Identifying Factors that Increase Risk of Developing an Opioid Use Disorder

Opioid use disorder (OUD) is an overpowering desire to use opioids, accompanied by increased opioid tolerance and withdrawal symptoms when discontinued.¹ This disorder takes many forms, including the misuse of prescribed opioids, use of diverted opioid medication, and/or the use of illicitly manufactured or distributed opioids - such as fentanyl and heroin.² While opioids are used for pain management in clinical settings, they are often diverted for misuse due to their euphoric effects.³ In 2020, it was estimated that over 2.7 million individuals⁴ aged 12 or older in the United States suffer from opioid use disorder, which demonstrates a public health crisis as overdose deaths continue to increase nationally.5

To help solve this problem, it is important to identify potential factors that increase one's risk for developing OUD. This is a complex issue that is a product of biological, environmental, genetic, and psychosocial factors⁶; however, certain risk factors relate directly to opioid use.



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Opioid Use Disorder

Identifying Factors that Increase Risk of Developing an Opioid Use Disorder

Personal and Family History with Opioids

It is estimated that there is a 50% heritability to OUD¹³, indicating a strong genetic component within families. The social influences of family and friends can also help shape the beliefs, attitudes, and behaviors of individuals and their likelihood of substance use initiation and misuse.¹⁴

Duration of Opioid Use

Physical dependence can occur within a short period of time¹⁵ and result in severe, long-term consequences quickly. The CDC recommends that clinicians should prescribe opioids for three days or less for acute pain, as more than seven days will rarely be needed.¹⁶

Method of Opioid Use

As opioid tolerance increases, individuals may choose to change the method of consumption, such as choosing to crush the pill to inhale it, smoke it, or inject it.¹⁷ By utilizing these methods, the opioid can enter the blood stream quicker and accelerate the crossing to the brain, which can generate a quicker reaction of the opioid's effect with greater intensity.¹⁸

Extended-release and long-acting opioid formulations (ER/LA) often contain three times the dose of an immediate release formulation, which can be diverted for misuse if the individual uses different methods other than what is prescribed to consume the opioid.¹⁹ The CDC recommends that clinicians prescribe immediate release formulation in pain management.²⁰

Type of Opioid Formulation

Opioid Dosage

Higher opioid doses significantly increase one's risk of developing OUD.²¹ The CDC advises clinicians to prescribe the lowest effective dose of immediate-release opioids and no greater than what is needed for the expected duration of pain.²²

Availability and Volume

The availability of opioids for pain reduction varies substantially across the globe and it has been shown that countries with higher prescribing rates for opioids have greater rates of non-medical use and opioid overdose deaths, such as in North America, Western Europe and Australia.²³ This can be attributed to lobbying efforts, deceptive marketing, and direct-to-physician marketing of opioid products.²⁴

Learn more about preventing opioid misuse and treating opioid use disorder



Safe storage and disposal information https://takemedsseriously.org/





Provider education on safe prescribing practices and treatment https://corxconsortium.org/ resources/cme/



Overdose prevention using Naloxone https://cdphe.colorado.gov/ naloxone



Counseling and treatment programs https://ownpath.co/

Colorado State Epidemiological Outcomes Workgroup

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