Introduction

Cannabis sativa is a dioecious (having male and female flowers in separate plants), green, leafy plant with characteristic opposite, usually seven-fingered, lance-shaped leaves; on dry, sandy slightly alkaline soil. It can grow to more than seven meters in height. Glandular hairs develop, usually on the female flower, which secrete a resin. The female plants are more important than male plants for commercial purposes ,their fibers are thicker, they form the nutritious seeds and they contain the psychoactive principle tetrahydrocannabinol (THC) which is much sought after by producers of marijuana and hashish ***(Ben ,2001).***

Tetrahydrocannabinol (THC) is absorbed by the body much more slowly after oral intake (eating or drinking) and then has a lower bioavailability of 4 to 12 percent because of the poorer absorption, catabolism (breakdown into simpler substances) in the liver and the fact that the inactive tetrahydrocannabinolidic acids in natural cannabis products cannot be transformed into psychoactive delta-9-THC unless they are heated first, as in case when they are smoked. In contrast to absorption through the respiratory tract, in which peak plasma concentration of THC may be achieved while the product is being smoked, the plasma concentration increases constantly over a period of four to six hours when cannabis is ingested; state of intoxication is reached later and is of a different quality ***(Lehmann,1995).***

The active ingredient of cannabis is delta-9-tetrahydrocannabinol (Δ^9-THC) and it is thought to exert its effect by binding to cannabinoid CB1 receptors on pre-synaptic nerve terminals in the brain.delta-9-THC binding to CB1 receptors activates G-proteins that activate/inhibit a number of signal transduction pathways. The G-proteins directly inhibit N and P/Q-type voltage dependant calcium channels and sodium channels and indirectly inhibit A-type calcium channels via inhibition of adenylate cyclase. Delta-9-THC binding and G-protein activation also activates inwardly rectifying potassium channels and the Mono Amino Phosphate Kinase signalling pathway. The cumulative effect of these pathways is the euphoric feelings associated with cannabis use ***(Job, 2000).***

The prevalence of cannabis use has increased markedly over the past decade in young people in the UK, although patterns of consumption vary between different social groups. A survey of 3075 university students from 10 UK universities ***Webb et al., (1996)*** found that about 60% had some experience with cannabis; nearly 25% had tried it more than once or twice and 20% of students reported regular use (weekly or more frequently). Experience with cannabis had usually started at school, and other surveys have shown that 30-40% of 15 to 16-years-old have tried it ***(Miller and Plant, 1996).***

The toxicity of cannabis is primarily the toxicity of the route of delivery, and since most cannabis is smoked, concern focuses on lung cancer, respiratory disease and vascular diseases affecting the heart, brain and peripheries. There is conflicting evidence about the degree

to which THC and other agents add to (or perhaps protect against) the risks of smoking itself. In utero exposure has been associated with low birth weight and height, neurological abnormalities, non-lymphocytic leukaemia, behavioural disturbance and learning problems. Salmonella, fungi and infectious bacteria have been cultured from marijuana, which may pose a risk for immunosuppressed patients using it therapeutically ***(Nolan, 2008).***

Increased public concern about the extent to which drivers are under the influence of cannabis appears to coincide with reported increases in the prevalence of the behavior. The extent to which cannabis use by drivers contributes to serious road crashes is difficult to determine, largely because of the poor rates of testing for drugs other than alcohol among drivers involved. From an enforcement perspective, cannabis use, unlike alcohol, cannot be measured from breath samples, but requires more invasive, time-consuming and expensive procedures ***(Adlaf and Paglia, 2006).***