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FOR PEOPLE LIVING WITH DIABETES, EARLY DIAGNOSIS OF CHRONIC KIDNEY DISEASE IS KEY

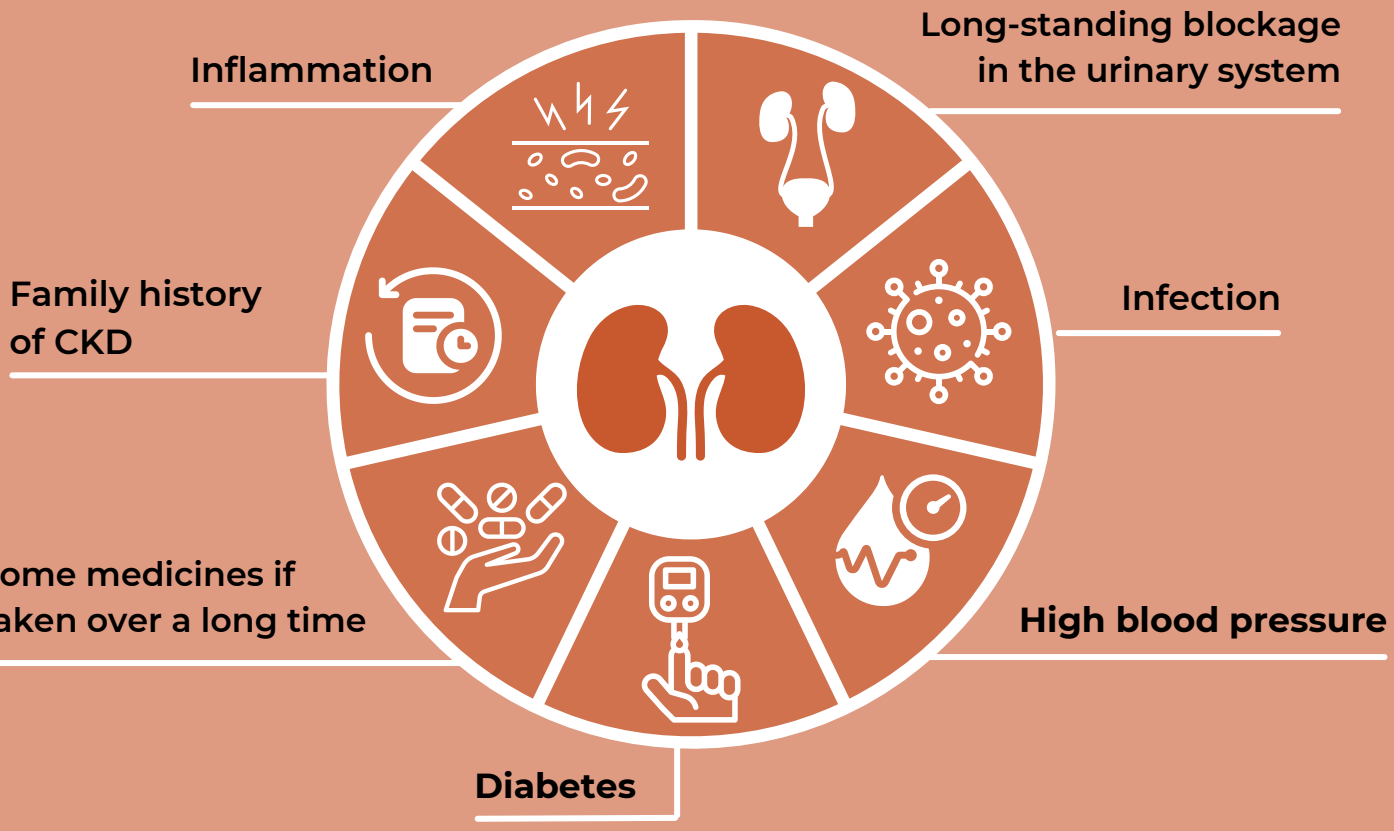
WHAT IS CHRONIC KIDNEY DISEASE?

[1; 2; 3]

Chronic kidney disease (CKD) is a progressive loss in kidney function resulting from damage to the nephrons, which are tiny filters in your kidneys that clean waste from the blood. Diabetes is one of the main causes of CKD as it can lead to high blood glucose and high blood pressure which can damage the kidneys and alter their filtration function. Loss of kidney function due to waste building up could lead to kidney failure and become life-threatening. However, with the right care and medication, it is possible to slow or even sometimes stop the progression of the disease and live well with it.

WHAT ARE THE MAIN RISK FACTORS?

[1; 4; 5]



Diabetes and hypertension together cause 80% of end-stage kidney disease cases globally.

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WHAT IS THE PREVALENCE OF CKD?

1 in 10 people

About 1 in 10 people in Europe have some degree of CKD

About 1 in 3 people living with diabetes (PwD) develop CKD in their lifetime .

1 in 3 PwD

Nonetheless, there are various steps that can be taken to reduce the risk and not everyone with diabetes will get CKD.

CKD can affect people of all ethnic groups, with people of South Asian origin, African Americans, Hispanics and American Indians being at higher risk of CKD, due to the high prevalence of high blood pressure in these communities.

CKD becomes more common with increasing age as kidneys naturally age, and other conditions which damage the kidneys are more likely to occur (e.g., high blood pressure and heart disease).



[1; 6]

WHAT ARE THE SYMPTOMS?

Early CKD usually has no symptoms. It is estimated that **a person can lose up to 90% of their kidney functions before experiencing any symptoms.**

Some signs of advancing CKD can be:



- fatigue
- foamy urine
- swollen ankles
- blood in the urine
- decreased appetite
- difficulty concentrating

[1; 4]



EARLY DIAGNOSIS

If diagnosed early, CKD can be treated effectively, and the deterioration of kidney function can be slowed or even stopped.

[1; 5; 7]

HOW IS CKD DIAGNOSED?

To detect CKD, simple laboratory tests are performed on small samples of blood and urine.



The first sign of damage is the **presence of albumin in the urine**, detected with a urine strip test (dipstick).

Subsequently, a blood test is performed to check the **Glomerular Filtration Rate (GFR)** which estimates kidney function.



A normal GFR value is about 100ml/min. Anybody with a GFR value below 60 ml/min will require adequate treatment.

[1; 4; 8; 9]

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WHAT ARE THE VARIOUS STAGES OF THE DISEASE?

[1]

CKD can progress over the years through various stages which are determined by the Glomerular Filtration Rate of the Kidneys. Not everyone progresses from Stage 1 to Stage 5.

STAGE	DESCRIPTION	GFR LEVEL
Normal Kidney Function	Healthy kidneys	90mL/min or more
Stage 1	Kidney damage with normal or high GFR	90mL/min or more
Stage 2	Kidney damage and mild decrease in GFR	60 to 89mL/min
Stage 3a	Mild to moderate decrease in GFR	45 to 59mL/min
Stage 3b	Moderate to severe decrease in GFR	30 to 44mL/min
Stage 4	Severe decrease in GFR	15 to 29mL/min
Stage 5	Established kidney failure	Less than 15mL/min or on dialysis

CAN CKD BE TREATED?

[1; 7; 8]

CKD has no cure, but early treatment can slow down or stop the progression of CKD as well as prevent the development of complications.

Treatment depends on the stage of the desease and includes:

PROPER DIET AND MEDICATION

to maintain the healthy balance of water, salt and minerals that your kidneys can control.



RENAL REPLACEMENT THERAPIES (RRT)



LONG-TERM DIALYSIS (haemodialysis or peritoneal dialysis) – to remove excess waste and fluids accumulated in the body.



KIDNEY TRANSPLANTATION* – to place a healthy kidney from a donor in the body to perform kidney functions.

*Kidney transplant can be a risk factor for the development of type 2 diabetes. This is possibly due to the immunosuppressant medication that people with a kidney transplant must take to prevent rejection of the transplanted organ. This medication may increase the risk of developing diabetes.

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[2; 4; 7; 8; 9; 10]

WHAT CAN YOU DO TO PREVENT OR SLOW DOWN THE PROGRESSION OF CKD?

The development of CKD can be prevented or slowed down by adopting some key measures:

MEDICATION AND DIABETES MANAGEMENT/MONITORING

- Keep your blood glucose in range as much as possible
- Check your blood pressure regularly and keep it under control
- Take medication as instructed by your healthcare team
- Avoid overuse of anti-inflammatory and pain-killing medicines
- Get tested regularly for kidney disease and other complications
- Communicate with your healthcare team and ask questions to identify the treatment that is best for you
- Talk with others who are living with diabetes and/or kidney disease



HEALTHY EATING

- Develop a meal plan with a dietitian
- Limit salt and sodium in your diet
- Avoid sugary and processed foods
- Eat more fresh vegetables, fruit and unprocessed grains
- Drink water instead of sugary drinks

HEALTHY HABITS

- Don't smoke
- Be active and get regular physical activity
- Get enough sleep (aim for 7 to 8 hours of sleep each night)
- Take appropriate fluid intake
- Maintain a healthy weight

Sources:

[1] World Kidney Day. Chronic Kidney Disease. https://www.worldkidneyday.org/facts/chronic-kidney-disease/

[2] World Kidney Day. Diabetes. https://www.worldkidneyday.org/facts/topics/diabetes/

[3] National Kidney Foundation. Managing Blood Sugar for Kidney Health. https://www.kidney.org/atoz/content/Managing-Blood-Sugar-For-Kidney-Health

[4] World Kidney Day. Take Care of Your Kidneys. https://www.worldkidneyday.org/facts/take-care-of-your-kidneys/

[5] International Diabetes Federation. Diabetes and the kidneys. https://www.idf.org/our-activities/care-prevention/diabetes-and-the-kidney.html

[6] European Kidney Health Alliance https://ekha.eu/wp-content/uploads/2021/11/EKHA-Infographic-2014.pdf

[7] National Kidney Foundation. Quality of Life with Diabetes. https://www.kidney.org/atoz/content/Quality-Of-Life-With-Diabetes

[8] National Kidney Foundation. Preventing Diabetic Kidney Disease: 10 Answers to Questions. https://www.kidney.org/atoz/content/preventkiddisease

[9] National Kidney Foundation. Type 2 Diabetes and Kidney Disease, What you should know. https://www.kidney.org/sites/default/files/01-10-8193_kbj_kls_pated_diabetes-pad_infographic.pdf

[10] National Kidney Foundation. Diabetes: Ten Tips for Self-Management. https://www.kidney.org/atoz/content/diabetes-ten-tips-self-management