



Modulating Women's Health with An Ancient Healing Plant

Endocannabinoid System + Reproduction

- Uterus has highest concentration of anandamide
- ECS influences sperm + egg production plus lactation
- Anandamide reaches peak levels during ovulation
- Endocannabinoids in semen, amniotic fluid, breast milk, ovarian cysts

Endocannabinoid System + Fertility

- Enzymes reduce endocannabinoid levels, enabling an embryo implantation
- Anandamide levels then increase, preventing a second embryo to implant
- Abnormal anandamide or receptor levels may cause infertility
- Embryo has higher levels of CB1 receptors than adult brain

Endocannabinoid System + Estrogen

- Strong relationship between endocannabinoids + estrogen levels
- Increased estrogen + increased CB1 receptors via the CNR1 gene

Male & Female Differences

- Women have fewer receptors in the brain, but possibly more efficient signaling
- Cannabis more likely to increase sexual behavior in women
- Women more likely to have pain + anxiety relief from cannabis
- Women less likely to experience appetite stimulation with cannabis
- Women use cannabis less frequently + in smaller quantities

Cannabis Care for Women

- ECS dysfunction is a root cause for autoimmune disease, breast cancer, IBS, fibromyalgia
- Vaginal cannabis treatments may be useful for yeast infections, STDs + UTIs

Pelvic Pain

Pelvic Pain Causes & Treatments

- Dysmenorrhea – acute pelvic pain related to menstruation
- Treatments for chronic pelvic pain include medications, physical therapy + surgery
- Pain killers, antibiotics, hormone therapy, hysterectomy may not always resolve pain



Cannabis & Pelvic Pain

- CB1 receptors in the brain mediate pain-relieving effects of cannabis
- Better ECS function = less pain
- Higher levels of anandamide = less pain
- Possible genetic mutation related to decreased pain sensitivity

What Does the Research Say?

- No cannabis or CBD clinical trials for pelvic pain treatment
- New drug possibilities that inhibit FAAH, prolonging anandamide activity
- More anandamide means more CB1, CB2 signaling = pain relief

Cannabis Options

- Smoking or vaporizing provide immediate relief
- Sublingual use can provide quick, consistent results
- THC or CBD only topicals on abdomen + lower back
- Vaginal suppositories made with coconut oil have high bioavailability

Potential Risk

- Avoid CBD with prescription meds contraindicated with grapefruit
 - CBD inhibits P450 detox enzymes
- Avoid CBD with opiate pain relievers, Zoloft, Prozac + Valium
- CBD interactions do not occur when administration bypasses the liver
 - Smoking, vaporizing, sublingual + vaginal preparations

Endometriosis

Endometriosis Causes & Treatments

- Uterus tissue lining (endometrium) grows outside the uterus causing bleeding + pain
- Medications to slow growth, laparoscopic surgery (often creating scar tissue + worsening condition), hysterectomy

Cannabis for Endometriosis

- Endometriosis is co-morbid with GI + immune disorders
- ECS dysfunction is linked to endometriosis
- Higher endocannabinoid levels may compensate for fewer CB1 receptors
- CB1 receptors may hold a key to managing the condition

Treating Endometriosis

- THC + CBD combined help reduce endometrial cell growth (not THC alone)
- Beta-caryophyllene (primary terpene in cannabis) activates CB2 receptors
 - Study results show endometriosis growth reduced by 50%



Toxin Exposure

- Environmental toxins are linked to ECS dysfunction
- Dioxin (90% in meat, dairy, fish) wipes out CB1 receptors
- Women with endometriosis have higher dioxin levels in adipose (fat) tissue

How Can Cannabis Help?

- May reduce inflammation, pain, spasms, nausea, vomiting + disease progression
- No clinical trials on prevention or treatment
- Women who use cannabis may experience less pain
- Cannabis may inhibit endometrium growth

Options for Use

- Juicing raw acid form – THCA and/or CBDA – can reduce inflammation + pain
- Vaginal suppositories can reduce disease progression (research needed on safety + efficacy)
- Atypical cannabinoid, PEA, show promise for pain

Potential Risk

- Avoid smoking cannabis if on hormone therapy
 - Vaporizing is a better choice
- Avoid CBD with prescription meds contraindicated with grapefruit
 - CBD inhibits P450 detox enzymes
- Avoid CBD with opiate pain relievers, Zoloft, Prozac + Valium

Menopause

Menopause Causes & Treatments

- Menopause: 12 months after last menstrual period (1.1 billion women by 2025)
- Most common treatments include hormone therapy, antidepressants, medications for bone loss

Endocannabinoid System + Menopause

- Endocannabinoids influence the cycle of menopause
- Reduced ECS signaling may account for hot flashes
- Lower estrogen levels means less active ECS → poor stress + mood responses
- Endocannabinoids regulate pre-synaptic release of neurotransmitters, helping to boost serotonin (reduced need for antidepressants)



Clinical Applications

- No clinical cannabis or CBD trials for menopause
- Safe alternative to hormone + estrogen therapy
- Safer alternative to osteoporosis meds
- Sativa cultivars may mitigate menopause fatigue

Terpenes in Menopause

- Beta-caryophyllene activates CB2 receptor
- May help prevent bone loss and hot flashes

Potential Risk

- Avoid CBD with prescription meds contraindicated with grapefruit
 - CBD inhibits P450 detox enzymes
 - Avoid CBD with opiate pain relievers, Zoloft, Prozac + Valium
- CBD may induce short term memory loss