

# Shining a New Light on Liver Health: Unveiling the Benefits and Science of Red Light Therapy

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Did you know that the liver performs over [500 vital functions in your body](#)? This includes filtering toxins, producing bile to aid in digestion, regulating metabolism, and storing essential vitamins and minerals. With such a crucial role in our overall health, it's important to take care of the liver and ensure that it's functioning properly. In addition to making healthy lifestyle choices, such as eating a healthy, balanced diet, it's important to also keep an eye out for any warning signs of liver problems. Symptoms such as fatigue, abdominal pain, jaundice, and dark urine can all indicate a problem with your liver, and it's important to speak to your healthcare provider if you experience any of [these symptoms](#).

**Liver disease** is a common and serious health condition affecting millions of people worldwide. Traditional treatments like medication, surgery, and lifestyle changes can help manage symptoms, but they don't always address the underlying cause of the problem.

Red light therapy can be a helpful approach to addressing and supporting symptoms of liver disease. In recent years, this non-invasive treatment has shown promise in improving liver health and function. In this blog post, we'll explore the benefits of red light therapy for your liver and the science behind it.

## What is Red Light Therapy?

Red light therapy (RLT) is a form of phototherapy that uses low-level red light wavelengths to penetrate the skin and stimulate cellular processes. RLT is often used for skin rejuvenation, wound healing, and pain relief, but its benefits go beyond skin deep. Studies have shown that RLT can improve mitochondrial function, increase ATP production, and reduce oxidative stress, which can all benefit liver health.

## How can Red Light therapy give your liver a powerful boost and help it function at its absolute best?

After ongoing research, the exact mechanisms through which red light therapy enhances liver health and mitigates liver disease are yet to be fully understood. Nonetheless, some hypotheses have been put forward to explain the observed benefits of this therapy on liver health.

While the majority of studies have been conducted on animals, the results are encouraging. For instance, [rodents with cirrhotic livers](#) have shown remarkable healing after undergoing red light therapy.. Additionally, Red light therapy has also exhibited its promise in surgical settings, where it can aid in the rejuvenation of the liver following [liver transplant operations](#).

This [study](#) investigated the effects of a Mediterranean diet in combination with low-level laser therapy (LLLT) (another term for red light therapy) on liver health in patients with non-alcoholic fatty liver disease (NAFLD). The study found that LLLT combined with a Mediterranean diet could be considered a viable treatment strategy for NAFLD in older adults, with potential benefits in enhancing liver function, managing dyslipidemia, and aiding in weight loss. One key finding was that the researchers noticed some remarkable improvements in other markers of metabolic health, such as reductions in body mass index (BMI), and blood glucose levels. More research is needed to fully understand the long-term effects of this dietary approach on liver function. Nonetheless, this is definitely a promising step forward!

Additionally, this [study](#) (link 2) found that the participants who received LLLT experienced a decrease in liver enzyme levels and levels of "bad" cholesterol and triglycerides. At the same time, they saw an increase in "good" cholesterol. The results suggest that LLLT could be a promising approach for improving overall health and wellness.

### Discover the Amazing Ways Red Light Therapy Can Supercharge Your Liver Health with These Four Incredible Benefits:

**Reduces inflammation:** Chronic inflammation is a common feature of liver disease, and it can lead to fibrosis and cirrhosis. Red light therapy has been shown to reduce inflammation in animal models of [liver injury](#), potentially by modulating cytokine release and suppressing oxidative stress.

**Improves mitochondrial function:** Mitochondria are the powerhouses of our cells, and they play a critical role in liver function. Studies have revealed that red and near-infrared light therapy operates through a distinct mechanism that involves the ability of these light wavelengths to infiltrate cells and stimulate the mitochondria, resulting in a surge of

cellular energy production. Numerous investigations have indicated that the mitochondria play a crucial role in determining how red and near-infrared light impacts our cells. Consistently observed in various studies:

*“Several pieces of evidence suggest that mitochondria are responsible for the cellular response to red visible and near-infrared light. The effects of (red and near-infrared light) on mitochondria isolated from rat liver, have included increased proton electrochemical potential, more ATP synthesis, increased RNA and protein synthesis, and increases in oxygen consumption, membrane potential, and enhanced synthesis of NADH and ATP.”* (Hamblin, M. and Carroll, J. et al. 2009).

**Increases blood flow:** Blood flow to the liver is essential for proper liver function, as it delivers oxygen, nutrients, and hormones to liver cells. Red light therapy has been shown to increase blood flow in animal [models of liver injury](#), potentially by inducing vasodilation and angiogenesis.

**Supports liver regeneration:** The liver has a remarkable capacity for regeneration. Red light therapy has been shown to enhance liver cell metabolism and regeneration with the improvement of mitochondrial function

\*\* Article taken from Rouge Red Light Blog