Physical Dangers of Marijuana Use

Research has consistently demonstrated that there are potentially serious and damaging physical effects from marijuana use and abuse. Cannabis use has been connected to acute cardiovascular deaths in young adults, and can cause rapid heart rate and low blood pressure, making it risky for older patients with cardiovascular problems. It may be especially dangerous for cardiac patients to combine marijuana with alcohol. The National Academy of Science Institute of Medicine recommends that persons with cardiovascular disease avoid the drug.

People who smoke marijuana are more likely to have respiratory problems, with chronic marijuana smoking having a probable connection to acute and chronic bronchitis, emphysema, bronchial asthma, and chronic obstructive pulmonary disease (COPD). Chronic, heavy use of cannabis had been associated with abdominal pain, severe nausea, and intractable vomiting. The Institute of Medicine reports that studies at the levels of cells and molecules provide strong evidence that cannabis smoke is a carcinogen. Marijuana smoke produces 50% more hydrocarbons than tobacco smoke; and hydrocarbons are the chemicals associated with lung cancer, and has been linked to both pre-cancerous growths and to cancer of the lung, head and neck, and testis. Marijuana smoke has been shown to be both mutagenic (causing mutations) and teratogenic (causing birth defects). In fact, when women smoke marijuana during pregnancy, their children may have permanent effects on memory, information processing, and executive functions.

Research shows that cannabis may have other physiological effects: cannabis has been shown to negatively affect bone metabolism and bone toxicity; cannabis can interfere with the immune system; and cannabis smoking can increase the severity of fatty liver in hepatitis C patients. Cannabis smoke also contains other chemicals - many of which are poisonous, including ammonia, carbon monoxide, acetaldehyde, and methanol, which may have long term deleterious effects upon other organs of the body.

Marijuana Related Birth Defects

Studies show that marijuana may seriously affect fetal development. Lower birth weights, a shorter gestation period, major malformations, and the occurrence of miscarriages increases with marijuana use. Cannabis smoke can cause both mutations, and birth defects, depending on the dose and duration. Kalant reports that “a small but growing body of evidence indicates subtle but apparently permanent effects on memory, information processing, and executive functions, in the offspring of women who used cannabis during pregnancy. Cannabis exposure was associated with decreased birth weight, reduced length, and smaller head circumference, and prenatal cannabis exposure is associated with fetal growth reduction. There is increasing evidence from animal studies showing that cannabinoid drugs are neuroteratogens which induce enduring neurobehavioral abnormalities in the exposed offspring. Maternal exposure to even low doses of cannabinoid compounds results in atypical locomotor activity, cognitive impairments, altered emotional behavior, and enhanced sensitivity to drugs in the adult rodent offspring.

One longitudinal study showed that prenatal marijuana exposure had significant effects on the developing central nervous system (CNS) in children and adolescents, with higher rates of attention deficits and impulsivity at age 3, 6, and 14 years, poorer academic performance and higher rates of delinquency at ages 6, 10, 14, and 16 years, and in 10-year-olds was linked with marginally more depressive symptoms and poor performance on memory and visual planning tests, and at age 14 years exposure to marijuana in the womb predicted problems with sustained attention, cognitive flexibility, and response suppression.

Scientists suspect that excess levels of anandamide, a substance which occurs naturally in the body but is also one of the chemicals released when cannabis is burned, is the factor leading to "spontaneous abortion" - miscarriage (“Cannabis Chemical Harms Embryo”, BBC.) An Australian study hinted that marijuana use during pregnancy may lead to lasting mental defects in youth. Offspring of mother rats given marijuana had lower memory-retention scores than rats whose mothers had not been given the substance. In addition, the memory impairment seemed to persist, present at both 40-and-80 days of age. A 10-fold increase in the risk of nonlymphoblastic leukemia in children was reported, and marijuana may also increase the risk of chromosomal damage (including breakage and translocation), although this damage seems to be confined to somatic cells.