

## RISK FACTORS FOR BLADDER CANCER

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**Aims and background:** To summarize risk factors for bladder cancer, emphasizing the role of recently established associations and to present some ongoing debates on the issue.

**Methods:** A systematic literature search was performed using MEDLINE database on bladder cancer risk factors between January 1985 and June 2006 and by detailed examination of the references of original articles, reviews and monographs retrieved.

**Results:** Cigarette smoking is recognized as the main cause of bladder cancer and accounts for about 50% of cases in developed countries. A strong link exists between the amount and duration of cigarette smoking. A high risk of bladder carcinoma has been observed in workers exposed to some aromatic amines. Based on these and other occupational risks, it has been estimated that 5-10% of bladder carcinomas in industrialized countries were due to exposures of occupational origin. Infectious agents have a major influence on bladder cancer

risks in the areas of the world where *Schistosoma haematobium* infestation is endemic. Other potential risk factors for bladder cancer are other urinary tract infections and drinking tap water with chlorination by-products or arsenic. Exposure to certain drugs, like cyclophosphamide used in chemotherapy and heavy consumption of phenacetin-containing analgesics, has been shown to cause bladder cancer in humans. Total fluid intake and high consumption of fruits and vegetables are probably associated with a small decrease in risk.

**Conclusions:** Avoidance of tobacco smoking and incriminated occupational exposures, habitual intake of fresh fruits and vegetables, and prevention and control of urinary tract infections should be recommended for bladder cancer prevention. Further studies are required to assess the role of genetic polymorphisms and their modifying effect of lifestyle risk factors for bladder cancer occurrence and to evaluate the benefit of bladder cancer screening, particularly in those at high risk.

**Key words:** bladder cancer, epidemiology, occupational exposure, risk factors, smoking.

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