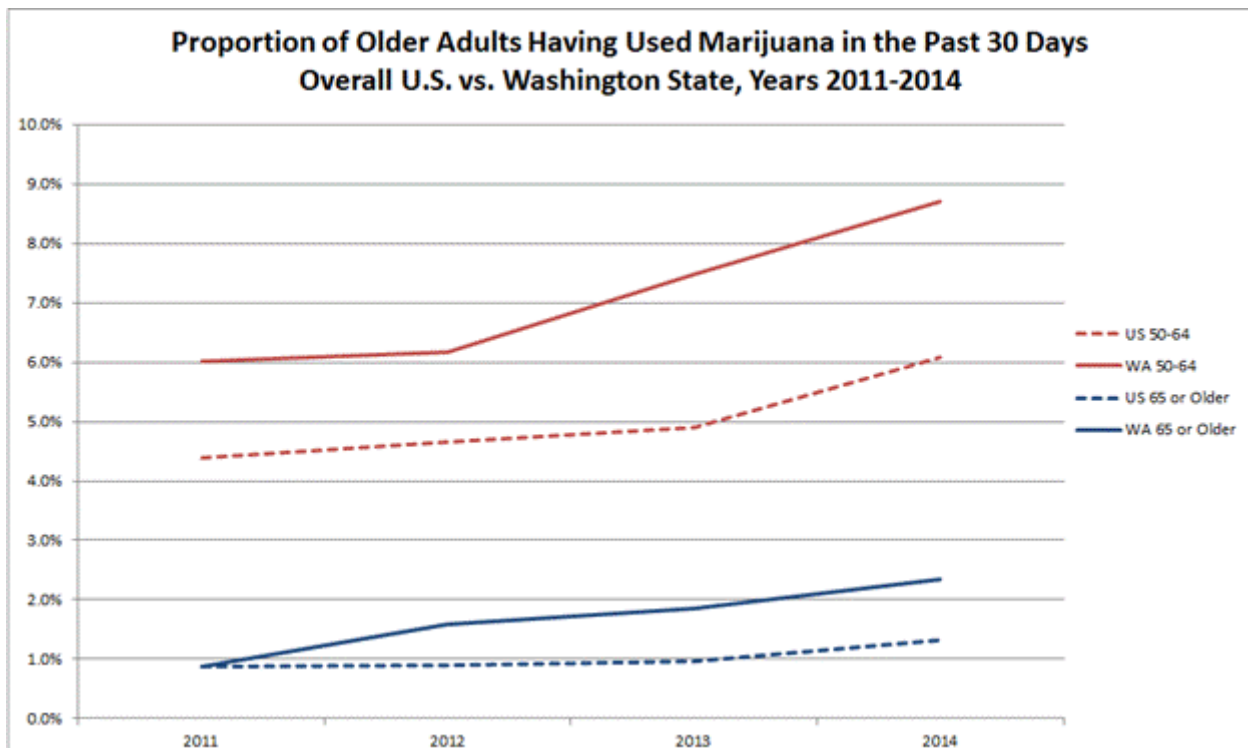
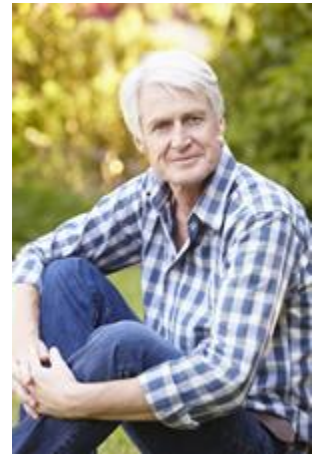


## Marijuana Use by Older Adults

As of May 2016, twenty-four states have enacted laws to legalize medical marijuana, and four states have legalized marijuana for recreational use. (1) In a recent Gallup poll, 58% of surveyed American adults indicated that marijuana use should be legal, more than double the percentage who did so (25%) in 1995. (2) As acceptance of cannabis use is on the increase across the country, it is important to consider the implications for the fastest growing segment of the population, older adults. (3)

### How many older adults use Marijuana?

Research indicates that cannabis use by older adults is on the rise. According to data from the annual National Survey of Drug Use and Health (NSDUH), from 2002-2014 the proportion of adults aged 50 to 64 who reported cannabis use in the past year more than tripled from 2.9% to 9.0%. Among adults aged 65 or older, the proportion increased more than tenfold from 0.2% to 2.1%. As the baby boom generation has only recently begun to reach senior citizen status and as medical and recreational marijuana use is increasingly decriminalized across the country, the proportion of older adults using cannabis could continue to grow and approach rates currently observed in younger age groups, which as of the NSDUH of 2014, were 11.6% of those aged 35 to 49, 20.0% of those aged 26-34, and 31.9% of those aged 18-25.



## What are some concerns about older adults and cannabis use?

Along with aging come physical changes, including hearing impairment, vision changes, slowed reaction time, susceptibility to falls, and cognitive decline. Aging also entails the development of age-related health problems, such as cardiovascular disease, diabetes, arthritis, osteoporosis, and cancer. Two out of three older Americans have multiple chronic health conditions, which generally require multiple prescription medications, increasing the risk of adverse drug effects, which can further endanger their health. (4) As cannabis is increasingly seen as benign and a safe adjunct or alternative treatment for age-related health problems, a rising number of older adults may be expected to turn to marijuana for medical in addition to recreational purposes.

### *Concerns about Health Harms*

Cannabis consumption has a number of acute physiological effects that may be more hazardous or concerning for older adults.

- Smoking marijuana results in a substantially greater respiratory burden of carbon monoxide and tar than smoking a similar quantity of tobacco. (5) Habitual marijuana smoking has been linked to airway injury and chronic bronchitis. (6)
- Cannabis consumption causes an increase in heart rate, lesser increases in cardiac output and supine blood pressure, and frequent occurrence of postural hypotension. While little is known about the effect of cannabis use on cardiovascular disease outcomes, it is believed that cannabis use can result in inadequate blood flow to the heart (i.e., ischemia) in susceptible individuals. (7)

### *Concerns about Drug Interactions*

According to the Mayo Clinic, cannabis may interact, sometimes dangerously so, with several medications that are commonly prescribed to older adults. (8) Cannabis affects the liver's cytochrome P450 enzyme system (CYP450), which determines how certain drugs, herbs, and supplements are metabolized. Those who take medications, herbs, or supplements that are metabolized by CYP450 could have increased blood levels of their active ingredients, which could cause increased effects or potentially serious adverse reactions. Some specific concerns are listed below.

- Cannabis may further increase the risk of bleeding when taken with drugs that increase the risk of bleeding, including aspirin, anticoagulants such as warfarin (Coumadin®), antiplatelet drugs such as clopidogrel (Plavix®), nonsteroidal anti-inflammatory drugs such as ibuprofen (Motrin®, Advil®) or naproxen (Naprosyn®, Aleve®), and herbs or supplements such as ginkgo biloba.
- Because cannabis use may affect blood sugar levels, medication adjustments may be necessary for those taking oral or injectable drugs for diabetes, such as metformin or insulin, or herbs and supplements that also affect blood sugar.
- Because cannabis use may affect blood pressure, caution is warranted among those who take blood pressure medications or herbs or supplements that affect blood pressure.
- Cannabis may increase the amount of drowsiness caused by benzodiazepines such as lorazepam (Ativan®) or diazepam (Valium®), barbiturates such as phenobarbital, narcotics such as codeine, some antidepressants, and alcohol, which could increase the risk of fall and injuries among older adults.

### *Concerns about Memory Problems*

Age-associated cognitive decline is common in older adults. Research suggests that more than 10% of older adults aged 60-64 show some age-associated cognitive decline, and the proportion of individuals with cognitive decline increases with age. (9) This is important to consider because cannabis often has cognitive effects, and it is largely unknown how cannabis-related cognitive effects interact with age-related cognitive decline. Studies on the cognitive effects of cannabis, conducted with younger adults, indicate that the primary psychoactive ingredient in cannabis, delta-9-tetrahydrocannabinol (THC), impairs attention, executive cognitive function, and short-term memory. (10, 11) Such effects could be magnified among older adults who consume cannabis and become problematic, for example, if they interfere with optimal adherence to medication regimens, increase the risk of accidents in the home, or affect decision-making around driving under the influence of cannabis, which could be more hazardous among older adults with subtle or obvious cognitive decline. Research has found, in young adults, residual cognitive effects of cannabis persist for 12 to 24 hours after smoking. Residual effects have not been studied in older adults, but it might be expected that residual effects would even last longer in those with age-related cognitive decline.

### *Concerns about Cannabis Misuse*

Generally speaking, older adults are less likely to exhibit substance use disorders than younger adults. (12) However, as cannabis use becomes more widespread among older adults, cannabis misuse, abuse, or dependence would also be expected to rise. One study indicated that the number of adults aged 50 or older with substance use disorder is projected to double from an

average of 2.8 million per year 2002–2006 to 5.7 million in the year 2020. (13) Research published in the Journal of the American Medical Association showed that rates of cannabis abuse and dependence increased modestly but significantly among those aged 45 to 64 from 1991-1992 to 2001-2002 (14) and again from 2001-2002 to 2012-2013. (15)

While there is no research to suggest whether older adults are any more or less susceptible to the development of substance use disorders than younger adults, aging is associated with a number of psychosocial problems that serve as risk factors for substance misuse, including bereavement, social isolation, loneliness, lack of social support, depression, and anxiety. Although most older adults have regular contact with health professionals for a variety of reasons, relatively few with substance use problems seek professional help. (16) This may be particularly true for cannabis, given the widespread belief that cannabis is not addictive. (17) While treatments designed specifically for older adults are few and have rarely been tested, response to treatment for substance use disorders appears to be at least as good among older adults as among younger adults. (18)

## Conclusion

In summary, there are a number of concerns about cannabis use among older adults. Older adults who use cannabis, especially those who are concerned about their use of cannabis, might start by talking with their primary care providers about this issue. Primary care providers are in the best position to advise older adults about their use of cannabis in the context of each individual's current health status. Primary care providers should also be able to provide referrals to those seeking treatment to reduce or discontinue their use of cannabis. Washington State residents can call the Recovery Helpline at (866) 789-1511. Individuals from any state can call Marijuana Anonymous at (800) 766-6779. A free online program to reduce or discontinue cannabis use is also available at <https://reduceyouruse.org.au>.

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