



## SERIOUS RISKS OF LONG TERM USE OF OPIOIDS

***Did you know that Opioids such as Oxycodone could make your pain worse?***

Long-term or chronic use (greater than 3-6 months) of Opioids (Narcotic Pain Killers) such as Oxycodone, Codeine, Hydrocodone, Morphine, Fentanyl, Oxymorphone and other related Opioids products carry significant risks that need to be considered.

- 1) Opioid Induced Hyperalgesia
- 2) Tolerance
- 3) Dependence
- 4) Addiction
- 5) Potential Overdose
- 6) Depression/ Anxiety
- 7) Sleep disturbances
- 8) Hormonal Changes
- 9) Fractures from Falls
- 10) Chronic Constipation
- 11) Dry Mouth – tooth Decay

### **What is Opioid Induced Hyperalgesia (OIH)?**

**Opioid induced hyperalgesia** is a condition where opioid pain medications create more pain rather than pain relief.

Patients who have opioid induced hyperalgesia may have:

- Increased sensitivity to painful and non-painful stimuli
- Worsening pain despite increasing doses of opioids
- Decreased pain threshold
- Pain that becomes more spread out, extending beyond the area of usual pain

When a patient is examined they may have pain from ordinary non-painful stimuli such as light pressure or even stroking skin with cotton. OIH is a side effect of medication that causes the central nervous system to become overly sensitive. OIH can occur at any dose of opioid. It is more common with higher dose

**Tolerance:** The diminishing effect of a drug resulting from repeated administration at a given dose of Opioid.

### **How is Opioid Induced Hyperalgesia Different from Tolerance?**

Briefly, increasing doses of opioids can be an effective way to overcome tolerance if pain is relieved with opioid medications. However, in OIH, increased medication makes the pain worse by causing hypersensitivity to pain and other sensations.

### **How is Opioid Induced Hyperalgesia Treated?**

Patients with OIH benefit from reducing or discontinuing their opioid medication, and to use a non-opioid medicine

## **What is Dependence/Addiction?**

**Dependence:** is an adaptive state that involves physical-somatic withdrawal syndrome upon cessation of repeated drug intake triggering symptoms such as jitters, muscle cramps, nausea, vomiting, diarrhea, anxiety, hallucinations, delirium, agitation and other serious symptoms

**Addiction:** a state characterized by compulsive engagement in rewarding behavior or compulsive drug use, despite adverse consequences

Repeated exposure to escalating dosages of opioids alters the brain so that it functions more or less normally when the drugs are present and abnormally when they are not. As we have seen, the pleasure derived from opioids' activation of the brain's natural reward system promotes continued drug use during the initial stages of opioid addiction.

Subsequently, repeated exposure to opioid drugs induces the brain mechanisms of dependence, which leads to daily drug use to avert the unpleasant symptoms of drug withdrawal. Further prolonged use produces more long-lasting changes in the brain that may underlie the compulsive drug-seeking behavior and related adverse consequences that are the hallmarks of addiction. Recent scientific research has generated several models to explain how habitual drug use produces changes in the brain that may lead to drug addiction.

### **What is the risk of Depression related to Opioid Use?**

**Depression** may be associated with greater dependence and thus the greater need for treatment of the core drug-use disorder.

New studies reveal that longer than 90 days or more of use of opioids medications can significantly raise the risk (90-180 days – 25%; 180 days or longer – 53 %) of developing major depression. It is not entirely clear how these drugs may be involved, but there could be several factors that lead to it. Some of these opioid-induced resetting of the brain's 'reward pathway' to a higher level, which means the chronic use of opioid pain killers can elevate the threshold for a person's ability to experience pleasure from natural rewards such as food or sexual activity

Depression may also represent an independent disorder or may be engendered by hormonal imbalances, psychosocial stress, toxic and withdrawal effects of drugs.

### **What are Other risks related to Opioids?**

**Overdose/ Death:** Dying of respiratory depression during sleep must surely be the most serious adverse outcome of opioid therapy, and a number of studies now demonstrate that such deaths are strongly associated with high dose and erratic usage, especially in patients with a tendency to develop control issues, such as those with comorbid depression, anxiety, posttraumatic stress disorder, and substance use disorder. Obesity and

sleep apnea further increase risk for death from nocturnal respiratory depression

**Hormonal Changes:** The production of sex hormones can nearly stop with consequent infertility, lack of libido and drive. Especially men need to be concerned about plummeting levels of testosterone, a condition called opioid-induced hypogonadism. Low libido is just a minor nuisance compared with the fatigue and depression caused by this hormonal imbalance. Opioid induced hormonal imbalances are also highly likely to cause Vitamin D deficiencies, Osteoporosis, sleep disruption, metabolic changes, and cardiovascular stress.

**Fractures from fall:** Other serious risks of continuous high-dose opioid therapy include a tendency to falls, fractures and cognitive dysfunction both of which occur particularly in the elderly.

Chronic dry mouth with long-term opioid use leads to tooth decay.

### **What is the treatment of Opioid Dependence/ Addiction:**

Pharmacological agents such as Buprenorphine, Naltrexone, Clonidine and other drugs with psychosocial support can be used in the treatment for opioid dependency/ addiction. Your doctor can refer you to the appropriate specialist for this care.

*Opioids have very limited use in chronic pain from musculoskeletal and spine related conditions and are only to be used as a last resort. Opioids if used for longer period may mask your pain instead of*

*healing it and source of pain treatments such as physical therapy and injections can become ineffective*

*A slow taper of Opioid medications can be instituted under the care of your doctor with use multimodal treatments of non-opioid medications, physical therapy, interventional pain treatments, and psychological and other interventions*

*Opioid risks and related conditions are difficult to diagnose as they involve several pain pathways in the brain. We can diagnose it based on your medications, your symptoms and a physical examination. Please direct your questions and concerns with your doctor (Academic references furnished on request)*

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