

# THE INFLUENCE OF TEA ON THE ROLE OF DIET IN THE FORMATION OF URINARY CRYSTALS

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## ABSTRACT

The influence of tea on the role of diet in the formation of urinary crystals has been studied in 56 students of Gomal University D.I.Khan. All ate uniform diet prepared in hostel according to the fixed menu. The only variable factor was the tea intake, on the basis of which all the subjects were grouped from 1-7. Subjects in the control group (group 1) did not take tea. Our data reveals that excessive tea intake increases urinary output and to certain extent changes the pattern of crystaluria favouring the appearance of those crystals which are formed above the pH. 6.

## INTRODUCTION

The diet has a strong influence on the composition of urine (1, 2). Tea is one of the most popular dietary items in our population and is served both in winter as well as in summer. Tea contains certain xanthine derivatives such as caffeine, theophylline and theobromine which are active pharmacologically. These substances have stimulant action on central nervous system, muscular system and cardiovascular system as well as on metabolism, enhancing the break down of glycogen and triglycerides and increasing oxygen consumption. These substances have also diuretic effect [3, 4].

Since enhanced metabolism may be associated with elevated blood levels of metabolic anions which have some concern with crystaluria, and the dilution of urine may affect the formation of urinary crystals, it has been proposed in the present study to explore the possible effects of excessive tea intake on the nature and quantity of urinary crystals in young adults while they are on the uniform diet.

## MATERIALS AND METHODS

**Participants:** Apparently healthy 56 subjects with comparable age, weight height and body mass index (Table 1) were selected after their consent. All the subjects were students of Gomal University eating uniform diet prepared in hostel according to a fixed menu. The only variable factor was tea intake, on the basis of which subjects were