

With the rising popularity of cannabidiol (CBD) products like those from **Joy Organics**, many people are naturally curious about how CBD affects the body — especially the liver. After all, the liver's job in processing medications and supplements means it's crucial to understand any potential impact, particularly when it comes to liver enzyme levels. In this deep dive, we'll unpack the relationship between CBD and liver enzymes, why quality matters, and how to safely navigate your CBD journey.

CBD Basics: What Is It and How Does It Differ From THC?

CBD and THC both come from the cannabis plant, but they are vastly different in effects and legal status:

- **CBD (Cannabidiol):** Non-intoxicating and won't make you "high." It's often sought after for its potential calming, anti-inflammatory, and pain-relief properties.
- **THC (Tetrahydrocannabinol):** The compound responsible for the intoxicating effects. Typically illegal or regulated depending on the state.

Since the 2018 Farm Bill, hemp-derived CBD with *less than 0.3% THC* is federally legal. This means reputable supplements like those from Joy Organics aim to keep THC at trace levels, minimizing intoxication risk. However, these very low THC levels differ significantly from marijuana products with higher THC content.

FDA Approval and the Therapeutic Dose of CBD

The FDA has approved a CBD product (Epidiolex) for treating certain seizure disorders — but this is a very controlled, pharmaceutical-grade CBD at a therapeutic dose prescribed by doctors. Over-the-counter (OTC) CBD products, while accessible, are not FDA-approved for medical treatment, and their dosing can vary widely.

This distinction matters because the safety profile and potential side effects, including liver-related effects, depend on the dose and formulation. The Epidiolex clinical trials did observe liver enzyme elevations in some users, which calls for careful monitoring under medical supervision.

Understanding Liver Enzymes and Why Monitoring Matters

Liver enzymes are proteins released into the bloodstream when the liver is stressed or injured. Key liver enzymes include:

Enzyme	Role	Why It Matters
ALT (Alanine aminotransferase)	Primarily found in the liver;	indicates liver cell damage
High levels	suggest liver inflammation or injury	AST (Aspartate aminotransferase)
Found in multiple organs but	elevated with liver damage	May indicate liver or muscle issues
ALP (Alkaline phosphatase)	Involved in bile duct	function
High levels	can point to bile obstruction or liver disease	

Monitoring these enzymes is crucial if you're starting a new medication or supplement, especially one known to cause liver effects at high doses.

Liver-Related Effects of CBD: What Does the Science Say?

Preliminary studies and clinical trials focused on high, therapeutic doses of CBD (like Epidiolex) have shown:

- **ELEVATED LIVER ENZYMES** in a small percentage of patients, which sometimes required dose adjustments or discontinuation.

- Limited evidence that *low to moderate doses used in OTC supplements* pose a significant liver risk — but rigorous scientific data is lacking.

It's important to note many OTC CBD products vary greatly in concentration and purity, potentially affecting liver impacts.

Why Quality Variation in CBD Products Matters

The biggest hurdle in assessing liver risks from CBD is product inconsistency. CBD supplements often don't contain what they claim on the label. Some products have:

- Higher levels of THC than allowed—leading to unwanted intoxication and regulatory issues
- Contaminants such as pesticides, heavy metals, or residual solvents
- Inaccurate CBD dosing—either under- or overdosed

This variation can affect safety, including liver enzyme elevations.



Certificate of Analysis (COA): Your Safety Tool

A **certificate of analysis (COA)** is a batch-specific laboratory report that verifies a product's cannabinoid content and absence of contaminants. Reputable companies like **Joy Organics** provide publicly accessible COAs showing:

- Actual CBD and THC levels (not just "THC-Free" which can be vague)
- Testing for heavy metals, pesticides, microbial contamination
- Compliance with the legal threshold of <0.3% THC

Always check the COA for the specific batch of the product you're buying — not just a generic report. This helps ensure you're getting a consistent, safe product less likely to cause unexpected liver effects.



CBD Liver Enzyme Monitoring: Who Should Be Careful?

If you are considering CBD and fall into any of the [cytochrome p450 CBD](#) following groups, it's wise to consult your healthcare provider and possibly get liver enzyme monitoring:

1. Taking other prescription medications, especially those metabolized by the liver (e.g., blood thinners, antiepileptics)
2. Having pre-existing liver problems or elevated enzymes
3. Planning to use high or pharmaceutical-level doses of CBD
4. Using CBD long-term or in combination with other supplements affecting the liver

Your doctor may order blood tests before and during CBD use to check for any liver-related effects promptly.

Final Thoughts: Safe CBD Use and Liver Health

- CBD products vary in quality — choose brands like **Joy Organics** that provide **batch-specific COAs** for transparency.
- OTC CBD doses are typically lower than FDA-approved therapeutic doses, so liver risk is generally lower but not zero.
- Beware of vague claims like “THC-free” without a COA to back it up.
- Monitoring liver enzymes during CBD use is prudent, especially for those with risk factors or on other medications.

Ultimately, while CBD shows promise, it is not entirely “risk-free.” Thoughtful selection of products and dialogue with your healthcare provider will help you balance potential benefits with liver safety.

Resources for Further Reading

- FDA on Cannabis Research
- Joy Organics COA Library
- Review of CBD's Effects on Liver Enzymes (PubMed)