



**Don't miss it,
act in time.**



Healthy Living with Type 2 Diabetes and Understanding Its Impact on Your Body

Raising awareness of the relationship
between Kidney Health and Type 2 Diabetes



Why am I receiving this brochure?

Raising awareness of Kidney Health in Type 2 Diabetes

This brochure is to support you as you navigate your journey with type 2 diabetes (T2D). Its aim is to help you obtain more information on how to look after your overall health.

We understand you have a lot to deal with when it comes to managing your condition, but we hope to provide a clear and simple overview of the impact of type 2 diabetes on other parts of the body so you are informed about, know what to look out for, and can stay as healthy as possible.

The information within this booklet should also enable you to have open and informed discussions with your physician, so you can feel in charge of your journey and be in the driving seat.

You can refer to this brochure as often as you want in preparation for your physician consultations, to guide your discussions with your physician and to refer to after your appointment. There is also room at the back of the brochure for you to write notes. Let's get started.



Commonly used terminology

Type 2 Diabetes and Kidney Health

As you navigate through your journey with type 2 diabetes, you will encounter a lot of information about the condition and how it impacts your kidney health. This can be overwhelming, and you may not always understand the terminology used.

Below is a list of the most frequently used terms related to type 2 diabetes and kidney health to help you better understand the information you read.

Albumin: A protein that keeps fluid in your bloodstream and helps transport hormones, vitamins, enzymes, etc. throughout the body.

Albuminuria: Albumin leaking into the urine, which is potentially a sign of chronic kidney disease (CKD).

Creatinine: A waste product that the kidneys filter from the blood and release via the urine.

Chronic kidney disease (CKD): A long-term condition where the kidneys don't work as well as they should and which, if left untreated, can worsen over time *with further progression potentially leading to dialysis or the need for a kidney transplant.*

CKD progression: Worsening CKD, moving from early to late stages.

Glomerular filtration: The process by which the kidneys filter the blood.

Dipstick: A strip of chemically treated paper that can be used to test for abnormalities in the urine to detect and manage a range of disorders such as diabetes, kidney disease, and urinary tract infections.

eGFR (estimated glomerular filtration rate): The rate at which the kidneys clean the blood; eGFR is the estimated rate at which this happens usually found using a blood test and a calculation.

Type 2 Diabetes (T2D): A condition where the body is unable to use the insulin it produces well enough to control the sugar levels in the blood.

UACR test (Urine albumin-to-creatinine ratio): A urine lab test to measure how much albumin and creatinine are cleared out from the body; it is the most accurate and earliest way to detect potential kidney damage.¹

Let's take a closer look at the kidneys...

More than 30% of type 2 diabetes patients develop kidney disease that can become chronic.² Chronic kidney disease (CKD) means your kidneys are damaged and there is a gradual loss of kidney function.

It's called chronic because the damage happens steadily over time and does not get better. Although they are small, your kidneys do vital work that keeps the rest of the body in balance, including the removal of waste and excess fluid from the body through urine.

Like the effects on the heart and liver, a high level of sugar in your blood can cause problems to the tiny blood vessels that act as filtering units in your kidneys. Over time, high sugar levels in

the blood can cause these vessels to become narrow and clogged. Without enough blood, the kidneys become damaged, and albumin (a protein made by your liver) passes through these filters and ends up in the urine where it should not be. This can be a sign of CKD.

Not all people with type 2 diabetes will have heart, liver, or kidney problems but, type 2 diabetes is a known risk factor in developing these health problems.^{2,3} The earlier you know about the relationship between type 2 diabetes and the rest of your body (especially about CKD in type 2 diabetes), the better you are prepared to take precautions to protect your kidneys.



Organs affected by T2D



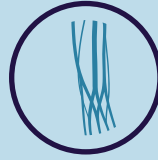
Eyes



Heart



Liver



Blood
Vessels



Bladder



Kidneys

What the kidneys do

1

Act as the body's
filter, removing waste
products from the blood

2

Control how much water and
electrolytes (sodium and
potassium being the most
important) are in the body

3

Secrete a number of
essential hormones

How do I protect my kidneys?

Health and wellbeing

Controlling your blood sugar and blood pressure can help in keeping your kidneys healthy or preventing chronic kidney disease (CKD) from getting worse, so managing your type 2 diabetes (T2D) and hypertension well is important.

You can also be proactive and make lifestyle changes that improve your overall well-being and health. Here are some lifestyle changes to consider that can make a difference:



Exercise at least 30 minutes a day, most days of the week to help you reduce stress, manage your weight and reach your blood pressure and blood sugar goals



Work with a dietician to develop a healthy meal plan so you know which foods you should and which you should not avoid



Maintain a healthy weight – being overweight is linked to high blood pressure, heart disease, and CKD



Avoid the overuse of nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen and naproxen, which can damage your kidneys



Manage your fluid intake as advised by your HCP, as damaged kidneys cannot remove extra fluid as well as they should



Reduce your alcohol intake



Consider quitting if you smoke

Kidney Health monitoring

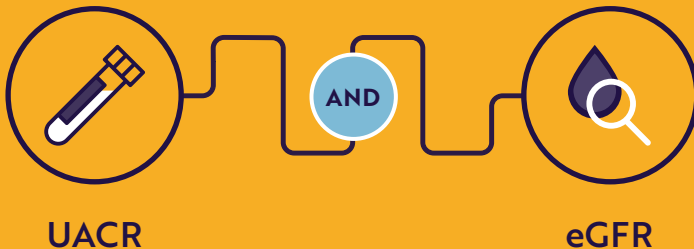
Your physician can advise you about available tests to assess and monitor your kidney health. To get a full picture you need to have a blood and urine test which measure kidney function and damage. The most common tests are:

- eGFR (estimated glomerular filtration rate) – a blood test that measures how well your kidneys filter waste from your blood.
- A UACR (Urine Albumin-to-Creatinine Ratio) or dipstick test are urine tests that can detect abnormal levels of albumin in the urine which may be a sign of kidney damage, as it suggests that the 'filter' is leaking.
- The UACR lab test is the earliest way to see potential signs of damage and is seen as the gold

standard by nephrologists to detect albumin in the urine.¹

- The dipstick test is more commonly used in general practice but is not considered to be as accurate as the UACR test.

Tracking both the urine and blood for signs of kidney damage and loss of function is the most effective way of keeping on top of how healthy your kidneys are. Medical guidelines are recommending that all patients with type 2 diabetes are given an annual kidney check, using a combination of the eGFR and UACR tests, so this may be something you want to raise with your doctor on your next consultation.¹



If your kidneys are being affected by T2D

People with type 2 diabetes often don't realize they are at increased risk of kidney disease because damage to the kidneys usually happens without causing any symptoms before the late stages.

A T2D diagnosis alone is difficult for many patients to come to terms with and additional worries about kidney disease can increase anxiety. However, knowing about the link between your kidneys and diabetes is an essential first step to protecting your overall health.

If you are diagnosed with kidney disease following eGFR and UACR testing, you should not despair. In addition to the lifestyle changes above, creating an open dialogue with your physician is essential to give you the best opportunity to manage your health well.

Your relationship with your diabetes care team will be long-term, because of the nature of the condition. Each consultation is an opportunity to discuss your broader management of diabetes alongside the immediate priorities – which may include heart health, kidney health but also your mental wellbeing. Nothing that is important to you should be left out.

In this brochure, we have taken a deeper look at kidney health to help you ask your physician the right questions so you can feel in control of your health.





© 2021 Bayer AG All rights reserved. BAYER and the Bayer Cross are registered trademarks of Bayer.
PP-KER-ALL-0015-1 01/22

