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OPINION

## Epidemiology and the Role of Complementary and Alternative Medicine of Kidney Stones

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### INTRODUCTION

Major developments that enhance our knowledge of the pathogenesis and treatment of kidney stones (KS) have remained missing for the past 20 years. Patients, doctors, and healthcare institutions all still struggle with the illness. In these circumstances, epidemiological studies aim to clarify the global shifts in the trends and impact of the illness and to pinpoint changeable risk factors that are associated with kidney stone formation. Our growing understanding of the epidemiology of renal stones is crucial and significantly improves how the illness is currently managed. The factors influencing frequency and rate are discussed in this article, including age, gender, race, culture, employment, temperature, location, systemic illnesses such as diabetes, vascular disease, chronic renal disease, and nutritional risk factors related to kidney stones. A prevalent urological condition known as kidney stones (KS) involves the development and sporadically passing through the urinary system of crystal agglomerates. The terms nephrolithiasis and urolithiasis are derived from the Greek words nephros, which means kidney, uro-, which means urine, and lithos, which means stone. Between 3200 and 1200 BC, medicinal writings from ancient Mesopotamia make the first mention of kidney stones. Hippocrates, a Greek physician and author (460–377 BC), wrote about the symptoms and indications of bladder stones and opposed “cutting for the stone,” which, as he stressed, should only be done by “specialists of the work.”

### DESCRIPTION

Global differences in the KS epidemiology are evident and are influenced by climatic, socioeconomic, and regional variables. Additionally, the frequency and incidence of the illness are influenced by age, sex, ethnicity, and diet. Metabolic syndrome and obesity are recognized as risk factors for KS. The aforementioned variables also have an impact on the sort of stones produced and their frequency of occurrence. The main ingredient in KS remains calcium oxalate on a worldwide scale. KS is now understood to be an imminent danger for other systemic illnesses like diabetes, heart disease, bone injuries, and chronic renal disease. Converse-

ly, these ailments also increase the chance of renal stones. Common risk factors probably play a role in the development of kidney stones as well as these systemic diseases. In individuals with renal stones, complementary and alternative medicine (CAM) is frequently used. It comprises of products that fall under the genre of nutritional supplements and contain various components, such as herbs, probiotics, and vitamins, frequently along with alkali. The majority of dietary supplements contain substances for which there is contradictory or no empirical proof that they can cure or avoid kidney stones. Clinicians should inform patients that most dietary supplements have unclear or unstudied effects in people and that the lack of proof does not rule out the possibility of adverse effects. Unfortunately, even when positive findings are published, the function of the individual molecules cannot be determined because the CAM preparation is a combination of various molecules, frequently including alkali, with various possible mechanisms of action.

### CONCLUSION

Despite all of these issues, CAM goods continue to be very well-liked by kidney stone sufferers. Only a tenuous recommendation for utilizing them in patients with kidney stones may be fair due to the paucity of knowledge in this area, which stops one from suggesting CAM products in routine clinical practice. High-income nations frequently experience kidney stone disease; in the United States and Europe, the frequency can approach 10%. Additionally, it demonstrates significant return rates. Therefore, it is important to focus on primary and indirect methods to avoid kidney stone illness. The primary goal of medical treatment for renal stone disease is to lower the likelihood of stone recurrence. In addition to nutritional and pharmaceutical interventions, complementary and alternative medicine (CAM) is frequently used. Fluid treatment continues to be the most popular non-pharmacological method for preventing kidney stones of any kind, regardless of makeup. The chance of kidney stones was found to be negatively correlated with fluid intake, with a relative risk of 0.71 in males and 0.61-0.68 in women. If you drink a lot of water, it can help prevent stone recurrences as long as you produce more than 2 L of

pee per day. The typical hydration dosage is 30 mL/Kg/d. The best option is branded water with a moderate calcium concentration (40-60 mg/L). Kidney stone development was

linked to higher consumption of sugar-sweetened beverage, particularly when it contained fructose.