

Chronic kidney disease (CKD) in Switzerland

Definition

Chronic kidney disease (CKD) is a long-term disorder of kidney function or kidney structure over a period of more than three months. It can be characterized by impaired kidney function and/or increased protein excretion in the urine and often leads to other health problems such as cardiovascular or bone disease.

Facts and figures on CKD in Switzerland

- An estimated 850 million people worldwide suffer from kidney disease.¹
- Globally, CKD is predicted to be the fifth most common cause of death by 2040.²
- In Switzerland, around 10 percent of people are affected by the disease.³
- It is assumed that two thirds of those affected do not receive a diagnosis.⁴
- Of almost one million people affected, around 4'800 require dialysis treatment.⁵
- The cost of dialysis can be up to 80'000 francs per patient per year.⁶ In addition, patients incur average annual travel costs of CHF 5'000.⁷

Forecasts:

A [recent study by AstraZenca](#) forecasts the impact of CKD in Switzerland until 2032.⁸

- Between 2022 and 2032, the number of CKD cases in Switzerland is expected to increase by 6,7% (from 0.96 million to 1,03 million cases).
- The number of cases in advanced stages 3 to 5 is expected to increase by 18,1% (from 437'000 to 516'000).
- CKD-related healthcare costs will increase by 27,6% and account for up to 4,6% of total healthcare expenditure in Switzerland.
- The environmental impact will increase due to the increase in CKD patients: 13% higher CO₂ emissions and 17% more water consumption due to dialysis.

What are the kidneys' functions?

The kidneys filter the blood, produce urine and excrete waste products with it. They regulate the fluid and electrolyte balance, blood pressure and the acid-base balance. They are also involved in the formation of red blood cells.

Causes and risk factors

The most common causes for the development of CKD are:

- **High blood pressure (hypertension):** Leads to vascular damage to the kidneys.
- **Diabetes mellitus:** Damages the blood vessels in the kidneys, known as diabetic nephropathy.

Risk factors include smoking, obesity, lack of exercise and taking certain medications.⁹

Living with CKD

Initially, CKD often shows no symptoms, which makes early detection difficult. Later, symptoms such as fatigue, water retention and high blood pressure appear.

¹ Jager KJ, Kovesdy C, Langham R, et al. A single number for advocacy and communication – worldwide more than 850 million individuals have kidney diseases. *Kidney Int.* 2019;96(5):1048-1050.

² [International Society of Nephrology](#)

³ Ogna VF, et al., Prevalence and determinants of chronic kidney disease in the Swiss population. *Swiss Med Wkly.* 2016;146:w14313.

⁴ Sundström J, et al. Prevalence, outcomes, and cost of CKD in a contemporary population of 2.4 million patients from 11 countries: the CaReMe CKD Study. *The Lancet Regional Health*

⁵ Schweizer Dialyseregister SRRQAP 2021

⁶ [deinadieu.ch](#)

⁷ [Berner Fachhochschule](#)

⁸ Campbell-James T, et al. (2024) Projected Increase of the Clinical, Economic, Societal, and Environmental Burdens of Chronic Kidney Disease in Switzerland: Insights from Impact-CKD.

⁹ [Universität Spital Zürich: Chronische Nierenerkrankung](#)

Treatment options:

Chronic kidney disease cannot be cured. Nor can the damaged cells of the organs be restored. This makes it all the more important:

- diagnose and treat the disease at an early stage
- a healthy lifestyle, with a low-salt diet and regular exercise
- drug treatments can slow down the progression of CKD

In advanced cases, dialysis or a kidney transplant are necessary. A transplant can offer an affected person a better quality of life than dialysis. However, due to the limited availability of donor organs and additional illnesses, dialysis is often the only option.^{10,11}

Psychological and social burden:

Due to a lack of public education and awareness, patients often do not realize what severe kidney damage means. The social consequences of the disease, the impact on work and standard of living are major and are the first to come into focus. The effects of CKD go beyond physical health:^{11,12}

- Almost a third of patients in stages 3 to 5 suffer from anxiety or depression.
- Dialysis has an enormous impact on everyday life and quality of life. It takes up a lot of time and is often associated with fatigue and other side effects.
- Accepting an organ from a deceased person is not easy for some of those affected and can have an impact on their mental well-being.
- Long waiting times lead to a great deal of uncertainty and put a strain on those affected and those around them.
- The disease in its advanced stages often has major financial consequences and brings with it massive challenges for relatives and family members.

Prevention and early detection

As the symptoms that trigger chronic kidney disease are very unspecific, it is important that patients at risk have their kidney parameters checked regularly. A study by the University of Zurich (UZH)¹³ came to the following conclusions for Switzerland:

- CKD is not completely reversible even in its early stages, but optimized early detection and treatment can slow down the disease and improve quality of life.
- There are weaknesses in the prevention, early detection and treatment of chronic kidney disease.
- The simplest way of effective early detection, monitoring of blood protein in the urine, and the targeted examination of patients at risk, are often neglected.
- Healthcare expenditure of up to CHF 250'000 per year and patient can be saved.¹⁴

Switzerland is lagging behind: lack of awareness and health policy attention

Although one million people in Switzerland are affected by chronic kidney disease and CKD is predicted to be the fifth most common cause of death worldwide by 2040, the disease is still little known in Switzerland.

- Although the disease is serious and causes high costs, it is overlooked in Swiss health policy and not considered in any health policy strategy.
- The National Strategy for the Prevention of Non-Communicable Diseases does not mention CKD or list it as a separate non-communicable disease.
- Although international and Swiss guidelines recommend early detection measures for at-risk groups, there are no national or cantonal prevention and early detection programs in Switzerland.

¹⁰ Universität Spital Zürich: Chronische Nierenerkrankung

¹¹ Nieren leiden leise

¹² Kidney Care UK: Facts about kidneys

¹³ Jäger L. et al. (2022) Quality and variation of care for chronic kidney disease in Swiss general practice: A retrospective database study.

¹⁴ Pierre-Yves Martin. Fortschritte in der Nephrologie: Vorteilhaft für Patienten und Kosten. Schweizerische Ärztezeitung. 2017; 98(45):1484–1486.

The progression of the disease and late diagnosis not only reduce the quality of life of patients, but also lead to high healthcare costs and socio-economic disadvantages.

- In Europe, around 140 billion euros are spent on this every year.¹⁵
- Without further measures such as prevention and early detection, the costs could rise to almost 5% of Switzerland's total healthcare expenditure.¹⁶
- The right therapy can reduce the risk of death by 67% and the risk of hospitalization by 20%.¹⁷

¹⁵ [van Mil D, et al. \(2023\) Cost-effectiveness of screening for chronic kidney disease: existing evidence and knowledge gaps.](#)

¹⁶ [Campbell-James T, et al. \(2024\) Projected Increase of the Clinical, Economic, Societal, and Environmental Burdens of Chronic Kidney Disease in Switzerland: Insights from Impact-CKD.](#)

¹⁷ [Pecoits-Filho R, et al. \(2024\) Kidney-protective medication and risk of adverse clinical outcomes in patients with chronic kidney disease](#)