

Non opioid treatment options

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NSAIDS

Non steroid anti inflammatory drugs

Ibuprofen

Lower doses often helpful

Monitor Renal and GI status

Muscle Relaxants

- Not technically a pain medicine.
- Helps muscle spasm that often comes with and worsens pain.
- Sedative, may help sleep.
- Several options: cyclobenzaprine, tizanidine, Skelaxin.

Anti-Depressants

- Direct Effect, especially if co-morbid depression.
- Indirect Effect, with group called SNRI's
- Norepinephrine effect: decreases pain, increases energy.
 - Duloxetine/Cymbalta.
 - Milnacipran/Savella.
- Tricyclics. Helpful but limited by side-effects.
 - Elavil, Doxepin, Norpramine.
- Others. Remeron, MAO drugs.

Anti-Seizure Drugs/Anti-Epileptic

- Main Group:
 - Gabapentin.
 - Pregabalin/Lyrica
- Very helpful for pain of any kind.
- May cause dizziness, sedation or edema.
- Very safe for kidney, liver and gi.
- Delayed Onset of Effect, dose responsive.
- Non habit forming, require no labs.

Anti-Seizure Drugs

- Secondary Group. Lamictal/Lamotrigine, Topamax/topiramate.
- Works on different pathway from main group.
- Also very safe, rarely causes severe rash.
- Lamictal: Less sedating, may be uplifting.
- Topamax: Decreases appetite, excellent for headache, may decrease cognition.
- Safe to mix with main group.
- Non habit forming, do not require lab tests.

Anti-Seizure Drugs

- Complex group.
- Dilantin, Tegretol.
- Require labs, careful titration.
- Do not mix well with other AED.
- Useful especially for facial pains, PHN.

Non medication alternatives.

- Exercise, especially hydrotherapy.
- Relaxation: meditation, Yoga, T'ai Chi.
- Stress Reduction: Cognitive Behavioral Therapy.
- Aromatherapy

Water Therapy



Tai Chi



Massage Therapy



Massage Therapy

- Almost Universally Helpful
- Releases Endorphins
- Use Especially for Muscle Involvement
- Multiple Types.
- Not Paid Through Insurance.

Meditation and Deep Breathing



Aroma Therapy



Cognitive Behavioral Therapy



Cognitive Behavioral Therapy

- Often Reported to Improve Pain.
- Hard to Get
- Maybe Able to Do With Self-Help.
- Catastrophizing.
- Control Your Thoughts?

CBD Oil



CBD OIL

- Chemical extracted from flowers and buds of marijuana and hemp.
- 80 different sub-chemicals.
- Not psychotropic.
- Legal in 37 states, widely available, legal in Indiana.
- Non regulated.

CBD Mechanism and Metabolism

- CB1 and CB2 endocannabinoid receptors in human body.
- Activates the internal production, but does not attach.
- Metabolized by CYP3A4 (60% of medications).
- Effective topically, inhaled or ingested.
- Amount in products vary widely. 43% discrepancy.
- Should not but may have some THC.
- Poor oral absorption, new forms via patches, sprays.
- Releases serotonin and dopamine.

CBD: Side Effects

- Minor sedation.
- Rarely elevated Liver Function Tests.
- Increased appetite.
- Rarely increased infections.
- Dizziness, may lower blood pressure.
- Impaired motor effect.
- Altered mood, increased depression, suicidality.

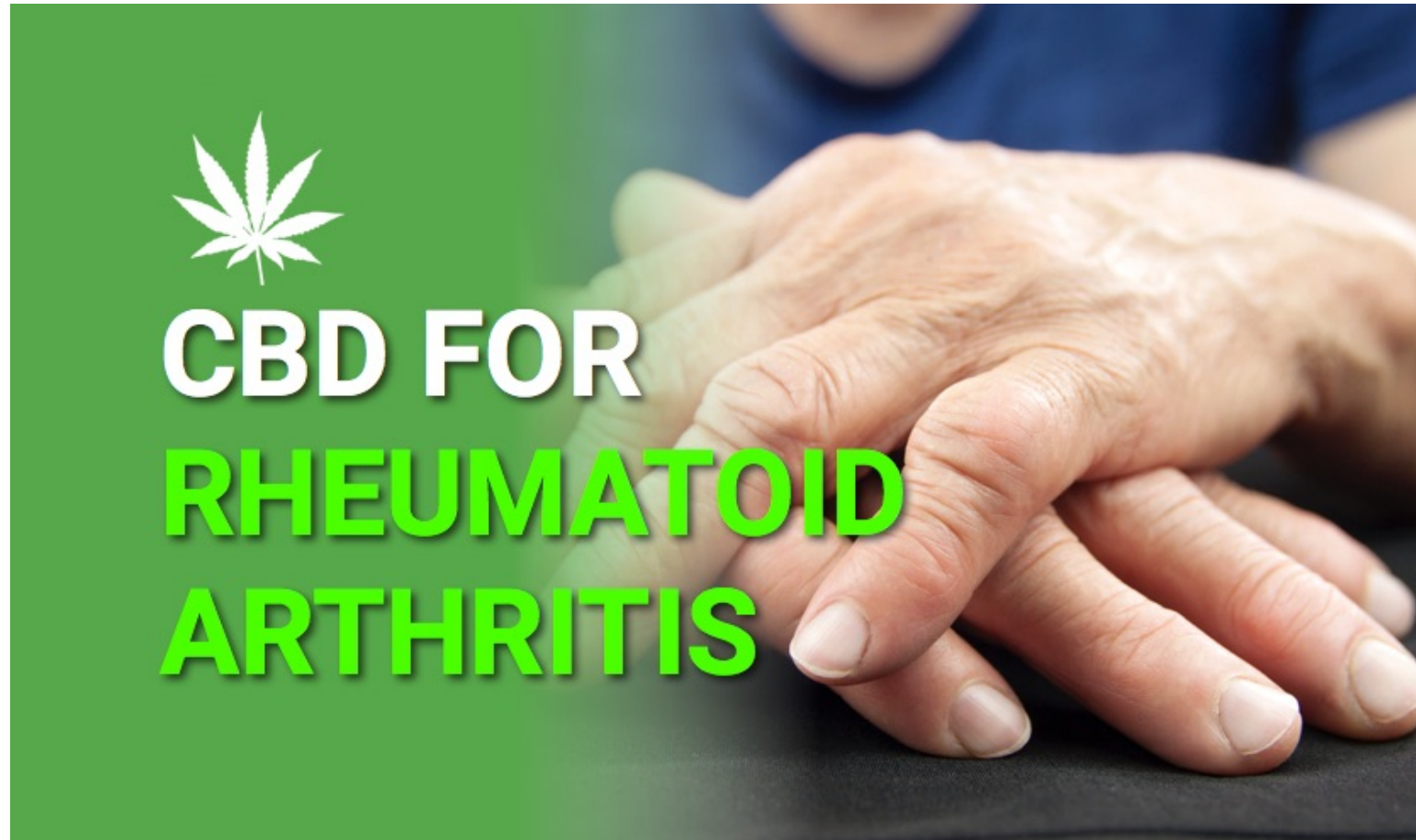
CBD: Reported Beneficial Effects.

- Immune: anti-inflammatory, immunoregulatory, decrease allergies.
- Neurologic: neuro protective, helps stroke recovery, Alzheimer's.
- Anti-Seizure: approved for use in two severe rare childhood seizure disorders.
- Metabolic: lowers insulin, may help diabetes, may increase appetite in chronic illness or cancer, lowers blood pressure. Increases vasorelaxation.
- Cancer: may help fight some cancer.
- Sleep: helps insomnia.
- Psych: may help psychotic disorders, may lessen anxiety, panic, PTSD and social anxiety. May help with addiction and recovery.
- GI: lessens nausea, helps colitis.
- Pain: decreases acute and chronic pain.
- Skin: helps Acne.
- Cancer: helps with cancer control.

CBD Oil Dosage

- Varies Widely.
- Remember Potency and Availability Vary Greatly.
- May Adjust for Weight.
- Start Slow, especially if initial usage.
- Starting Dose 5 mgs.
- Dosage Calculators on Web.
- Typical Doses for Common Uses 25-30 mgs.
- Calculated Doses: 15-34.

CBD Oil for RA



CBD: Anti-Inflammatory

- Decreases inflammation. Helped control RA in small study, prevented joint damage in animal study.
- Balance Immune System. Suppressed Th17 dominance.
- Immunomodulatory:
 - Suppresses TH1 (IL-6, TNF).
 - Suppresses TH2 (IL4,5,13).
 - Turns neutrophils off.
 - Decreases macrophage activation down.
- Anti-oxidant.
- CB2 receptors.

CBD Oil for Anxiety



CBD: Anxiety

- Helps with social anxiety, panic and PTSD, may suppress recurrent fear pathways.
- High doses may increase depression and suicidality.
- THC can cause increase in anxiety and paranoia.
- Decreases blood flow to limbic system (emotional center).
- Increases flow to posterior cingulate cortex, helps with cognition, memory and motivation.

CBD Oil for Pain



CBD: Pain

- Activates CB1 receptors.
- Multiple sites in brain, spinal cord and peripheral nerves.
- Most research spills over into THC, THC/CBD combination.
- Does not develop tolerance.
- May best help neuropathic pain.
- Decreases in Anxiety may be helpful in pain management.

CBD: Summary

- To Good to Be True??
- High, non insured costs.
- Highly variable, non regulated.
- Helps a lot of patients a little bit.
- Helps a few patients a lot.
- May be best with neuropathic pain and in patients with co-morbid anxiety.

Non-Opioid Treatments: Summary

- Multiple options available.
- Many can be used in layers and mixed and matches.
- Utilize side effect protocol to advantage.
- Most very safe and relatively low cost.
- Can be used with opioids to enhance pain control.
- Don't forget alternative options.