeusia
Diarrhea
Constipation
Malnutrition
Mucositis
Body weight ↓
Cachexia ↑

SIGNS OF DYSPHAGIA

- Cough during eating
- Change in voice tone or quality after swallowing
- Abnormal movements of the mouth, tongue or lips
- Slow, weak, imprecise or uncoordinated speech
- Abnormal gag
- Delayed swallowing
- Incomplete oral clearance
- Regurgitation
- Pharyngeal pooling
- Delayed or absent trigger of swallow

Complications of Dysphagia

- ASPIRATION PNEUMONIA
- DEHYDRATION
- DECREASED NUTRITIONAL STATUS
- WEIGHT LOSS

NURSING DIAGNOSIS

- RISK FOR ASPIRATION RELATED TO DYSPHAGIA
- CONSTIPATION RELATED TO LOW FIBRE INTAKE
- DIARRHEA RELATED TO FOOD INTOLERANCE
- IMBALANCED NUTRITION LESS THAN BODY REQUIREMENTS RELATED TO DECREASED ABILITY TO INGEST FOOD AS A RESULT OF DEPRESSION
- OBESITY RELATED TO INTAKE OF UNHEALTHY FOOD
- OVERWEIGHT
- RISK FOR OVERWEIGHT
- IMPAIRED SWALLOWING RELATED TO TRAUMA TO ESOPHAGUS
- FEEDING SELF CARE DEFICIT

IMBALANCED NUTRITION LESS THAN BODY REQUIREMENTS RELATED TO DECREASED ABILITY TO INGEST FOOD AS A RESULT OF DEPRESSION

- Assess the general condition of the patient
- Assess the height & weight of the patient
- Assess for any weight loss
- Perform physical examination
- Enquire about the dietary intake
- Assess the likes & dislikes of the patient
- Encourage to take small frequent meals
- Encourage fluid intake
- Plan a dietary menu for the patient
- Give health education on importance of well balanced diet