

CBD Patient Survey

Care By Design

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Methodology

Care By Design surveyed 2,495 patients who have been using medical marijuana for over 30 days. Survey responses were collected over a 6-month period of time between March and August of 2015.

The survey asked medical marijuana patients about:

- The conditions for which they are taking CBD-rich cannabis
- The ratio of CBD-to-THC they are using
- The impact of CBD-rich cannabis therapy on pain or discomfort, energy, mood, and overall wellbeing

Seven hundred and three (703) people responded—just over 28% of those surveyed—suggesting that there is a pent up desire among medical marijuana patients to share their learnings and experience.

In the final tally, we excluded incomplete submissions (55), and submissions from people who had not been taking cannabis for at least 30 days (27), leaving 621 completed surveys to evaluate.

Key Findings

1. Medical marijuana patients are using CBD-rich cannabis therapeutics for a wide variety of conditions, including serious and incurable diseases and conditions that sometimes respond poorly to FDA-approved pharmaceuticals.
2. There is no significant correlation between the condition a patient has and the specific CBD:THC ratio they choose to treat that condition. However, patients with psychiatric or mood disorders and patients with diseases of or injuries to the CNS system favor CBD-dominant cannabis therapies. Patients with pain and inflammation favor CBD-rich cannabis therapies with more equal levels of CBD and THC.
3. THC matters. A higher ratio of CBD to THC does *not* result in better therapeutic outcomes. Patients using the 4:1 CBD-to-THC were the most likely to report a reduction in pain or discomfort, and improvements in mood and energy. Patients using the 2:1 CBD-to-THC ratio reported the greatest improvement in overall wellbeing. This finding is consistent with scientific research indicating that CBD and THC interact synergistically to enhance one another's therapeutic effect.
4. CBD-rich cannabis appears to be remarkably good at ameliorating pain, particularly in patients with fibromyalgia, headaches and migraines.
5. CBD-rich cannabis appears to be remarkably good at improving patients' sense of wellbeing, particularly for patients with PTSD.
6. CBD-rich cannabis' does not appear to have a significant impact on energy levels (as compared to pain, discomfort or mood).
7. Given that people using CBD-rich cannabis for "general wellbeing" are the *only* group who reported a decreased feeling of wellbeing and the most likely to report a worsening mood, CBD products *may* not be appropriate as a supplement for people who are otherwise healthy.

What Conditions Are People Using CBD-Rich Cannabis For?

Medical marijuana patients reported using CBD-rich cannabis therapies for a wide variety of conditions:

- ✓ **21.4% of patients reported using CBD-rich cannabis for mood or psychiatric disorders**

Including anxiety (6.5%), depression (4.0%), PTSD (3.6%), ADD/ADHD (1.6%), bipolar disorder (1.6%), stress (1.6%), schizophrenia (1.2%), autism (0.8%), and addiction (0.4%).

- ✓ **19.4% of patients reported using CBD-rich cannabis for inflammatory conditions**

Including arthritis (9.7%), general inflammation (6.5%), rheumatism (2.4%), and Crohn's disease (0.8%).

- ✓ **13.7% of patients reported using CBD-rich cannabis for conditions marked by pain**

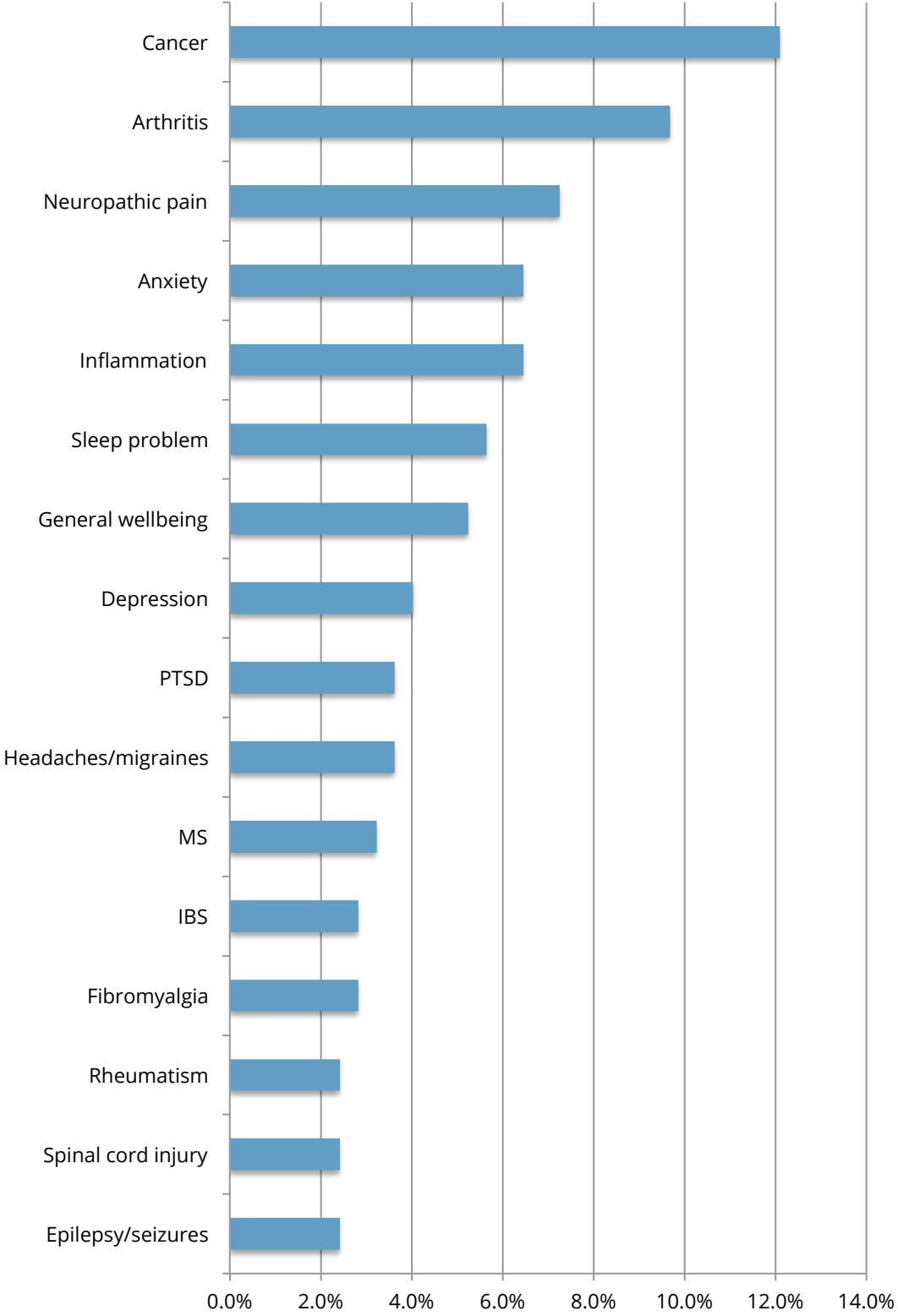
Including neuropathic pain (7.3%), headaches and migraines (3.6%), and fibromyalgia (2.8%).

- ✓ **12.4% of patients reported using CBD-rich cannabis for diseases of and injuries to the central nervous system**

Including multiple sclerosis (MS) (3.2%), epilepsy and seizures (2.4%), spinal cord injury (2.4%), Parkinson's disease (1.6%), Traumatic Brain Injury (TBI) (1.6%) and other neurodegenerative disorders (1.2%).

- ✓ **More patients (12.1%) reported using cannabis to treat cancer-related symptoms than any other single condition.**

Top Conditions*



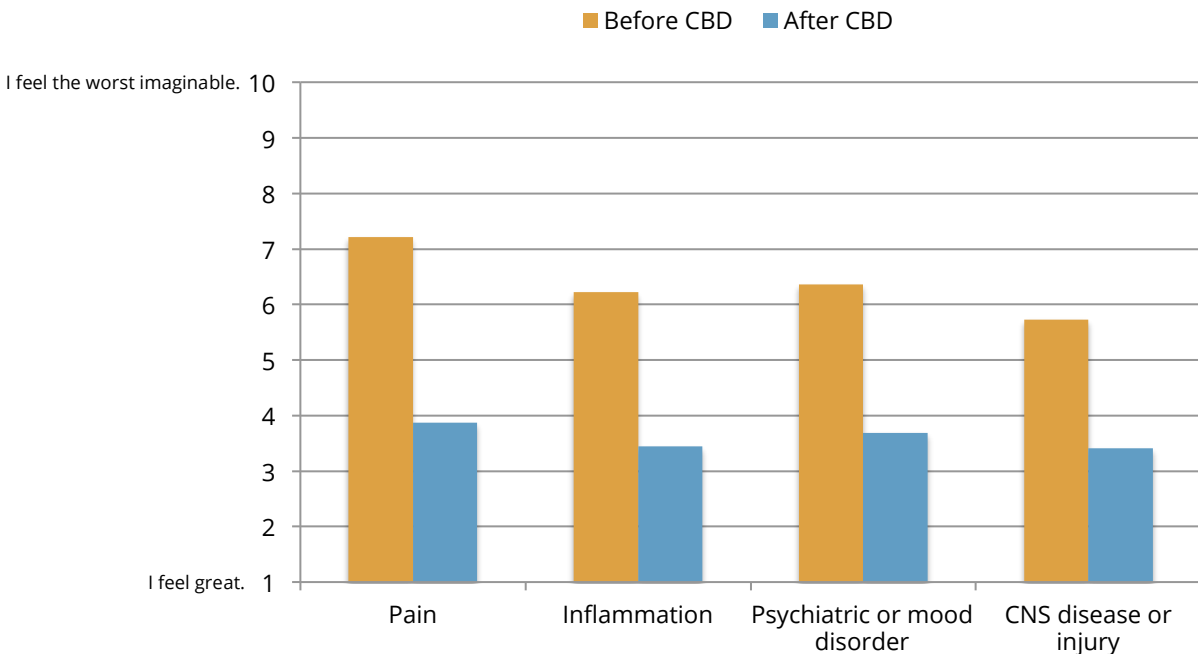
**Conditions affecting less than 2% of respondents are not listed.*

CBD-Rich Cannabis' Impact on Overall Wellbeing

Patients were asked to rate their overall wellbeing before and after being on CBD-rich cannabis therapy for at least 30 days.

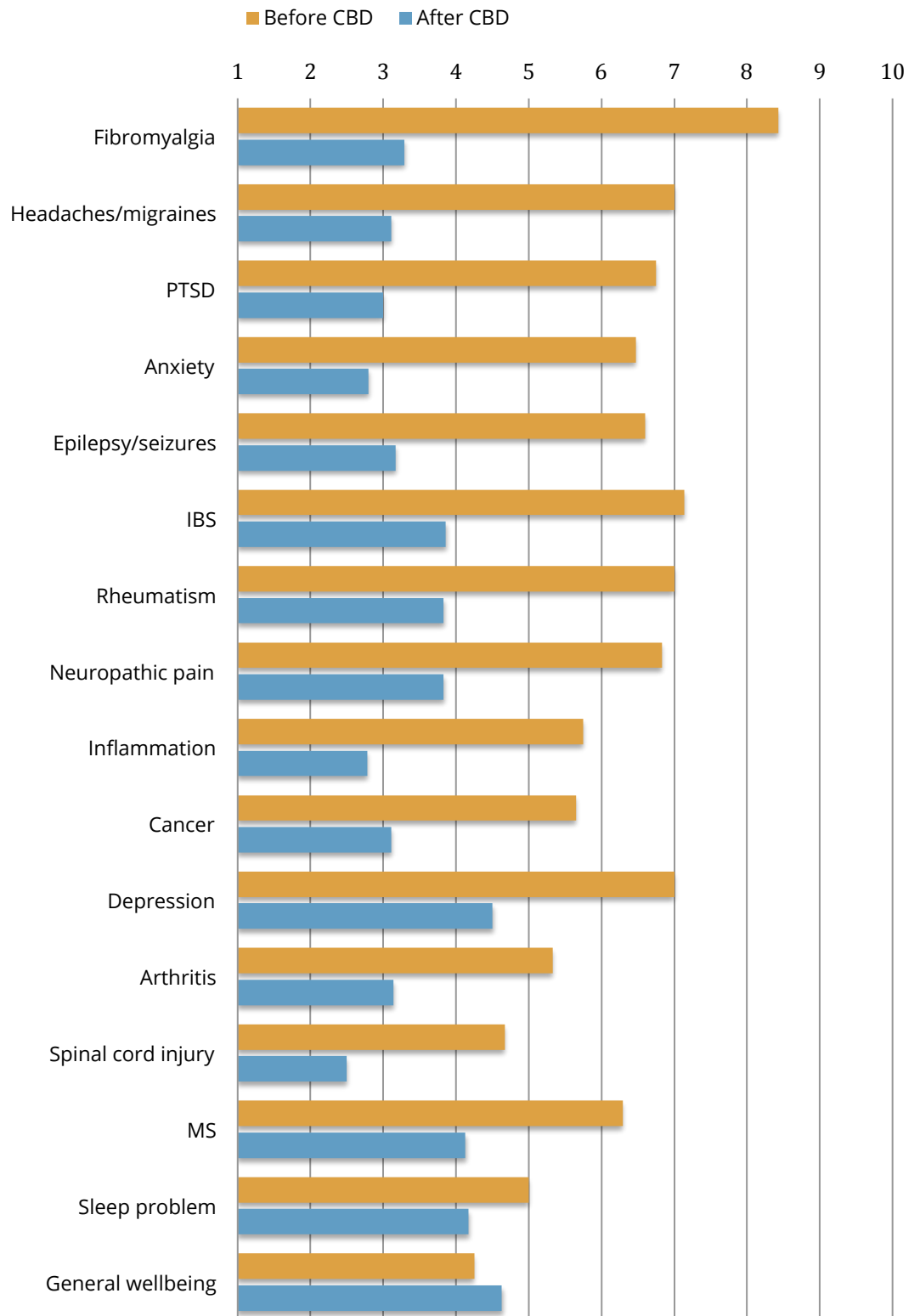
- ✓ A majority of patients (88.2%) reported that CBD-rich cannabis therapy improved their overall sense of wellbeing.
- ✓ Patients with fibromyalgia, headaches and migraines, PTSD and anxiety reported the greatest improvement in general wellbeing (as compared to other patient groups).
- ✓ The only group of patients who report a *decrease* in overall wellbeing were those who stated that they were taking CBD-rich cannabis for "general wellbeing" rather than a *specific medical condition*.

Wellbeing: Before & After CBD-Rich Cannabis (Average, By Category)



Wellbeing: Before & After CBD-Rich Cannabis (Average, By Condition)

1 means "I feel great." 10 means "I feel the worst imaginable."

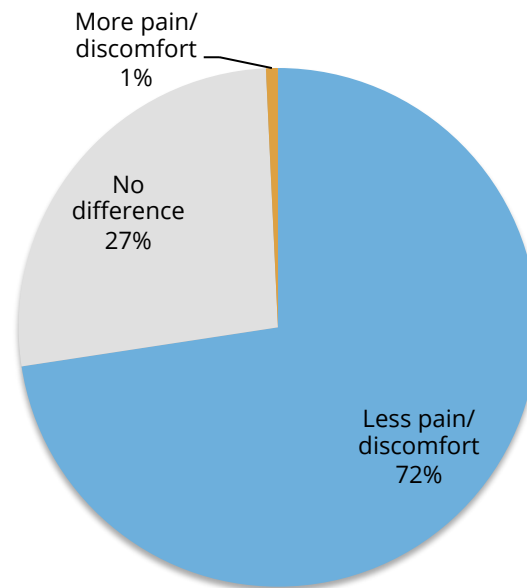


CBD-Rich Cannabis' Impact on Pain and Discomfort

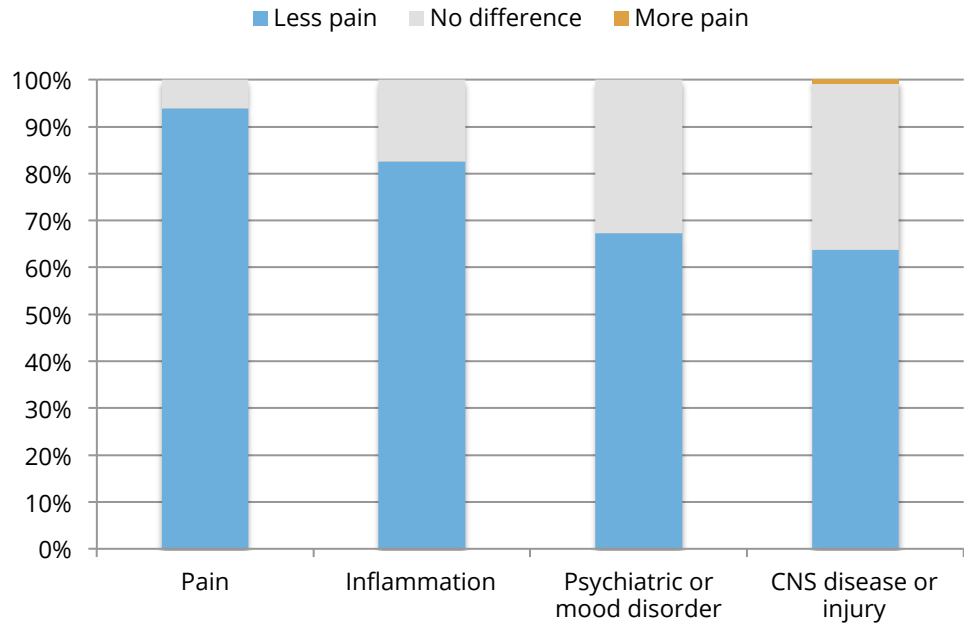
Patients were asked about changes in their pain or discomfort level after being on CBD-rich cannabis therapy for at least 30 days.

- ✓ A majority of all patients (72.6%) reported a decrease in pain or discomfort.
- ✓ All patients (100%) with headaches and migraines, fibromyalgia, irritable bowel syndrome (IBS), and spinal cord injury reported a decrease in pain or discomfort.
- ✓ Less than 1% of patients reported an *increase* in pain or discomfort after CBD-rich cannabis therapy. (All patients reporting an increase in pain reported using CBD for ALS.)

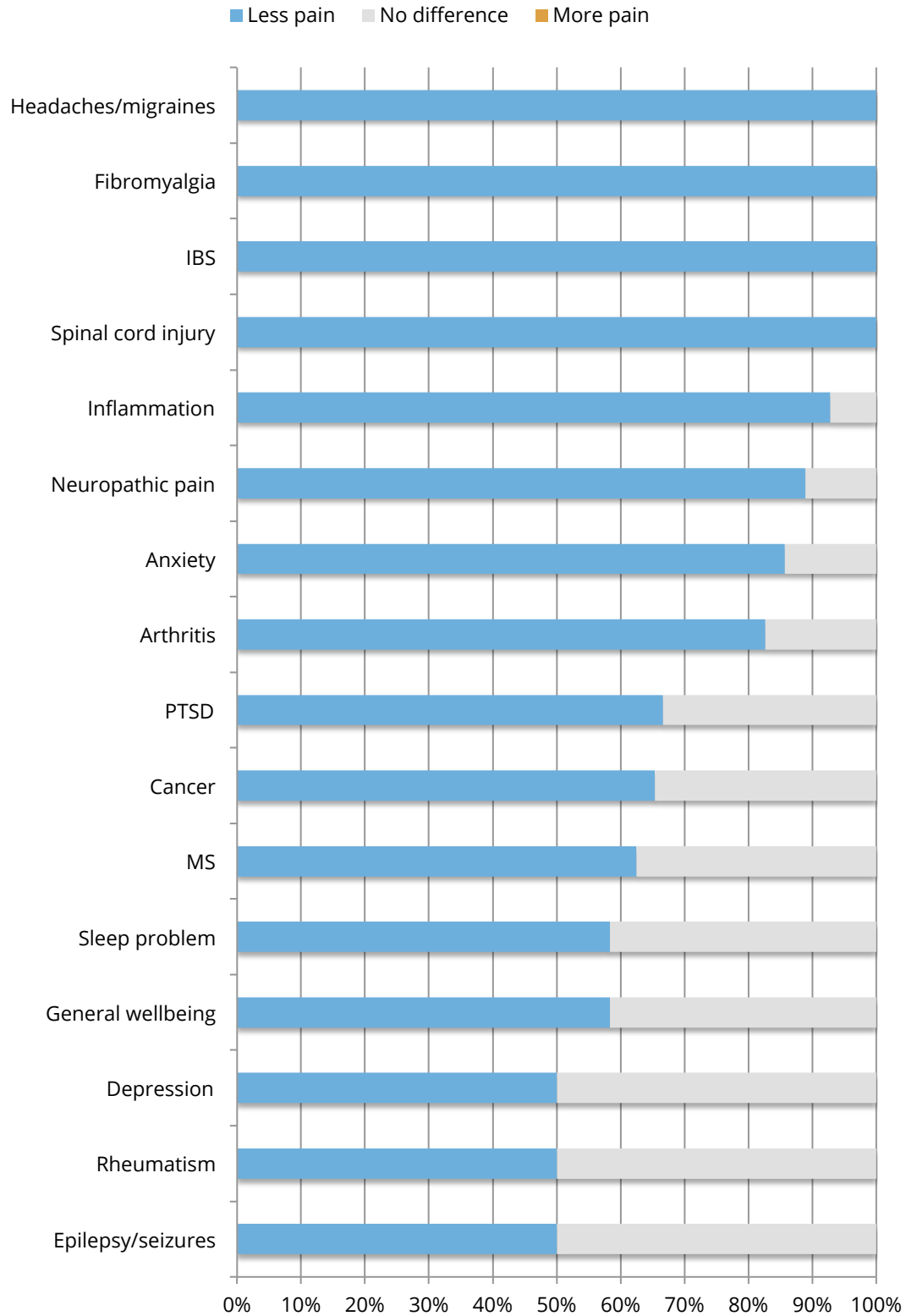
CBD-Rich Cannabis: Impact on Pain or Discomfort (All Patients)



CBD-Rich Cannabis: Impact on Pain/Discomfort (By Category)



CBD-Rich Cannabis: Impact on Pain/Discomfort (By Condition)

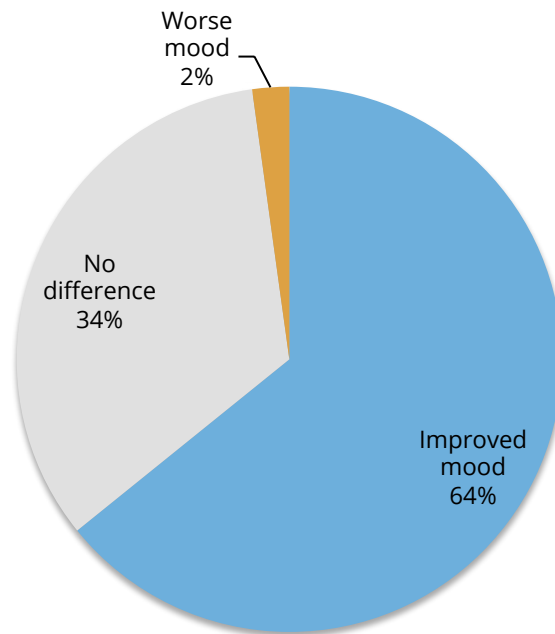


CBD-Rich Cannabis' Impact on Mood

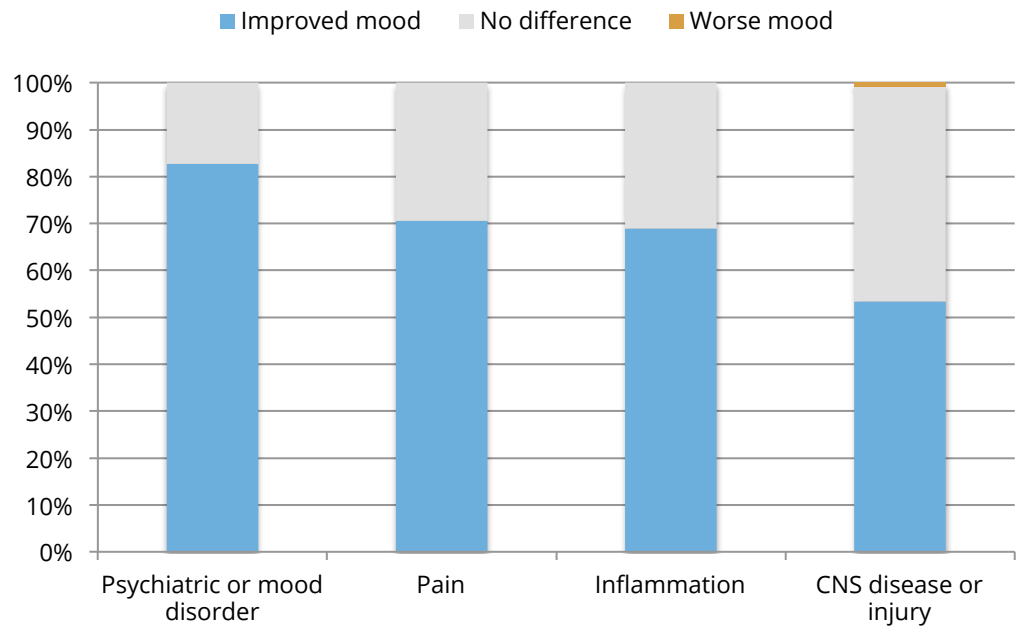
Patients were asked about changes in their mood after being on CBD-rich cannabis therapy for at least 30 days.

- ✓ A majority of all patients (64.2%) reported an improvement in mood.
- ✓ All patients (100%) with PTSD and spinal cord injuries reported an improvement in mood.
- ✓ Some patients with sleep problems (8%) and cancer (3%) reported a worsening of mood.
- ✓ While a majority of patients taking CBD-rich cannabis for “general wellbeing” rather than for a specific medical condition reported improved mood (66.7%), this group was also the most likely to report a worsening of mood (16.7%).

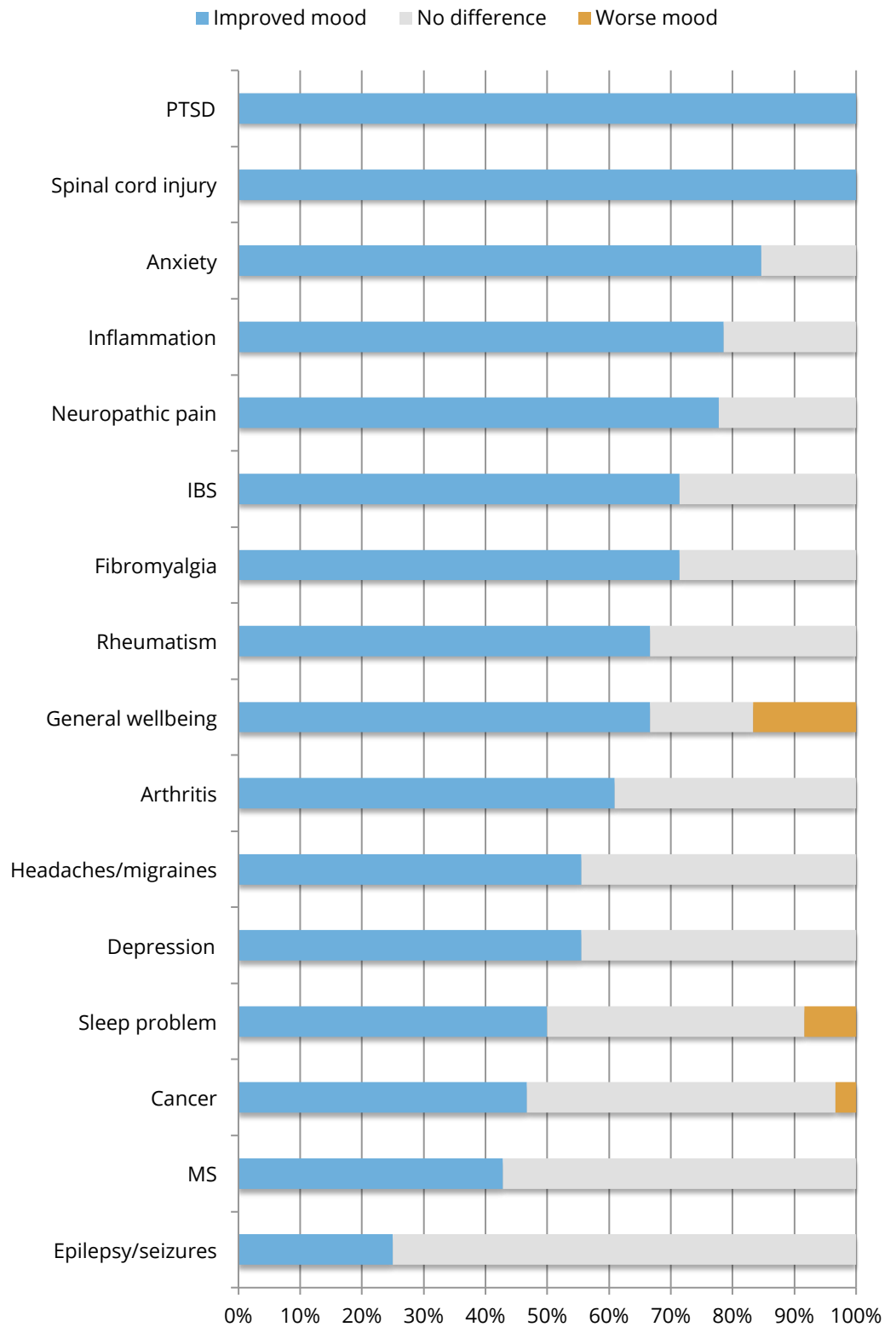
CBD-Rich Cannabis: Impact on Mood (All Patients)



CBD-Rich Cannabis: Impact on Mood (By Category)



CBD-Rich Cannabis: Impact on Mood (By Condition)

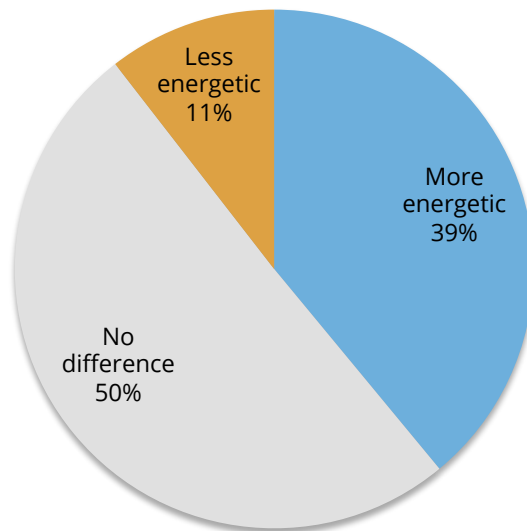


CBD-Rich Cannabis' Impact on Energy Levels

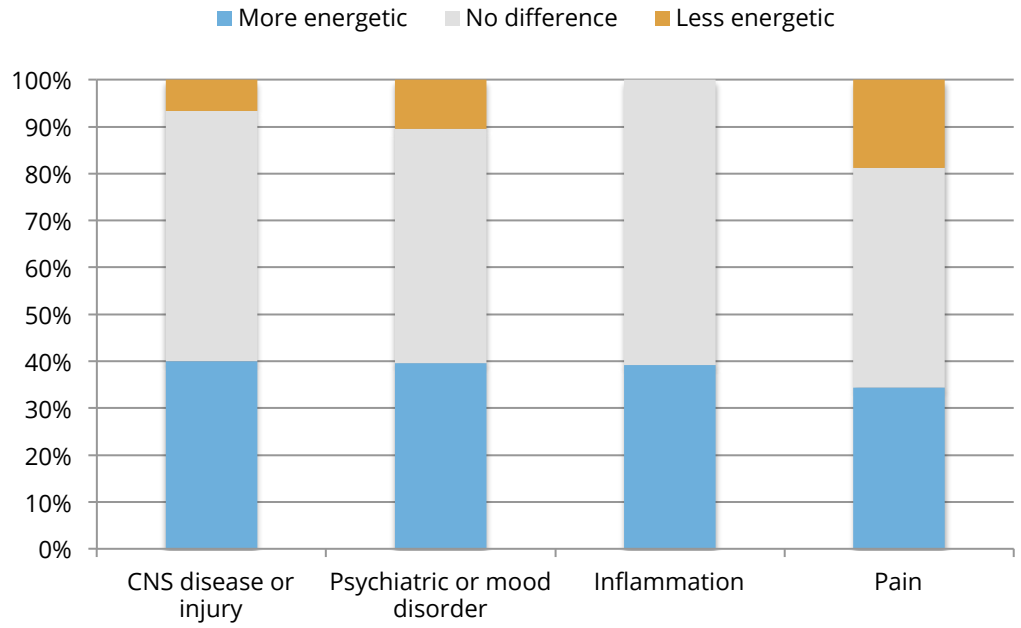
Patients were asked about changes in their energy level after being on CBD-rich cannabis therapy for at least 30 days.

- ✓ Half of all patients (50.4%) reported no change in energy level.
- ✓ The patients most likely to report increased energy levels were those with inflammation (64.0%), fibromyalgia (57.1%), and PTSD (55.6%).
- ✓ Patients with headaches or migraines were the most likely to report reduced energy levels (37.5%).

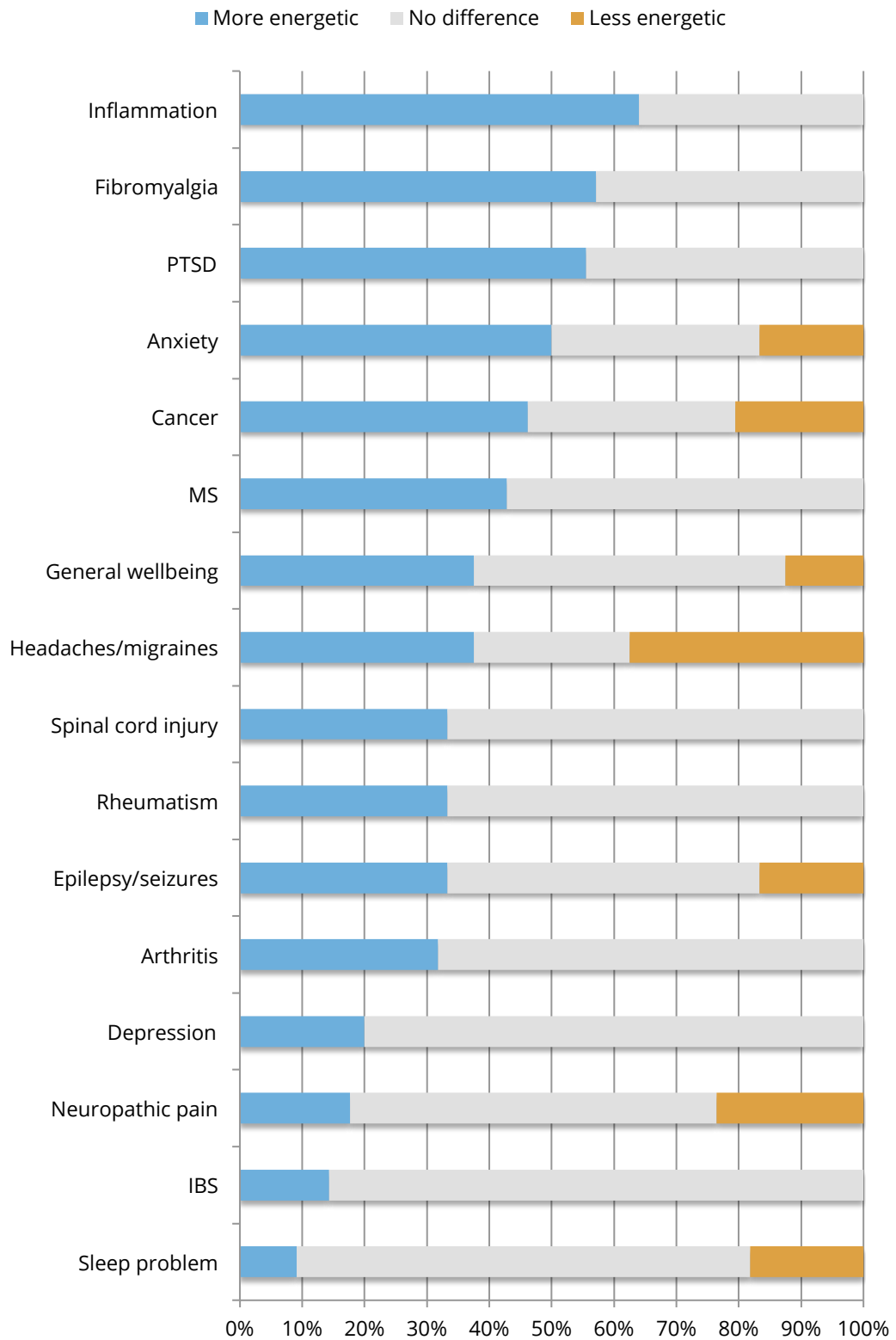
CBD-Rich Cannabis: Impact on Energy Levels (All Patients)



Impact on Energy Level, By Condition



CBD-Rich Cannabis: Impact on Energy Level (By Condition)

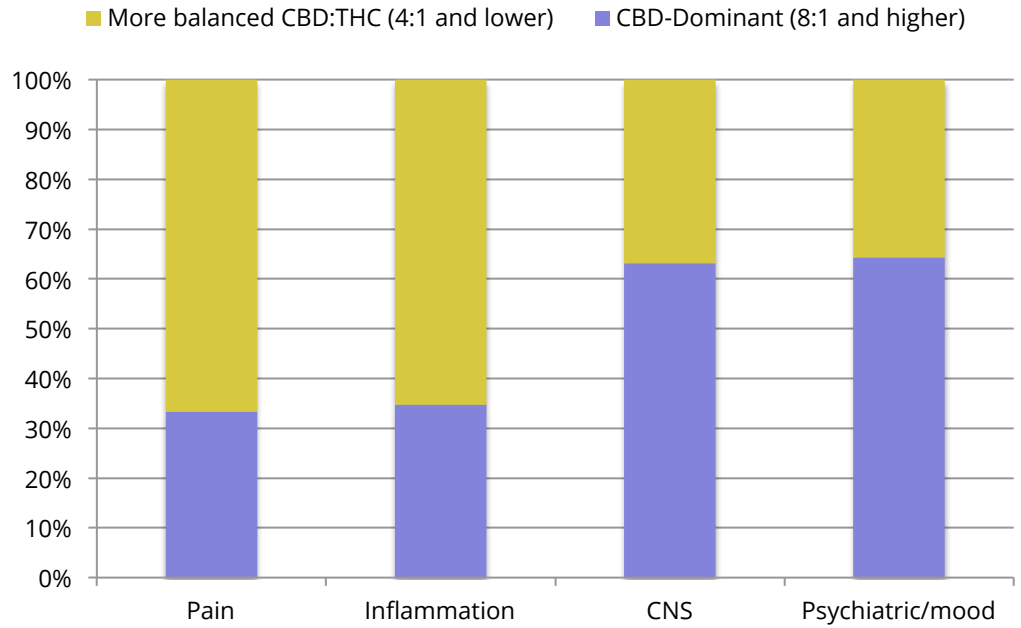


CBD versus THC: Ratios

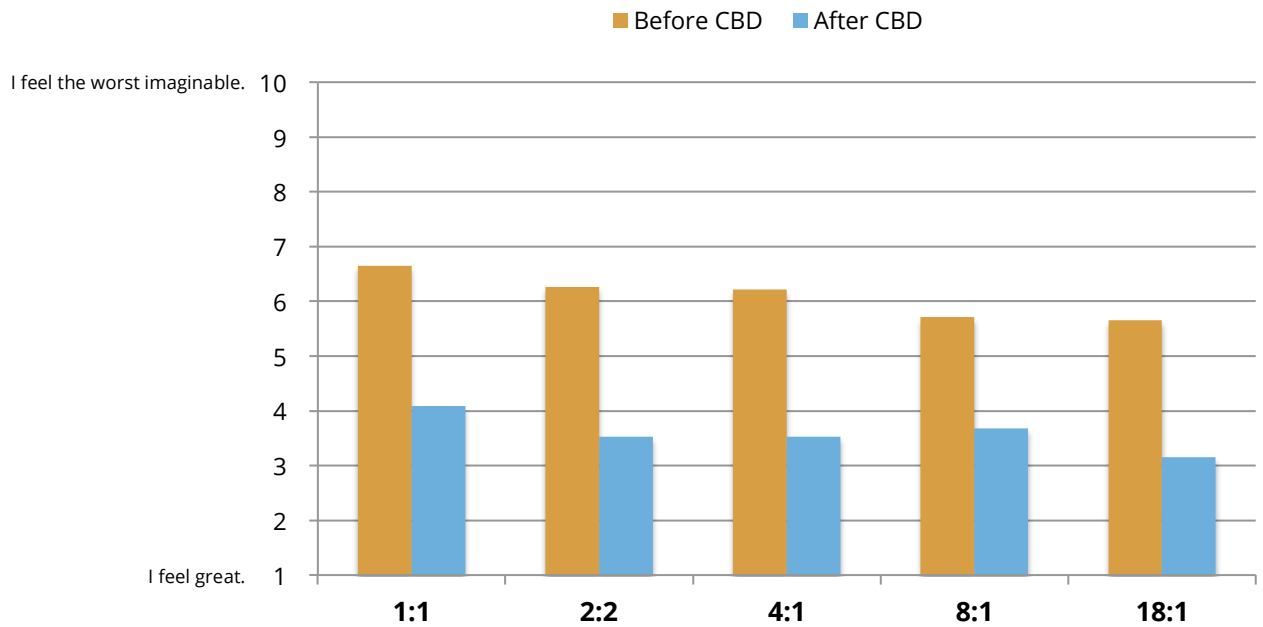
Patients were asked what CBD-to-THC ratio they use.

- ✓ A startlingly high percentage of patients (42.3%) reported not knowing what ratio of CBD-to-THC they were taking.
- ✓ There was no significant correlation between the condition a patient was treating and the CBD:THC ratio they chose. However, patients with psychiatric or mood disorders and patients with diseases of or injuries to the CNS system favored CBD-dominant cannabis medicines (CBD:THC ratios of 8:1, 18:1). Patients with pain and inflammation favored cannabis medicines with more equal levels of CBD and THC (CBD:THC ratios of 4:1, 2:1, 1:1).
- ✓ Patients using the 2:1 CBD-to-THC ratio reported the greatest improvement in overall wellbeing.
- ✓ Patients using the 4:1 CBD-to-THC were most likely to report a reduction in pain or discomfort.
- ✓ Patients using the 4:1 CBD-to-THC were the most likely to report improved mood (84.2%). However, some patients on the 4:1 (4.76%) report a worsening of mood. Whereas no patients on the CBD-dominant ratios (8:1 and 18:1) reported a worsening of mood.
- ✓ Patients using the 4:1 CBD-to-THC were the most likely to report improved energy (55.6%). However, they were also the most likely to report decreased energy levels (16.7%).
- ✓ Patient's using the 18:1 CBD-to-THC were the 2nd most likely to report improved energy levels (44.0%) and less likely than users of the 4:1 to report decreased energy (12.0%).

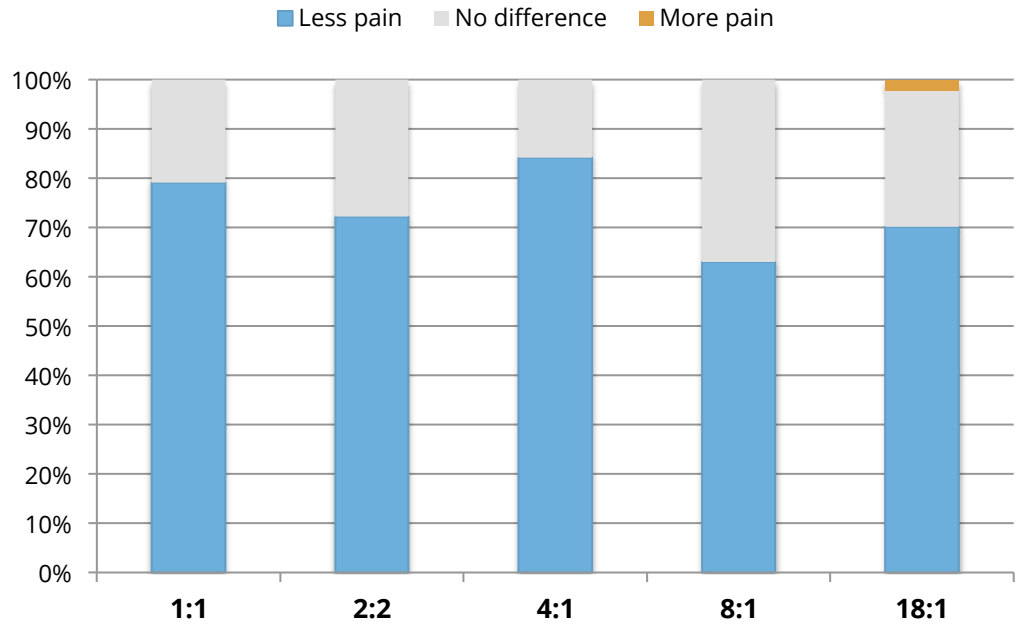
Ratios (Grouped) by Category



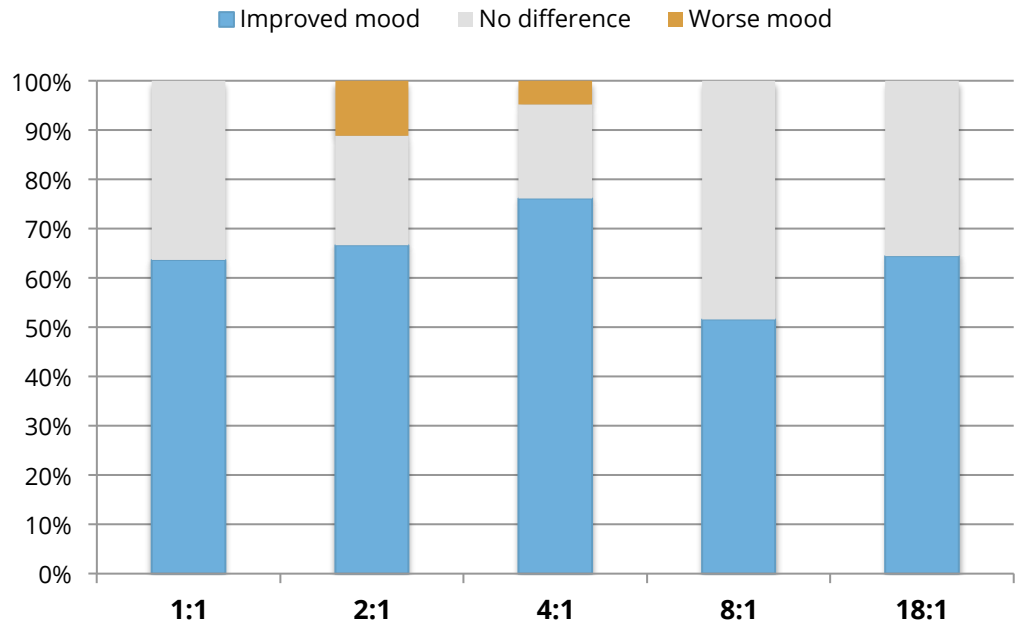
Ratios and Overall Wellbeing



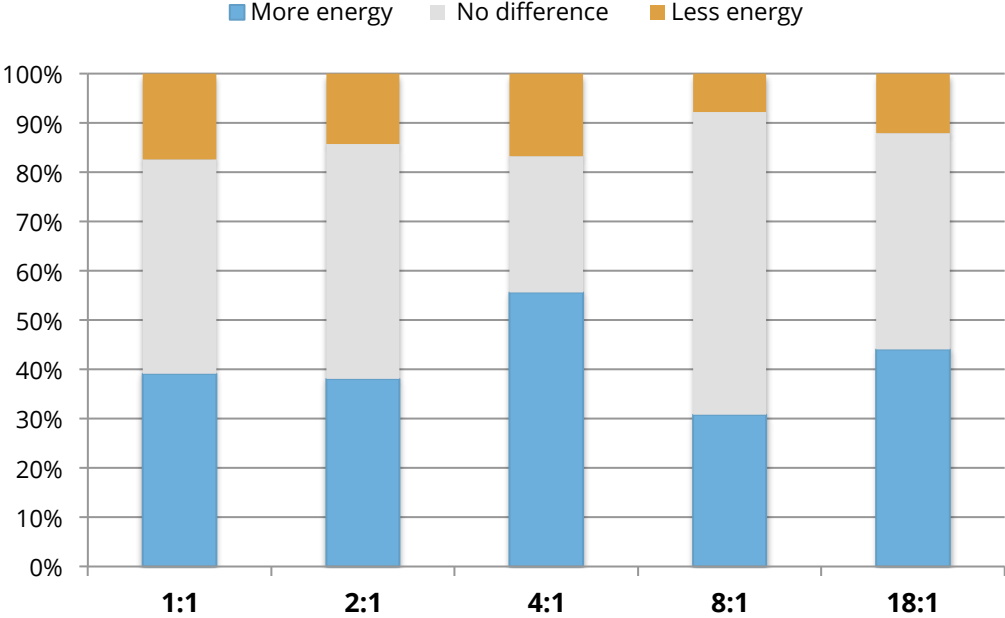
Ratios and Pain or Discomfort



Ratios and Mood



Ratios and Energy Level



Conclusion

This report represents preliminary data based on less than one thousand patients. It is not meant to provide patients with guidance on dosing or medical treatment. Rather, it is meant to suggest possible areas for additional research.

Care By Design is continuing to collect survey responses, and will report on trends in CBD-rich cannabis therapeutics again in 6 months time.

As our database of patient survey responses grows, we will be particularly interested to look at the relative efficacy of different CBD:THC ratios for specific conditions. Moving forward, we may also expand the list of efficacy measurements.

For questions and suggestions, please email us at: research@cbd.org