SNS COLLEGE OF NURSING

SARAVANAMPATTI,COIMBATORE-35

DEPARTMENT OF NURSING

COURSE NAME : BSC (N) II YEAR

SUBJECT : MEDICAL SURGICAL NURSING

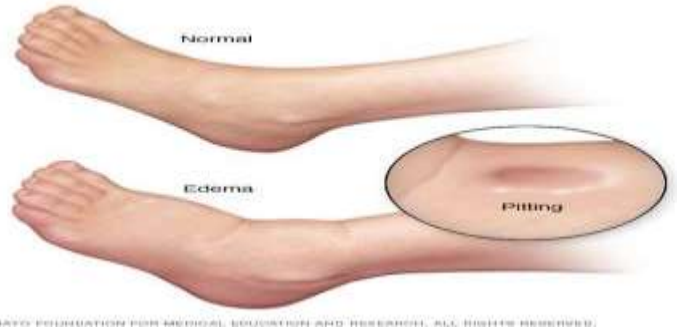
UNIT II: EDEMA

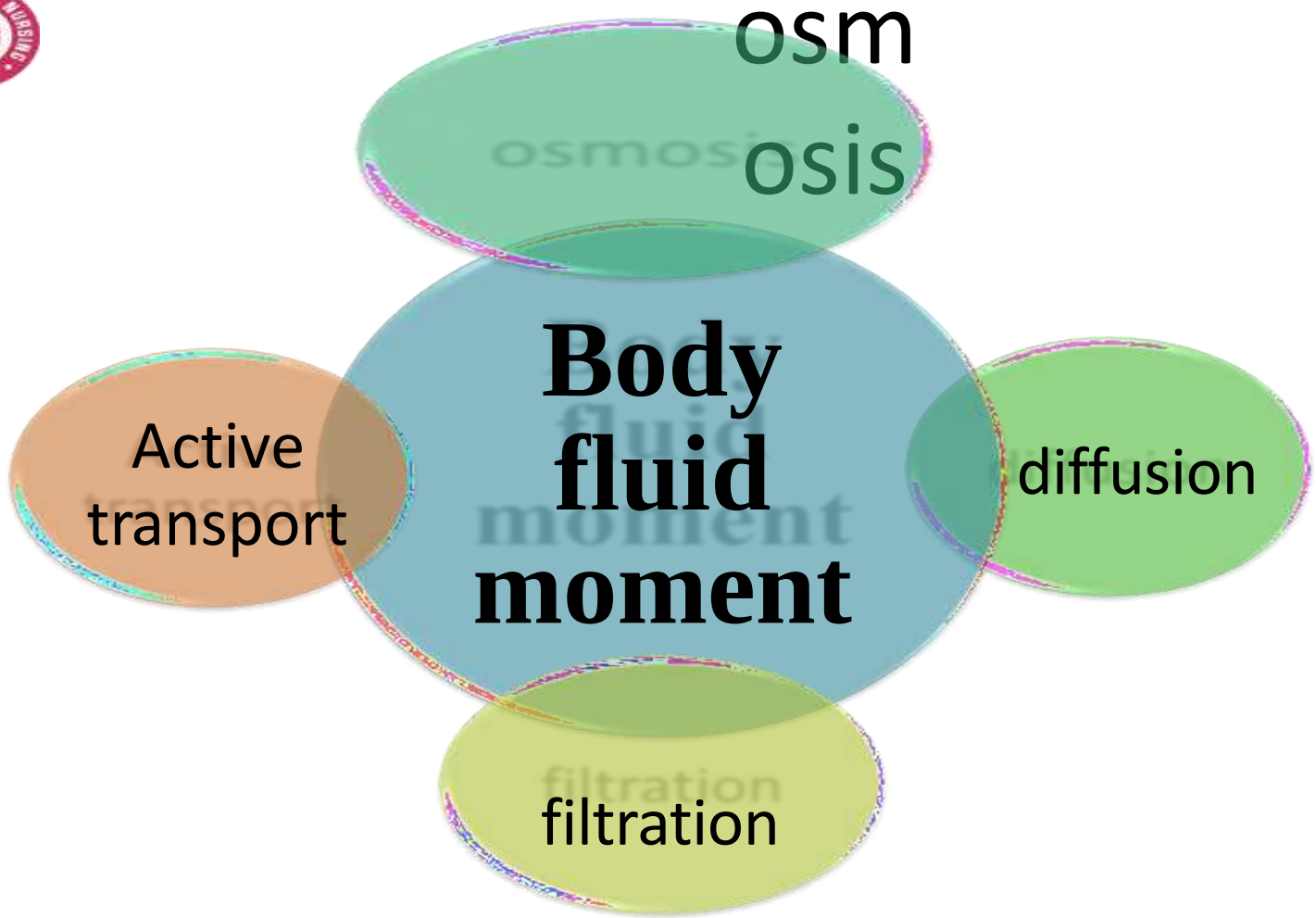
INTRODUCTION

Edema refers to **swelling due to fluid buildup in bodily tissues**. It is common in the skin but can affect the brain, lungs, and other organs.

DEFINITION

- Edema is an abnormal accumulation of fluid in the interstitial, located beneath the skin and in the cavities of the body.

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Body
fluid
moment
Active
transport
diffusion
filtration

RISK FACTOR OF EDEMA

- Sitting or staying in one position for too long
- Eating too much salty food
- Having premenstrual signs and symptoms
- Being pregnant
- Some medications eg: steroids, NSAIDs,

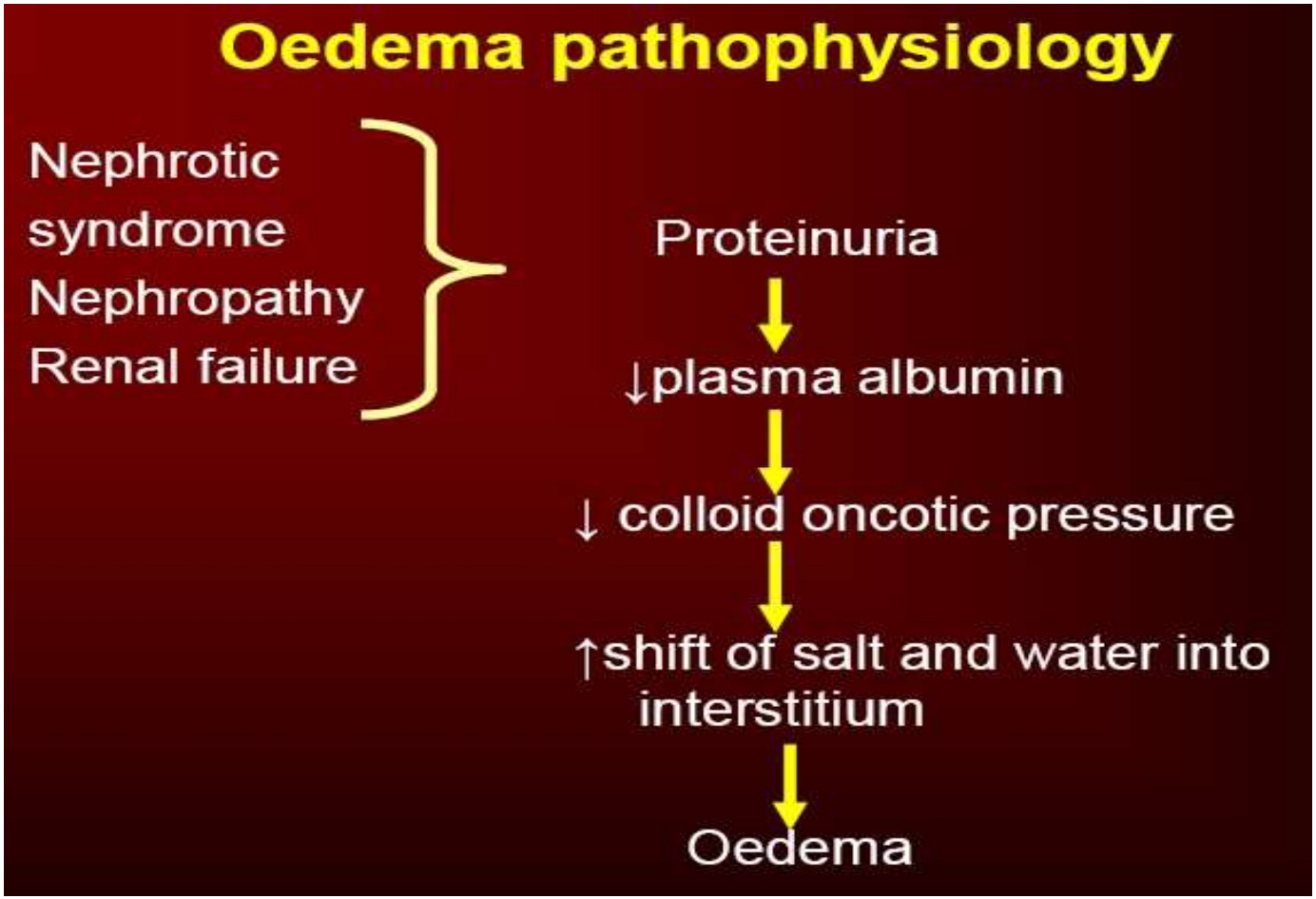
Several diseases and conditions may cause edema, including:

- Congestive heart failure
- Inadequate lymphatic system
- Weakness or damage to veins in your legs
- Kidney damage
- Kidney disease
- Cirrhosis

CAUSES OF EDEMA

- Increased capillary hydrostatic pressure
- Reduced plasma oncotic pressure
- Increased blood vessel wall permeability e.g. Inflammation
- Obstruction of fluid clearance in the lymphatic system
- Changes in the water retaining properties of the tissues themselves. Raised hydrostatic pressure often reflects retention of water and sodium by the kidney

Oedema pathophysiology



CLASSIFICATION OF EDEMA

Depending upon site of collection GENERALISED or LOCALISED

LOCALISED EDEMA

Redistribution of edema fluid, no accumulation

- Cellulitis
- DVT
- Lymphedema
- Angioneurotic
- Trauma
- Milroy's edema
- Nifedipine

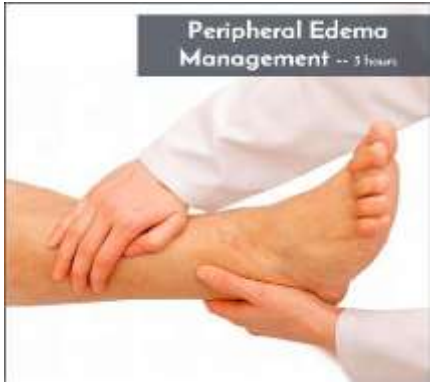
CLASSIFICATION

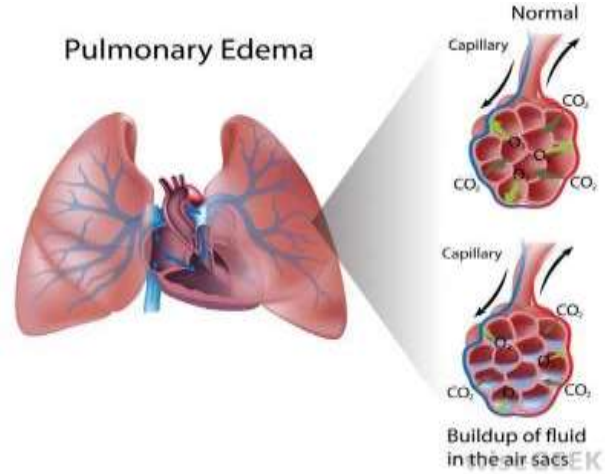
Edema can also be classified as pitting or non-pitting

OTHER TYPES

Other major types

- **PERIPHERAL EDEMA**
- **PULMONARY EDEMA**
- **CEREBRAL EDEMA**





CLINICAL MANIFESTATION OF EDEMA

- The increase in total body water causes weight gain over a short period of time.
- Peripheral edema
- Excess of fluid in interstitial space
- Distended neck veins and peripheral veins
- Slow emptying peripheral veins.
- CVP over 11 cm H2O
- Crackles and wheezes in lungs.
- Polyurea (if renal function is normal)
- Ascites
- pleural effusion
- Decreased BUN (due to plasma dilution)
- Bounding, full pulse
- Pulmonary edema, if severe

ASSESSMENT

- **Health history**
- **Diagnostic test**
  - ✓Monitory serum osmolality,
  - ✓Serum electrolytes,
  - ✓hemoglobin and hematocrit,
  - ✓urine, specific gravity and osmolality
  - ✓ CVP reading

Daily Weight

Lung sound

Extremity measurement

Abdominal measurement

ASSESSMENT OF EDEMA

0+ No pitting edema
1+ Mild pitting edema. 2 mm depression that disappears rapidly.
2+ Moderate pitting edema. 4 mm depression that disappears in 10–15 seconds.
3+ Moderately severe pitting edema. 6 mm depression that may last more than 1 minute.
4+ Severe pitting edema. 8 mm depression that can last more than 2 minutes.

Medical Management

Nursing Management

- Assess the presence of worsening of edema.
- Encourage adherence to sodium restriction to avoid over the counter drugs
- When indicated, encourage rest period

Nursing Management

- Monitor the clients response to diuretics, check daily weight.
- Monitor the rate of parenteral fluids and the client response.
- Teach self monitoring of weight and intake and output measurement (such as the case CCF, renal failure, cirrhosis of liver)

Nursing Management

- Turn and position the client frequently
- Help the patient relax to promote oxygenation.
- Place the patient in high Fowler's position to enhance lung expansion.
- Administer oxygen as ordered.
- Assess the patient's condition frequently.

Nursing Management

- Auscultate the lung fields for breath sounds and be alert for crackles.
- Watch for complications of treatment such as electrolyte depletion.
- Monitor ABG results for presence of hypoxemia (decrease PaO2) and hypercapnia(Increase PcO2)

ASSESSMENT

1. Define edema
2. List out types of edema
3. Describe about the assessment of edema
4. Elaborate the management of edema

REFERENCES

- BRUNNER & SUDDARTH, MEDICAL SURGICAL NURSING, 1ST EDITION
- LEWIS'S, MEDICAL SURGICAL NURSING, 9TH EDITION
- M.P SHARMA, MEDICAL SURGICAL NURSING,1ST EDITION, AITBS PUBLISHERS


Thank You