

Parma, September 12, 2018

## **Caffeine consumption might extend life expectancy in CKD patients**

**A study, which has been published in NDT [1] today shows that caffeine consumption is associated with a lower mortality rate in CKD patients. This relationship has already been observed in the general population. Although this study shows that this association may persist if caffeine is consumed through caffeine-containing soft drinks, the president of the European Renal Nutrition Working Group, Professor Denis Fouque, recommends CKD patients not to consume these soft drinks, but to drink coffee or tea instead.**

In the general population an inverse relationship between coffee consumption and life expectancy has been shown. A high coffee consumption can actually help people to live longer. Numerous possible reasons for this effect have been observed: coffee decreases uric acid levels and increases adiponectin, a protein hormone regulating glucose levels and the fat metabolism, as well as magnesium, which is known to benefit heart and vessel health. It stimulates the production of nitric oxide and, thus, promotes vasodilation, the relaxation of the vessels, which results in lower blood pressure. In addition, a cup of coffee contains antioxidants that are known to have beneficial effects on health.

A study, which has been published in NDT [1] today, examined whether or not caffeine consumption has the same beneficial effects in CKD patients. 4863 adults from the "National Health and Nutrition Examination Survey" (NHANES) with a GFR of between 15 and 60 ml/min/1,73 m<sup>2</sup> were analyzed and underwent a median follow-up of 60 months. The patients were divided into four groups according to their caffeine consumption: Very low (<28.2 mg/day), medium low (28.2 – 103 mg/day), medium high (103 – 213.5 mg/day) and high (>213,5 mg/day). A 26% lower mortality rate was observed in the low and medium group compared to the very low caffeine consumption group. However, this beneficial effect on life expectancy did not increase in the high group (there it was only 22%). Therefore, the relationship between caffeine consumption and life expectancy may not be linear, but present a U-shaped pattern.

The authors of this study made another observation: the protective effect of caffeine consumption was also detected when the analysis was performed according to caffeine consumption from soft drinks. Study author Miguel Bigotte Vieira points out that this might be due to a confounder: "Sicker patients may avoid soft drinks with caffeine, while the 'healthier ones' may consume more cola and energy drinks." Professor Denis Fouque, editor-in-chief of NDT and president of the European Renal Nutrition Working Group adds: "Physical activity may also correlate with caffeine-containing soft drinks, which might have falsified the results. We doubt this finding because we know that these soft drinks do not only contain caffeine, but also high amounts of sugar and phosphate. Phosphate is known to be a 'vessel toxin' for CKD patients. Therefore, this observational study cannot give the 'green light' for CKD patients to consume caffeine-containing soft drinks. We advise that they strictly limit their consumption".

The expert points out however that caffeine itself is not harmful. Caffeine consumption from coffee or tea appears to be safe at certain stages of kidney disease and probably has the same beneficial effects in CKD patients as in the general population. The authors of the study conclude: "If these results are to be confirmed in future studies, advising patients with CKD to drink more caffeine may reduce their mortality."

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[https://academic.oup.com/ndt/advance-  
article/doi/10.1093/ndt/gfy234/5063554?searchresult=1](https://academic.oup.com/ndt/advance-article/doi/10.1093/ndt/gfy234/5063554?searchresult=1)

### **About ERA-EDTA**

With more than 7500 members, the ERA-EDTA ("European Renal Association – European Dialysis and Transplant Association") is one of the biggest nephrology associations worldwide and one of the most important and prestigious European Medical Associations. It supports basic and clinical research in the fields of clinical nephrology, dialysis, renal transplantation and related subjects. It also supports a number of studies as well as research groups and has founded a special "Fellowship Programme" for young investigators as well as grant programmes. In order to involve young nephrologists in all its activities, ERA-EDTA has created the "Young Nephrologists' Platform" (YNP), a very active committee whose board includes members who are 40 years old or younger. In addition, it has established various working groups to promote the collaboration of nephrologists with other medical disciplines (e.g. cardiology, immunology). Furthermore, a "European Renal Best Practice" (ERBP) advisory board was established by the ERA-EDTA to draw up and publish guidelines and position statements. Another important goal of the ERA-EDTA is education: The series of CME courses combined with the annual congress offer an attractive scientific programme to cover the need for continuous medical education for doctors working in the fields of nephrology, dialysis and transplantation. The association's journals, NDT (Nephrology, Dialysis, Transplantation) and CKJ (Clinical Kidney Journal), are currently the leading nephrology journals in Europe; furthermore NDT-Educational is the Society's online educational journal, with free access for all users, as well as being a very important and useful feature of the NDT-Educational "Literature Review". The ERA-EDTA Registry is a large epidemiologic database comparing countries by assessing nephrology practices throughout Europe. ENP, the European Nephrology Portal, is the latest new initiative of ERA-EDTA, where all those interested in the activities of the Society can find everything that is happening, all in one place. Finally, ERA-EDTA is a member of the European Kidney Health Alliance (EKHA), a consortium of patients, nurses and foundations relating to renal issues that actively interacts with the European Parliament. For more information, please visit [www.era-edta.org](http://www.era-edta.org)