Fact sheet: Negative Health Consequences of Marijuana Use

1. **Marijuana addiction:**
   - According to NIDA, about 9 percent of marijuana users become addicted to marijuana.\(^1\)
   - An estimated 2.7 million people 12 years of age and older meet criteria for dependence on marijuana.\(^2\)
   - Early and regular marijuana use predicts an increased risk of addiction.\(^1,3\)

2. **Impact on the brain and mental health:**
   - Marijuana can cause brain damage in areas that develop during late adolescence and underlie hallucinations and schizophrenia.\(^4\)
   - It is associated with decreased brain function\(^5\) and structural abnormalities.\(^6\)
   - Is a risk factor for stroke especially in adolescents\(^7\) and can lead to neuropsychological and cognitive decline in adulthood.\(^8\)
   - Marijuana use may cause later major depressive disorder and substance abuse disorders in the late 20s through adulthood.\(^9\)
   - Increases the risk of psychotic symptoms\(^10\) and of developing depression.\(^11\)

3. **Marijuana and pregnancy:**
   - Marijuana use during the first month of pregnancy could lead to anencephaly (the absence of a major portion of the brain, skull, and scalp) and increased risk of stillbirth.\(^12,13,14,15,16\)
   - Used during mid- and late pregnancy marijuana leads to growth retardation and lower birth weight,\(^17,18,19\) and alterations of neurobehavioral performance.\(^20\)
   - Marijuana affects child intellectual development\(^21\) and is related to child behavioral problems (increased hyperactivity, impulsivity, inattention, and delinquency, and externalizing problems).\(^22\)
   - Prenatal exposure to marijuana is associated with deficits in language, attention, cognitive performance\(^12, 23, 24\) and increased risk of schizophrenia, depression, and addiction later in life.\(^25\)

4. **Impairment of lung function:**
   - Marijuana causes wheezing, cough, chest tightness and large airway obstruction. One marijuana joint has similar airway obstructing effects as 2-5 cigarettes.\(^26\)
   - Marijuana smoking is associated with episodes of acute bronchitis and increase in airways resistance.\(^27\)

5. **Marijuana and cancer risk:**
   - Carcinogens in marijuana smoke are similar to tobacco smoke. Cannabis exposure doubles the risk of developing lung cancer.\(^28, 29\) In 2009, California EPA called marijuana smoke as a “chemical known to the state to cause cancer”\(^30, 31\) and listed 33 unique chemicals in marijuana smoke that are carcinogens.\(^32\)

6. **Marijuana and the heart:**
   - Marijuana use is associated with arterial disease such as stroke, myocardial infarction, and sudden cardiac death, especially in young people without any medical history.\(^33, 34, 35\)
7. **Marijuana and gastric issues:**
   - Chronic marijuana use can lead to Cannabinoid Hyperemesis Syndrome (CHS), characterized by cyclical nausea and vomiting, abdominal pain, and an unusual compulsion to take hot showers to ameliorate the symptoms. 36, 37, 38

8. **Marijuana and Psychological Effects:**
   - Spatial and time perception are distorted after marijuana use.39
   - Marijuana impairs cognitive and psychomotor performance, including slowing of reaction time, motor incoordination, defects in short-term memory, difficulty in concentration and particular impairment in complex tasks performance.40, 41, 42
   - The impairments of attention, memory and ability to process complex information resulted from marijuana use can last for days, weeks even months after cessation of cannabis use.43
   - Marijuana impairs road-driving performance, and have linked its use with increased incidence of road traffic accidents.40, 44, 45
   - Marijuana has been shown to seriously impair aircraft piloting skills.46

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