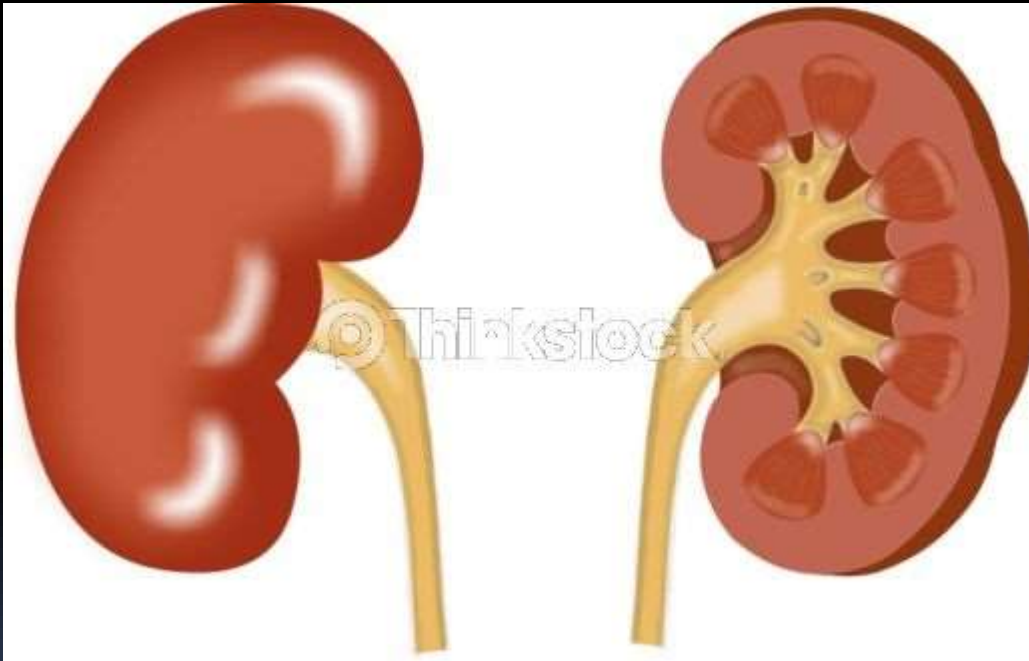



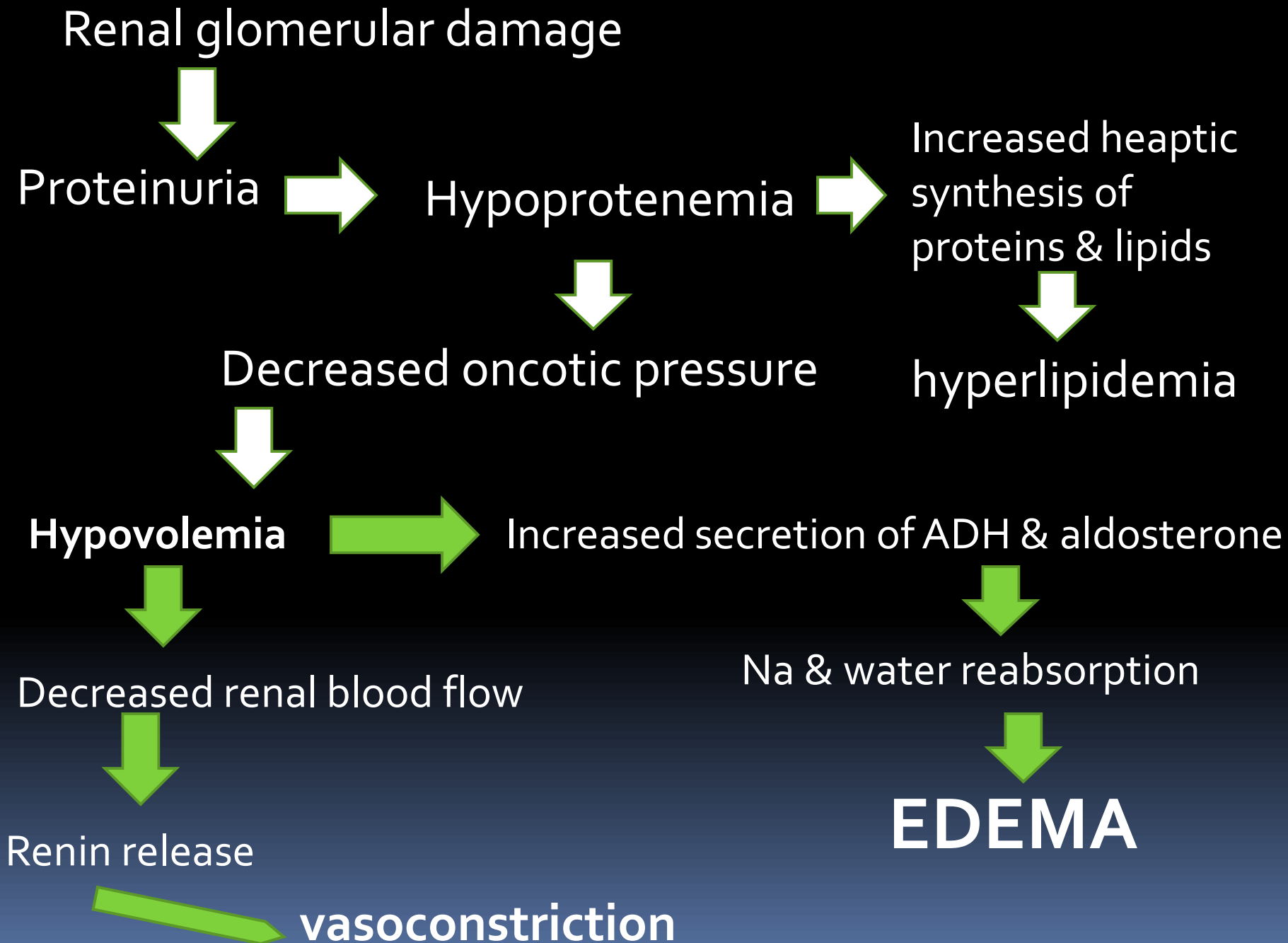
# NEPHROTIC SYNDROME



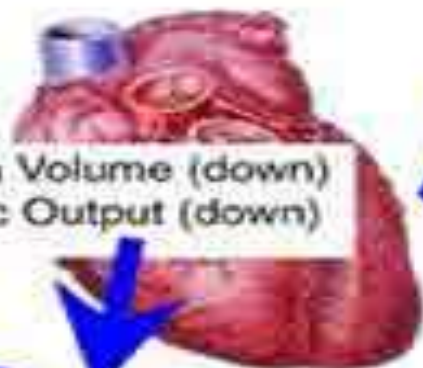
- 
- Nephrotic syndrome is a clinical state that includes massive proteinuria, hypoalbuminemia, hyperlipidemia and edema.
  - The disorders can occur as:
    1. Idiopathic nephrosis or minimal change nephrotic syndrome (primary)
    2. A secondary disorder that occurs as a clinical manifestation in association with glomerular damage
    3. A congenital form



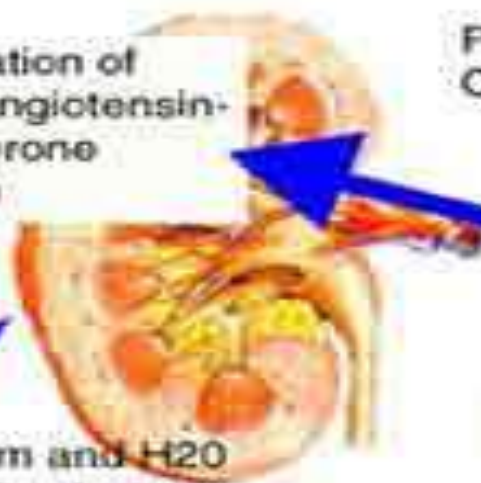
# PATHOPHYSIOLOGY



# Glomerular Injury



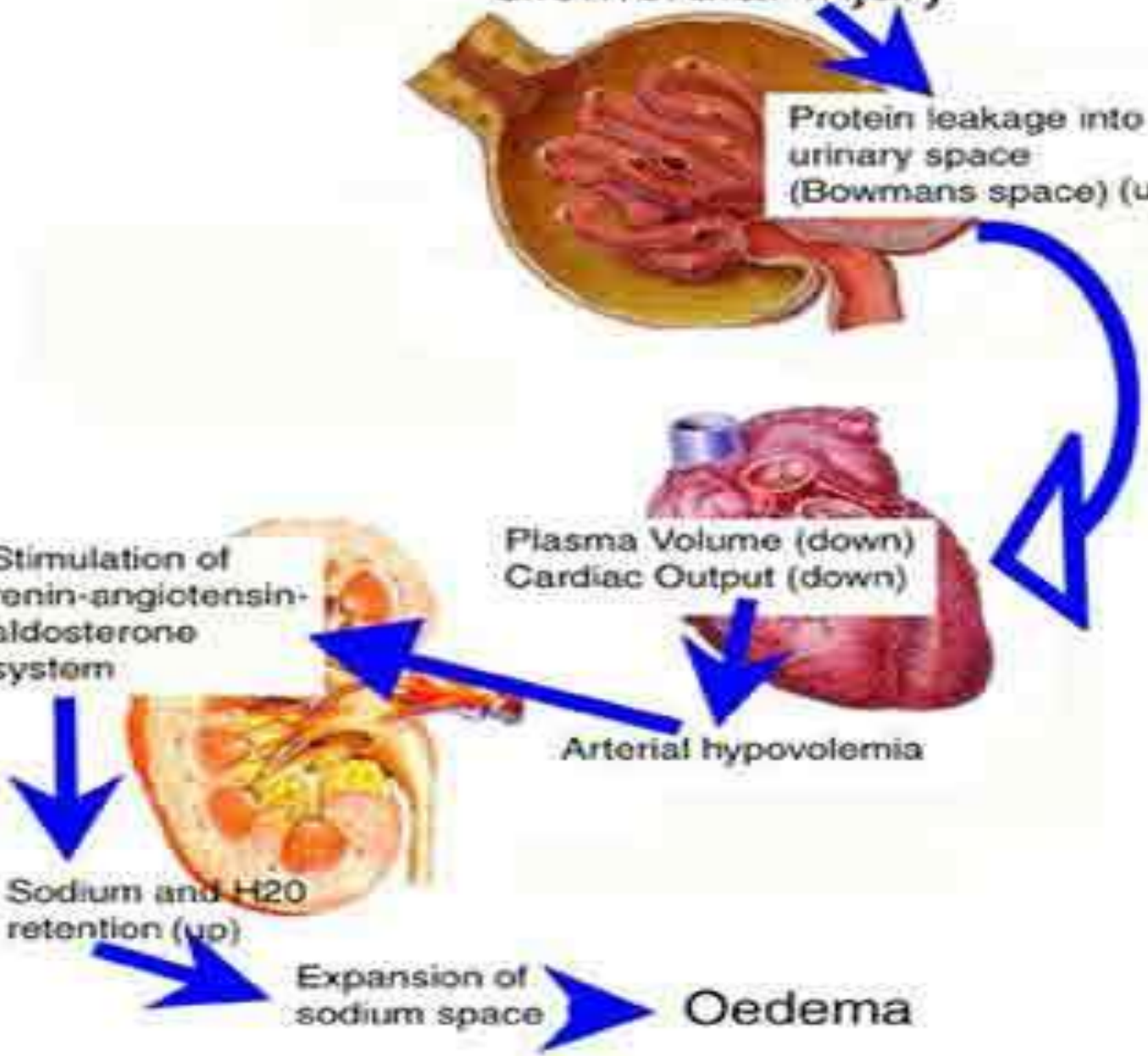
Stimulation of renin-angiotensin-aldosterone system



Arterial hypovolemia

Expansion of sodium space

Oedema



# CLINICAL MANIFESTATIONS

- Weight gain
- Puffiness of face
- Orbital edema
- Abdominal swelling (ascites)
- Pleural effusion
- Labial or scrotal swelling
- Irritability
- Edema of intestinal mucosal cause:  
Diarrhea, anorexia & poor intestinal absorption
- Lethargic
- Susceptibility to infection
- Decreased urine volume & frothy



Edema (swelling) of the ankles and feet


# Diagnostic evaluation


- History of illness & physical examination
- Urine examination: proteinuria, hematuria & increased specific gravity
- Blood examination: reduced protein, albumin < 2.5 gm/dl
- Lipo protein & BUN increased
- Renal biopsy in case of poor response to steroid therapy





# Management

- Objectives:
    1. Reducing excretion of urinary protein
    2. Reducing fluid retention in tissues
    3. Preventing infection
    4. Minimizing complications related to therapies.
- 

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- Corticosteroids: prednisone 2mg/kg/ day
  - Response occurs in 7 to 21 days
  - Bed rest and high protein diet with restriction of fluid intake & sodium.
  - Antibiotic therapy in case of infection
  - Diuretics in case of severe edema
  - Albumin infusion, in case of severe edema & ascites.
  - Immunosuppressive drugs in case of frequent relapses
  - Renal transplantation in end stage renal failure

# Nursing considerations

- Fluid volume excess related to fluid accumulation in tissue
  - Rest, comfortable position, change of position
  - Low salt & high protein diet
  - Offer potassium foods
  - Restrict fluid intake
  - Maintain I/O, weight chart
  - Reassure about the treatment plan
  - Urine testing for albumin

- Risk for infection
  - Examine for signs of infection
  - Monitor blood count
  - Keep nails short
  - Maintain general cleanliness
  - Preventing any injury to edematous skin
  - Avoiding invasive procedures as possible.
  - Teach mother about skin care

- Altered nutrition less than body requirement
- Provide small feeds at frequent intervals
- Consider child's likes & dislikes
- Provide nutritional supplement as needed
- Encourage child to take food

- Altered family process support
  - Allow parental involvement
  - Allow play and self care as tolerated
  - Encourage interaction with other children
  - Answer the questions asked by parents & allow to express frustration

Thank you

