

NAPA PAIN INSTITUTE NEWS

Brief Updates on Topics for Pain Management

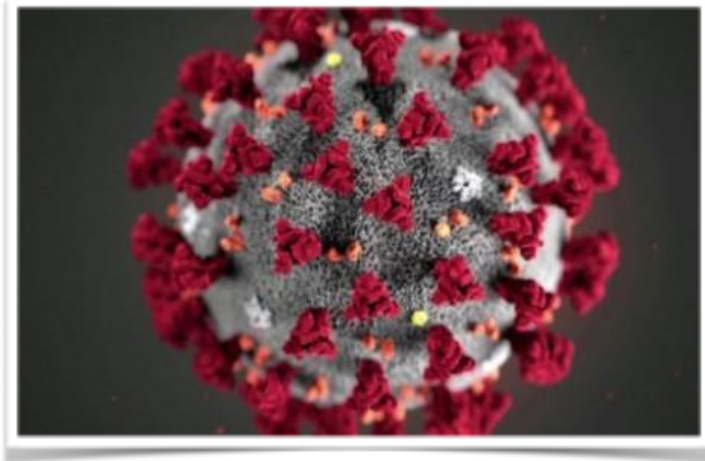
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Opioids and the Immune System

Opioids, like morphine, oxycodone, hydrocodone, hydromorphone and fentanyl, are the only FDA recognized agents for the treatment of severe pain. Their commonly encountered adverse effects include sedation, confusion, constipation, respiratory depression, and addiction. Less well recognized

are opioids interference with the endocrine and immune systems. It may be of interest to examine in more detail the debate regarding the impact opioids might have during the corona virus pandemic. Opioids have long been known through *in vitro* and *in vivo* research to impair the function of macrophages, natural killer cells, and T-cells. Opioids, therefore, have a theoretical adverse effect on both the Innate Immunity System and the Adaptive Immunity System. No studies have ever linked chronic opioid therapy with increased incidence of seasonal influenza and the clinical relevance remains to be established.

Be that as it may, with the corona pandemic uncertainties, every possible contributor to public health should reasonably be considered. Opioids may be a modifiable risk factor.



COVID-19 and Opioids

The corona virus epidemic has overwhelmed virtually every aspect of medical care. Napa Pain Institute, like all other outpatient clinics, has made dramatic changes in the way we manage our patients through e-visits.

Several things about pain management deserve special consideration. Most of the patients we manage have ongoing severe pain (otherwise they would be referred back to their primary care). Most of our patients take prescription opioids. We consider opioids as a *part* of the disease management options much like an angiotensin receptor blocker would be *part* of a cardiovascular disease management which is complementary to lifestyle interventions. Treatment for hypertension should not be interrupted because of the corona outbreak nor should opioid therapy. The problem is this: there is no national Lorcetan epidemic, no buying or selling of insulin on the streets, and no overdose deaths from Lipitor! However, the very real risks of opioid therapy continue unabated.

That is why, during the corona virus pandemic, Napa Pain Institute continues to evaluate and monitor each and every patient as though nothing has changed. Safety requires: monthly assessment of analgesia/ adverse effects/ aberrant behaviors/ activities/ mood/ sleep, monthly queries of the electronic prescription drug monitoring program, continuous and random quantitative urine drug testing, and non-stop assessment of risks and benefits. There is no safe alternative.

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NSAIDs and COVID

Many patients are concerned about the advisability of taking an NSAID during the COVID pandemic. This is what the FDA says about it (as of 03/30/2020).

“FDA is aware of news reports stating the use of non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, could worsen coronavirus disease (COVID-19). These news reports followed a March 11, 2020 letter in [The Lancet medical journal](#), which hypothesized that an enzyme (a molecule that aids a biochemical reaction in the body) is increased by NSAIDs and could aggravate COVID-19 symptoms.

At this time, FDA is **not aware of scientific evidence connecting the use of NSAIDs, like ibuprofen, with worsening COVID-19 symptoms**. The agency is investigating this issue further and will communicate publicly when more information is available. However, all prescription NSAID labels warn that “the pharmacological activity of NSAIDs in reducing inflammation, and possibly fever, may diminish the utility of diagnostic signs in detecting infections.”

For those who wish to use treatment options other than NSAIDs, there are multiple over-the-counter (OTC) and prescription medications approved for pain relief and fever reduction. FDA suggests speaking to your health care professional if you are concerned about taking NSAIDs and rely on these medications to treat chronic diseases. FDA advises the public to read the full [Drug Facts Label](#) on OTC medications prior to use. OTC medications are safe and effective when you follow the directions on the label and/or as directed by your health care professional. Patients who use prescription drugs should take these medications as directed by your health care professional and in accordance with instructions on the label.”



Steroid Effects on the Immune System

Corticosteroids such as prednisone, methylprednisolone, triamcinolone, and dexamethasone are remarkably effective treatment options when injected to reduce localized inflammatory/painful conditions or taken orally to treat systemic diseases. Their mechanism of action involves modification of immune cell responses. Corticosteroids can effect certain **infection risks** and **vaccination efficacy**. Steroids adversely affect the ability of leukocytes to adhere to vascular endothelium and exit from the circulation to enter sites of infection. Likewise, steroids interfere with phagocytes ability to migrate to sites of infection. Steroids also diminish the production of monocytes and macrophages. IgG levels decline acutely with exogenous steroid exposure. The list goes on: eosinophils, mast cells, basophils, and dendritic cells all experience impairments.

Systemic steroid therapy is associated with an immediate increase in the risk of infection, especially with common bacterial, viral, and fungal pathogens, primarily due to its dose-dependent inhibitory effects on phagocyte function. High doses and oral therapy have the most prominent risks, and low dose injection (localized) therapy less so. The relative risk of infection with moderate to high dose oral steroid therapy is estimated to be 1.6.

A recent report by the Mayo Clinic determined that even with steroid joint/bursa injections, vaccinated persons were at an increased risk of developing influenza (relative risk 1.52) compared to vaccinated controls. Women younger than age 65 were at the highest risk, suggesting that perhaps the high-dose vaccine should be considered for this group to enhance protection when possible. (Sytsma, TT. et al. Mayo Clin Proc Inn Qual Out. June 2018;2(2):194-198.) Killed or attenuated vaccines do not appear to be affected by moderate dose steroid therapy but high doses (>2mg/kg prednisone) suppress vaccine response. Live vaccines should be avoided in patients on steroids or deferred for 14 days since last exposure. In the context of a global COVID pandemic, optional steroid injections for moderate pain should be placed on hold. Interventions with CMS designated criteria IIIa and IIIb could proceed with proper informed consent.