# Nephrotic Syndrome
# ( Nephrosis )

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# What is nephrotic syndrome?

Nephrotic syndrome is a group of symptoms that indicate the kidneys are not working properly.

These symptoms include

•too much protein in the urine, called proteinuria

•low levels of a protein called albumin in the blood, called hypoalbuminemia

•swelling in parts of the body, called edema

•high levels of cholesterol and other lipids (fats) in the blood, called hyperlipidemia

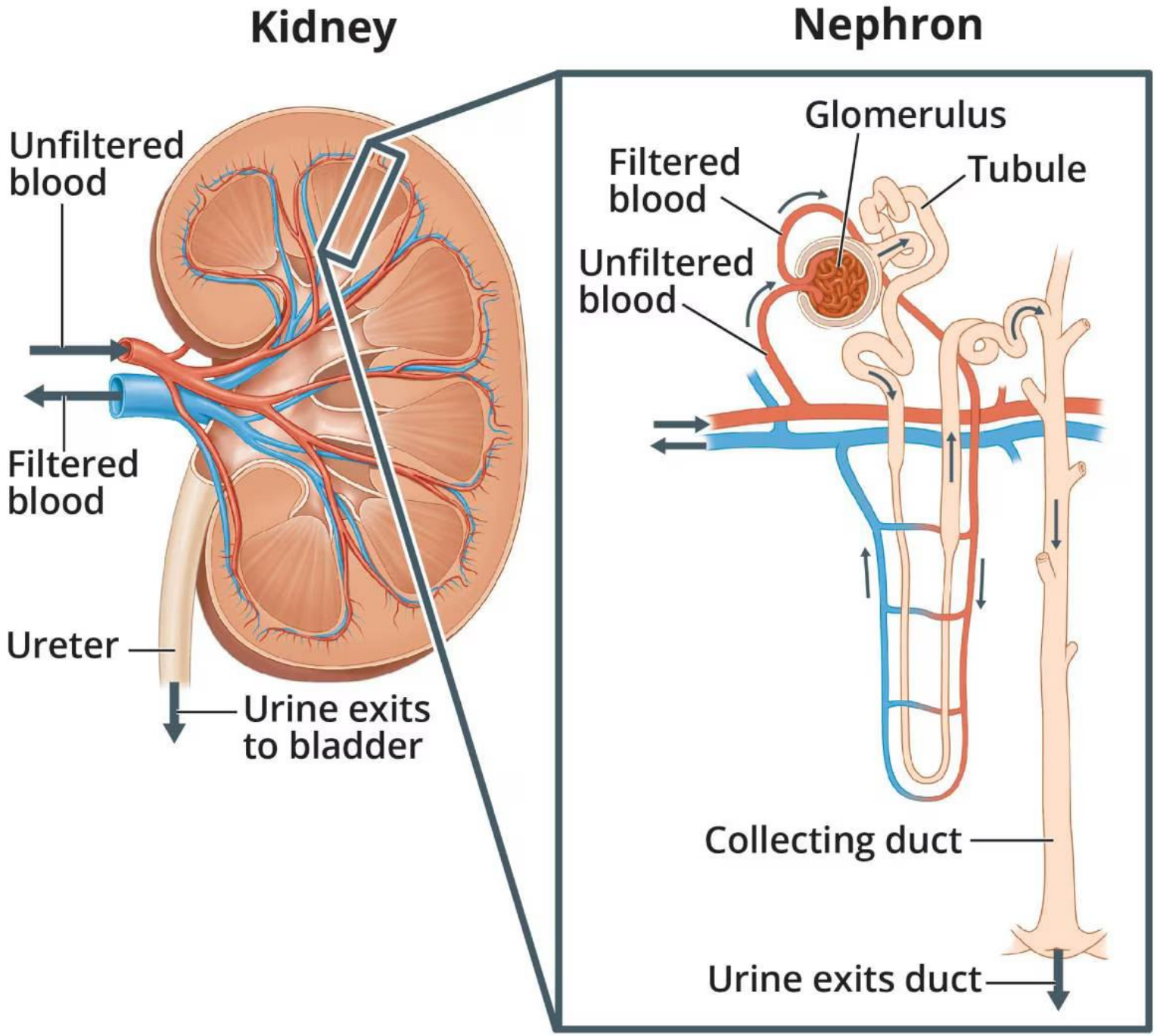
# Nephrotic Syndrome ( Nephrosis )

Clinical state characterized by: **Massive**

**proteinuria** ،**Hypoalbuminemia** ،**Hyper lipidemia**

and **Edema**.

The kidneys are made up of about a million filtering units called nephrons. Each nephron includes a filter, called the glomerulus, and a tubule. The glomerulus filters the blood, and the tubule returns needed substances to the blood and removes wastes and extra water, which become urine. Nephrotic syndrome usually happens when the glomeruli are damaged, allowing too much protein to leak from the blood into the urine.


Kidney
Nephron
Unfiltered blood
Filtered blood
Ureter
Urine exits to bladder
Glomerulus
Tubule
Filtered blood
Unfiltered blood
Collecting duct
Urine exits duct

As blood passes through healthy kidneys, the glomeruli filter out waste products and allow the blood to keep the cells and proteins the body needs.

# This disorder can be:

١. Primary: idiopathic nephrosis, minimal change nephnrotic syndrome (MCNS) or childhood nephrosis (preschool).

٢. Secondary: occur after or with glomerular damage of known or presumed etiology (major presenting syndrome of AIDS).

٣. Congenital form: inherited

# Minimal-change nephrotic syndrome: (Primary)

80% of the cases.

Pathophysiology:

- increases in male children than females
- Onset: at any age but mostly between 2-7 years.

# Pathogenesis:

there may be a metabolic biochemical disturbance that causes the basement membrane of the glomeruli to become more permeable to protein especially albumin.

# Clinical Manifestations

- ↑ wt edema - puffiness of the face round eyes, ascites
- Edema of the intestinal mucosa → diarrhea - anorexia, decreased intestinal absorption, extreme pallor of skin.
- Irritability - easily fatigued.
- Lethargic - BP normal or slightly decreased
- ++ Infection susceptibility.

# Therapeutic management:

- Replace excreted albumin (protein).
- ↓fluid retention in the tissues.
- Prevent infection.

o Diet: Low salt during periods of generalized edema. High protein diet.

o Diuretics given with severe edema & ascites or respiratory distress.

o Infections are prevented & treated properly with antibiotics.

✓ Corticosteroids are effective mainly prednisone

# NEPHROTIC SYNDROME IN CHILDREN

## Nursing considerations:

Assessment :

- Strict intake & output charting.
- Examine urine for specific gravity & albumin.
- Daily weight.
- Assessment of edema.
- Vital signs: TPR&BP.

## Nursing diagnosis :

- Fluid volume excess (total body) R/T of fluid accumulation in tissues
- High risk for (intravascular) fluid volume deficit R/T protein & fluid loss (edema).
- High risk for infection R/T lowered body defenses & fluid overload.
- High risk for impaired skin integrity R/T edema and lowered body defenses.
- Altered nutrition, less than body requirements R/T loss of appetite.
- Body image disturbance R/T changes in appearance.
- Activity intolerance R/T fatigue.
- Altered family process R/T presence of a child with a serious disease & maybe chronic disease.

**Planning : goals:**

- ↓ Protein in urine & maintain protein free urine by giving corticosteroids.
- Prevent skin breakdown & infection.
- Establish & maintain good nutrition.
- Support and educate child & family.

**Implementation**: to carry out the plan.

**Evaluation**: to detect progress or relapse.

# *THANK YOU*