

# **Natural Alternative to Narcotics and NSAIDs for Night Pain and Associated Insomnia**

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In recent years, researchers have discovered a proven, natural alternative to narcotic and other analgesic drugs for relief of night pain and night pain associated insomnia. Individuals with acute or chronic pain know that pain is intensified during the night. In turn, this produces sleep deprivation, which further slows the healing process, produces ongoing fatigue and can lead to despondency, personality changes, and even depression. In recent years governments around the world have recognized the safe and effective pain-killing effects of the isoquinoline alkaloids from the *Eschscholzia californica* herb, shown to reduce night pain and induce sleep in patients with night pain, without producing euphoria, addiction potential, physical dependency or serious side effects of any kind

## **Pain and the Aging Population**

Chronic pain is reported to affect approximately 110 million Americans, which is defined as experiencing three consecutive months of a painful condition (1). Chronic pain surveys in Canada suggest that 11% of individuals who are under 60 yrs, and 25-40% of those over 60 yrs, suffer from chronic pain. Across most Western developed countries approximately 14-17% of adults report having chronic pain. The most common conditions associated with chronic pain include:

- Arthritis/Rheumatism
- Fibromyalgia
- Migraine HA
- Low Back pain

Evidence suggests that a multi-disciplinary approach yields the best results in chronic pain management, whereas the method yielding the worst results for the patient, the health care system and society, entails reliance on prescription narcotic drugs (2).

Over the years medical doctors have prescribed and recommended many analgesic drugs such as acetaminophen, non steroidal anti-inflammatory drugs (NSAID's), and in more severe cases, narcotic drugs, as a primary and sometimes exclusive method of treatment, in the management of chronic and acute muscle, joint and arthritic conditions. In recent years documented evidence has shown that the frequent use of these medications for pain control has lead to many serious unforeseen complications.

## **Health Complications from Standard Analgesic Drugs**

Frequent use of Acetaminophen has been shown to be a leading cause of liver failure, and acetaminophen ingestion is the leading cause of drug-induced liver failure, accounting for 50% of all acute liver failure cases in the U.S., half of which are unintentional (not suicide driven) (3). Chronic intake of the recommended dosage of acetaminophen (up to 4 gm per day, with no

single dose to exceed 1 gm) is responsible for most cases of acetaminophen-induced liver failure (4). Chronic use of acetaminophen has also been shown to damage the kidneys (e.g. tubular necrosis), and can lead to analgesic nephropathy with need for dialysis. On a biochemical level, acetaminophen damages the liver and kidney via free radical assault, induced by its phase I detoxification to NAPQI (*N*-acetyl-*p*-benzoquinone imine) with concomitant depletion of cellular glutathione (which normally quenches NAPQI, stabilizing it, and facilitating its safe removal from the body) (5).

Heavy reliance on non-steroidal anti-inflammatory drugs (NSAIDs) for chronic pain control has also yielded devastating health consequences. Recent studies confirm that in addition to gastrointestinal erosion, ulceration and bleeding, chronic NSAID use also increases risk for kidney damage, liver damage, congestive heart failure, high blood pressure and sudden cardiovascular death. Aspirin has long been associated with gastrointestinal damage and associated internal bleeding, but other NSAID's are largely responsible for increased risk of cardiovascular death. This appears to be related to the promotion of thrombosis, associated with many NSAID's from ibuprofen to diclofenac (Voltaren ) to COX-2 inhibitors (e.g. Celebrex, Vioxx) As such, doctors have been instructed not to recommend any NSAID's, other than ASA, for patients at high risk for heart disease. These recommendations also extend to precluding the recommendation of all NSAID's for patients with any compromised kidney function (6). Low dose aspirin, although recommended as a blood thinner for those who have suffered a previous heart attack, is no longer recommended to prevent first heart attack (primary prevention) due to the increasing reports of intestinal bleeds, and bleeding into the brain, seen in patients prescribed low-dose aspirin (75-81 mg) for this purpose (7).

### **Narcotic Drugs – Rising Concerns About Addiction and Wasted Lives**

Since the early 1990's governments have allowed doctors to prescribe narcotic drugs (e.g. oxycodone) for patients presenting with a wide variety of musculoskeletal pain conditions. Prior to this, narcotic drugs were only prescribed for patients with intractable pain, primarily due to terminal cancers (e.g. morphine drip). As such, physicians commonly use narcotics to reduce a patient's post-operative pain or to reduce anxiety and induce anesthesia prior to an operation. These drugs are also commonly prescribed in an attempt to enable individuals with chronic pain to lead productive lives (8).

The problem is that many people who are prescribed and taking opioids for a period of time develop a physical dependence on the drug which can lead to abuse of the painkiller. Studies now show that 2.5 million Americans, of the 4.7 million who begin to abuse prescription drugs in any given year, use pain pills. Thus, more than 50% of all drug abuse cases involve analgesic drugs, and very often narcotics (9). Recognizing the potential for opioid abuse, addiction, diversion and related mortality, many jurisdictions have developed guidelines or implemented programs to promote more judicious use of these drugs. Across the board, medical doctors are being instructed to cut back on their prescription writing for narcotic drugs, and systems are being put in place to track and integrate pharmacy dispensing of these drugs, using electronic recording and monitoring systems (10).

## **Safe Alternative to Analgesic Drugs for Night Pain**

Recent studies have shown that the medicinal ingredients in the herb *Eschscholzia californica* block night time pain, allowing the patient to sleep through the night without being awakened by musculoskeletal pain. These medicinal ingredients also help to induce sleep, enabling patients who are in pain, to fall asleep at night, and experience a restful sleep through the night. This, in turn, allows more rapid healing and improved response to other treatments.

As such, the administration of the right dosage and standardized grade of this herb, one hour before bedtime, addresses this important part of patient management, and should be strongly considered during the intensive treatment phase of these conditions, and in the long-term of management of chronic pain (11).

### **Mechanism of Action**

The active ingredients in the *Eschscholzia californica* have been shown to be isoquinoline alkaloids (e.g. californidine, escholtzine and protopine). These isoquinoline alkaloids bind to opioid and serotonin receptors, relieving pain, without producing euphoria or having addiction potential. Stimulation of opioid receptors blocks pain sensation in the brain and blocks pain conduction in the spinal cord from reaching higher brain centers. Activation of serotonin receptors is also known to block the sensation of pain and induce sleep (12).

### **No Addiction Potential**

Unlike narcotic drugs (e.g. Percocet, Oxydone) and benzodiazepine drugs (e.g. Valium, Ativan) often used to help patients in pain sleep through the night, supplements containing *Eschscholzia californica* do not cause addiction or destroy a person's motivation to return to a productive life. The active constituents in this herb do not cause euphoria or feeling of being stoned, which allows individuals to function normally, and better comply with treatment recommendations, including exercise (13).

### **Some Precautionary Notes**

Patients should not take this herb if they are taking an evening or night time dose of a narcotic drug (e.g. Percodan, Oxycontin), anti-anxiety drug and/or a sleep-inducing drug (e.g. Valium, Sonata, Ambien).

Patients taking narcotic or benzodiazepine drugs, who wish to wean themselves off of these drugs by using *Eschscholzia californica* as a replacement for chronic pain management, must do so under the supervision and monitoring of their attending physician. Narcotic and benzodiazepine drugs are highly addictive, and thus, each case requires individualized evaluation and attention (14).

When choosing a supplement containing *Eschscholzia californica* it is important to use a government-approved product that contains the therapeutic dosage and standardized grade of isoquinoline alkaloids shown to be effective in clinical studies, and meets quality assurance and safety regulations. For example, Adeeva *Nyquinadol*, issued a Natural Health Product Number

(NPN - 80032386) by Health Canada, is an approved supplement available in North America and abroad for treatment of night pain and night pain associated insomnia (15).

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