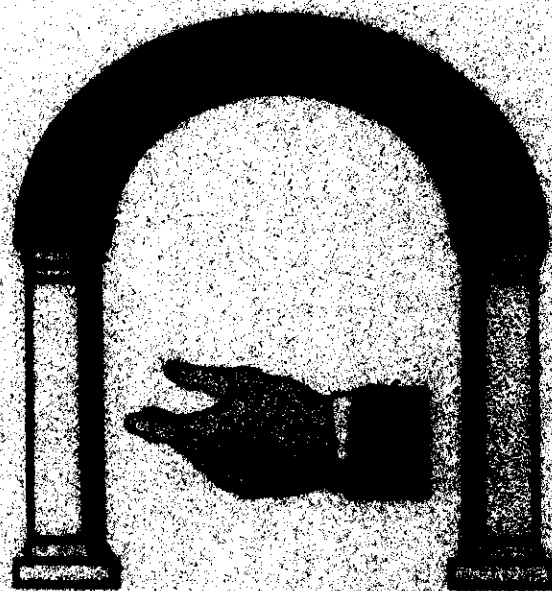


**INTRODUCTION
AND AIMS OF THE WORK**



INTRODUCTION AND AIM OF THE WORK

During the past few decades, human semen quality has decreased dramatically. There has been increasing concern about the possible adverse affects of enviromental factors on semen quality (*Chia et al., 1994*).

The consumption of cigarettes and the number of smokers have been increasing steadily throughout the world. The harmful effects of smoking on the different body systems and organs have been shown in many studies (*Attia et al., 1991*).

Interest in the effects of cigarette smoking on male reproduction is now expanding. In recent years there have been many studies on cigarette smoking and semen quality. The results have been non conclusive. Some studies showed no relation between cigarette smoking and semen quality while in other reports an association has been described between smoking and low semen quality (*Chia et al., 1994*).

Epididymal α -1, 4-glucosidase may play a role in the process of sperm maturation during its migration through the epididymis, since the enzyme provides glucose for the metabolism and activity of spermatozoa (*Pakrashi and Chatterjee, 1995*).

The estimation of α -1, 4-glucosidase activity in semen is widely used as a marker for epididymal function (*Kalla et al., 1997*).

Conventional semen analysis alone is not adequate for assessing the full impact of cigarette smoking on fertility potential of the male. Levels of α -1, 4-glucosidase have to be correlated with semen parameters (*Pakrashi and Chaterjee, 1995*).

AIM OF THE WORK

The aim of this study is to evaluate the effects of cigarette smoking on male reproduction through its effects on both semen parameters and α -1, 4-glucosidase activity.