

Oral Health and Chronic Kidney Disease

A Cross-System Connection



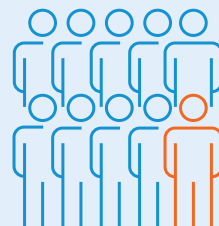
Poor oral health, particularly [periodontal \(gum\) disease](#), can [worsen kidney damage](#), make it more difficult to control high blood pressure, and potentially delay healing following transplant surgery for individuals with [chronic kidney disease \(CKD\)](#).

CKD and periodontal disease have a proposed bidirectional relationship, in which [oral bacteria](#) can travel to the weakened kidney and cause more damage. Conversely, [changes in immune function](#) seen in CKD can make periodontal disease worse. Periodontal disease is also linked to [diabetes](#) and [cardiovascular disease](#), which are [primary risk factors for CKD](#). Research suggests that providing periodontal treatment for individuals with CKD can help improve those individuals' kidney function. Additionally, studies suggest that [successfully managing CKD](#) can help improve indicators of periodontal disease.

CKD can have substantial impacts on the oral cavity. In addition to periodontal disease, individuals with CKD are more likely to have [xerostomia](#) (dry mouth), which increases the risk of dental caries (decay), taste disturbances, mucosal lesions, and [oral candidiasis](#) (an oral fungal infection known as thrush). Individuals receiving dialysis treatment are often prescribed blood-thinning medications, which can cause [excess bleeding](#) during dental care. Further, dental problems such as pain, loose or broken teeth, or taste disturbances can get in the way of someone with CKD eating a [healthy diet](#), which can, in turn, worsen kidney disease.

Understanding Chronic Kidney Disease

Our kidneys play a key role in keeping us healthy by filtering our blood — about half a cup each minute — to remove waste and extra water from the body through urine. CKD occurs when our kidneys are damaged and cannot filter blood efficiently, resulting in waste and extra fluid building up in our bodies ([edema](#)). More than [one in ten adults](#) (about 37 million) in the United States has CKD. Adults with diabetes, high blood pressure (hypertension), and other types of cardiovascular disease (CVD) are at [higher risk of developing CKD](#), as are those over the age of 60 and those with a family history of kidney disease. In turn, [complications of CKD](#) include high blood pressure and other forms of CVD, as well as sudden loss of kidney function.



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CKD cannot be cured, but its symptoms can be managed and its progression delayed to preserve kidney function for as long as possible. In its early stages, managing diabetes and/or high blood pressure through diet modifications and

medication is key. When a person's kidneys are no longer able to sufficiently filter waste out of the blood, this is considered [end-stage kidney disease](#) (also known as end-stage renal disease or kidney failure). The two primary treatments for end-stage kidney disease are dialysis and kidney transplantation. In dialysis, a person's blood is filtered either through an external machine ([hemodialysis](#)) or the person's own abdominal lining ([peritoneal dialysis](#)) to remove waste and extra water in place of the failing kidneys. Individuals with end-stage kidney disease may also be candidates for a [kidney transplant](#), in which a kidney from a living or deceased donor is surgically transplanted to replace the failing kidney.

Integrating Oral Health Care into Kidney Care

Integrating oral health care into kidney care offers a clear path toward more coordinated, whole-person care for individuals living with CKD. One approach is to embed oral health directly into routine medical care — for example, by conducting [oral health screenings during nephrology visits](#) and enabling nephrologists and primary care providers to deliver basic services such as oral health counseling or fluoride varnish. At the same time, [strengthening interdisciplinary care teams](#), including bringing together dentists, nephrologists, and primary care providers, can support more coordinated management for high-risk patients, particularly those receiving dialysis or preparing for kidney transplantation, where [dental clearance is essential to reduce infection risk](#). Including oral health services [within dialysis centers or kidney clinics](#) can further reduce barriers to care by allowing patients to receive oral health services on the same day as medical visits.

[Effective integration](#) also depends on a strong care coordination infrastructure. Structured referral systems with closed-loop communication, or communication pathways that confirm that all parties understand the same information, can ensure that patients complete dental visits and that providers across disciplines remain informed. [Interoperable electronic health records](#) between medical and dental systems would further enable shared care planning, risk stratification, and continuity of care.

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Aligning patient education across kidney care and dental settings can reinforce consistent messaging about the oral-kidney connection, empowering patients to engage in preventive behaviors and seek timely care.

On the policy and financing side, payment models that incentivize integrated care and coverage for [medically necessary dental services](#), such as those increasingly recognized in Medicare for specific clinical contexts, are critical to overcoming long-standing fragmentation.

Finally, aligning patient education across kidney care and dental settings can reinforce consistent messaging about the oral-kidney connection, empowering patients to engage in preventive behaviors and seek timely care. Together, these strategies illustrate how integrating oral health into kidney care can improve outcomes, enhance patient experience, and advance health equity.