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[PrEP science](#)

Daily PrEP is safe for the kidneys, although on-demand PrEP has slightly less impact

[Alain Volny-Anne](#)

30 December 2022

According to a recent study, oral PrEP has a very good renal safety profile even after two years of use. The study also shows that on-demand PrEP has less impact on kidney function than daily PrEP, although this difference is not clinically significant.

The drug tenofovir disoproxil is widely used for oral PrEP in combination with emtricitabine. It is known to affect how kidneys work in a small number of people. What is unclear is whether or not this risk is higher, depending on the PrEP regimen. This brought a French team of researchers to compare the impact of daily or on-demand PrEP regimens on kidney function.

The study included 1,253 participants who started PrEP in [the Prévenir cohort](#) in the greater Paris area, between 2017 and 2020. Gay and bisexual men could take PrEP daily or on-demand, as they preferred. While daily tenofovir disoproxil-based PrEP means taking one pill each day, on-demand PrEP (or event-based PrEP) requires planning ahead:

- A double dose (two pills) between 2 and 24 hours before sex,
- a single dose (one pill) 24 hours later, and
- another single dose (one pill) 24 hours after that.

Switches between regimens during follow-up were allowed in the study. To facilitate comparisons of kidney function between regimens, participants were classified in three groups:

- On-demand.
- Daily.
- Switches.

Every three months, the investigators collected data on participants' dosing regimens. Also, participants were required to produce a serum creatinine test result at each visit. This was essential, as the study's primary endpoint was the evolution from baseline of estimated glomerular filtration rates.

The estimated glomerular filtration rate, or eGFR, results from an equation that comprises the age, the sex and a serum creatinine test result of a person (glomeruli are networks of blood vessels acting as filters in the kidney). The eGFR shows how fast toxins, including creatinine, are filtered out of the body by the kidneys. Generally, an eGFR result is listed as millilitres per minute per 1.73 m² of body surface. An eGFR of 90 mL/min/1.73 m² is considered normal, and rates ranging from 60 to 90 reflect a moderate kidney function. However, an eGFR below 60 is abnormal and may indicate kidney dysfunction.