



## THE NECESSITY TO SUPPRESS DAILY PAIN EXACERBATIONS IN AA

Pain occurs when bioelectricity accumulates because it cannot traverse a nerve that is damaged. During sleep little bioelectricity is made, but during daytime normal activities may generate bioelectricity in great quantity. The cauda equina consists of over 18 nerves of which several are damaged in AA due to adhesions and inflammation. Great amounts of bioelectricity may accumulate which accounts for the fact that adhesive arachnoiditis produces severe pain. Persons with AA can expect a daily pain exacerbation due to the number of nerves involved in AA

**The Necessity:** The necessity (Step One) to treat AA and prevent deterioration is to have a pain relief medication that will suppress the daily exacerbations of pain within 30 to 60 minutes.

**Detrimental Effects of Pain Exacerbations:** When the daily exacerbation of pain occurs in AA, it causes adrenalin, blood pressure, blood glucose, and cortisol to rise. The immune system is depressed, which allows more inflammation and nerve damage to occur. Viral reactivation is also fostered. Simply put, each exacerbation causes more inflammation, nerve damage, and future pain (a vicious cycle).

**Difficulty To Suppress Cauda Equina Pain:** The cauda equina is part of the spinal cord and it is inside the spinal canal. Few drugs will suppress pain in the cauda equina. To do so, the drug must cross the blood brain barrier, enter spinal fluid, and be biologically capable of attaching to cauda equina receptors. To date, the only classes of drugs that do this consistently and with potency are opioids and corticosteroids.

**Initial Step:** Persons with AA must obtain opioids from their medical practitioner and use the opioid to suppress their daily pain exacerbations. We recommend any one of these low potency, short-acting opioids to start:

1. Tramadol (Ultram®), 100 to 200 mg	4. Hydrocodone (Vicodin®, Norco®)
2. Buprenorphine	5. Oxycodone (Percocet®)
3. Codeine Compound #3 or #4	

**Don't Delay:** Take your exacerbation medication as soon as possible. If you delay, it gets harder to dampen down the pain and more likely to have additional damage.

**Opioid Alternatives:** Initially we had hoped that low dose naltrexone (LDN), some peptides (KPV, BPC ARA 290), marijuana, and CBD, ketamine, and palmitoylethanolamide might replace opioid drugs. These alternatives either fail to provide immediate, 30-to-60-minute relief or lose their power and effectiveness over time. These medicinals, however, may, over time, reduce baseline pain and pain severity.

**High Potency Opioids:** High potency opioids can be used if the short-acting, low potency opioids fail to provide adequate relief within 30 to 60 minutes. These opioids include hydromorphone (Dilaudid®), morphine, oxycodone, and fentanyl.

**Long-Acting Opioids:** These are very acceptable to suppress baseline pain, but they may not suppress daily exacerbations within 30 to 60 minutes.

**Low Dose Naltrexone:** This low potency, short-acting opioid listed above can be taken as a singular dose with LDN.