



Chronic Kidney Disease (CKD): What Causes It?

Several conditions and diseases can cause CKD. Diabetes (high blood sugar) and Hypertension (high blood pressure) are the two most common causes.

Diabetes: This disease is caused by a lack of insulin in the body or the body's inability to use insulin. Not enough insulin causes high blood sugar (glucose) levels. Without treatment, it can be fatal. High blood sugar can damage the small blood vessels of the kidneys. High blood sugar can also weaken the kidney's nephrons (filters). When the kidney's blood vessels and filters are damaged, kidney function worsens. As kidney function worsens, protein may leak out of the kidneys and into the urine (called proteinuria). This may be one of the first signs of CKD.

Hypertension (High Blood Pressure): Blood pressure is the pressure (force) of the blood on the walls of the blood vessels. Over time, high blood pressure can damage the blood vessels and nephrons (filters) in the kidneys. If blood pressure becomes extremely high, it can restrict (narrow) the blood vessels which supply the kidneys. This reduced blood flow to the kidneys result in reduced kidney function. High blood pressure can also damage other organs such as the heart, brain and eyes.

Other possible causes of CKD include:

Glomerulonephritis: This disorder involves inflammation (swelling) of the nephrons (filters) inside of the kidneys. Sometimes it may be due to an infection. There are several types of glomerulonephritis. Damage to the kidneys generally occurs over a long period of time.

Inherited & Congenital Disorders such as Polycystic Kidney Disease (PKD): PKD is a condition in which a large number of cysts (sacs of fluid) develop in the kidneys. It is typically an inherited disease. The cysts can grow large and block the kidney's ability to filter waste products out of the blood. However, the kidneys are still able to make normal amounts of urine. Low kidney function from PKD generally occurs over a long period of time.

Autoimmune Diseases such as Systemic Lupus Erythematosus (Lupus): Autoimmune disorders occur when the body attacks itself. Lupus is one type of autoimmune disease which causes inflammation (swelling) in all organs of the body. It can affect the kidneys and cause CKD.

Nephrotoxic Agents: These medicines or substances can be damaging to the kidneys. Certain pain medicines called NSAIDs (Non-Steroidal Anti-Inflammatory Drugs) such as Ibuprofen (Advil, Motrin) and Naprosyn (Aleve) can cause damage to the kidneys if used regularly over a long period of time. Other examples of agents that could damage your kidneys are contrast dye studies such as CT scans with contrast and certain antibiotics. Persons with lower kidney function should avoid these medicines and substances.

HIV-Associated Nephropathy: In this case, the kidney damage can be caused by the HIV virus (Human Immunodeficiency Virus). Early treatment of the virus with HIV medicines may reduce possible damage from the virus.

Urinary Obstruction or Blockage: The flow of urine can be blocked by different ways such as kidney stones or an enlarged prostate gland in men. This blockage of urine flow may cause kidney damage. Kidney stones can form anywhere within the urinary tract, including the kidneys, and cause blockage of urine flow to the bladder. The kidneys can be damaged due to the pressure of urine backing up into the kidneys.