

High Appetite: Cannabis and its Relationship with Eating Patterns and Overall Nutrition

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Introduction

- Cannabis is the most commonly used federally illegal drug in the United States (CDC, 2025)
- Two polar opposite viewpoints (Lazy-stoner archetype vs. medical/positive use) of cannabis use require further explanation of how cannabis affects the body
- Endocannabinoid system: regulate functions like appetite, sleep, pain management, hormones, etc. using receptors CB-1 and CB-2
- When THC (a type of cannabinoid molecule) binds to CB1 it has strong effects on hypothalamus (feeding) and nucleus accumbens/limbic area (reward and motivation aspect of eating). (O'Sullivan et al., 2021).

Purpose Statement

In my time at Cal Poly Humboldt I have found a strong passion in the field of nutrition, specifically in the realm of eating behaviors, disordered eating, and relationship with food. Cal Poly Humboldt also has a deeply rooted cannabis culture. The purpose of this writing is to show how cannabis affects eating habits, diet, overall nutrition, and how it can be used as a tool for some.

Methods

The majority of my research was found through google scholar using search terms such as:

- Cannabis consumption + Diet quality
- Cannabis consumption + disordered eating
- Relationship between cannabis use and binge eating
- Relationship between cannabis use and anorexia
- Cannabis + appetite stimulation
- Endocannabinoid System + food reward

Cannabis Influence on Appetite (Table 1)

| | |
|--|------|
| I continue to eat despite being full/uncomfortable (a) | 0.75 |
| If I see food I want to eat it (a) | 0.73 |
| If someone mentions food, I want to eat (a) | 0.73 |
| When I start to eat I can't stop (a) | 0.72 |
| I start to eat even though I feel full | 0.78 |
| If I have already eaten a filling meal, I find myself wanting more sooner than usual | 0.74 |

Questions with "a" are reverse scored (reference below)

Roberts, C. A., Jager, G., Christiansen, P., & Kirkham, T. C. (2019). Exploring the munchies: An online survey of users' experiences of cannabis effects on appetite and the development of a Cannabinoid Eating Experience Questionnaire. *Journal of Psychopharmacology*, 33(9), 1149-1159. <https://doi.org/10.1177/0269881119862526>

Table 3: Questions with "a" are reversed / Reference: Same source as table 1

Cannabis and Diet Quality

- Cannabis is well known for increasing appetite and the appreciation for food, also known as the munchies (Roberts et al., 2019)
- Table 1: Study looking into the relationship between cannabis and different appetitive factors.
- A study looking into the relationship between cannabis users, fast food consumption, overweight, and obesity showed there to be a positive correlation with consumption of fast food and cannabis use. (Romano et al., 2022).
- No correlation was found between being overweight or obese among cannabis users in this study
- Table 2: Shows the relationship between diet quality and cannabis consumption (Gelfand and Tagney, 2020).

Diet Quality and Cannabis (Table 2)

| HEI component (standard scoring for maximum score) | HEI-2010 score | | | | | | HEI-2015 score | | | | | | | |
|--|----------------|------------------------------|-----|-----------------------------------|-----|---------------------------------|----------------|---------------|------------------------------|-----|-----------------------------------|-----|---------------------------------|-----|
| | Maximum score | Never used cannabis (n 8216) | | Previously used cannabis (n 7127) | | Currently use cannabis (n 2510) | | Maximum score | Never used cannabis (n 8216) | | Previously used cannabis (n 7127) | | Currently use cannabis (n 2510) | |
| | | Mean | SE | Mean | SE | Mean | SE | | Mean | SE | Mean | SE | Mean | SE |
| Adequacy | | | | | | | | | | | | | | |
| Total HEI score | 100 | 57.7 ^a | 0.4 | 56.2 ^b | 0.4 | 51.8 ^c | 0.7 | 100 | 57.0 ^a | 0.3 | 55.9 ^a | 0.4 | 52.8 ^b | 0.7 |
| 1. Total vegetables (≥1.1 cup equivalents per 1000 kcal) | 5 | 3.7 ^a | 0.0 | 3.6 ^a | 0.0 | 3.0 ^b | 0.1 | 5 | 3.7 ^a | 0.0 | 3.6 ^a | 0.0 | 3.1 ^b | 0.1 |
| 2. Greens and beans (≥0.2 cup equivalents per 1000 kcal) | 5 | 2.8 ^a | 0.1 | 2.5 ^b | 0.1 | 2.1 ^c | 0.1 | 5 | 3.1 ^a | 0.1 | 2.7 ^b | 0.1 | 2.3 ^c | 0.1 |
| 3. Total fruit (≥0.8 cup equivalents per 1000 kcal) | 5 | 3.0 ^a | 0.1 | 2.5 ^b | 0.1 | 2.2 ^c | 0.1 | 5 | 3.0 ^a | 0.1 | 2.5 ^b | 0.1 | 2.1 ^c | 0.1 |
| 4. Whole fruit (≥0.4 cup equivalents per 1000 kcal) | 5 | 3.3 ^a | 0.1 | 2.9 ^b | 0.1 | 2.2 ^c | 0.1 | 5 | 3.3 ^a | 0.1 | 2.9 ^b | 0.1 | 2.2 ^c | 0.1 |
| 5. Whole grains (≥1.5 oz equivalents per 1000 kcal) | 10 | 3.0 ^a | 0.1 | 2.9 ^a | 0.1 | 2.0 ^b | 0.1 | 10 | 3.0 ^a | 0.1 | 2.9 ^a | 0.1 | 2.1 ^b | 0.1 |
| 6. Dairy (≥1.3 cup equivalents per 1000 kcal) | 10 | 5.8 | 0.1 | 5.9 | 0.1 | 5.7 | 0.1 | 10 | 5.8 | 0.1 | 5.9 | 0.1 | 5.7 | 0.1 |
| 7. Total protein foods (≥2.5 oz equivalents per 1000 kcal) | 5 | 4.9 | 0.0 | 4.8 | 0.0 | 4.8 | 0.0 | 5 | 4.8 | 0.0 | 4.8 | 0.0 | 4.8 | 0.0 |
| 8. Seafood and plant protein (≥0.8 oz equivalents per 1000 kcal) | 5 | 3.5 ^a | 0.1 | 3.5 ^a | 0.1 | 3.1 ^b | 0.1 | 5 | 3.6 ^a | 0.1 | 3.5 ^a | 0.1 | 3.1 ^b | 0.1 |
| 9. Fatty acid ratio (PUFA + MUFA)/SFA > 2.5 | 10 | 4.8 | 0.1 | 4.7 | 0.1 | 4.4 | 0.2 | 10 | 4.8 | 0.1 | 4.7 | 0.1 | 4.4 | 0.2 |

Table 2 reference: Gelfand, A. R., & Tagney, C. C. (2020). Dietary quality differs among cannabis use groups: data from the National Health and Nutrition Examination Survey 2005-16. *Public Health Nutrition*, 1-9. <https://doi.org/10.1017/s1368980020001846>

Binge Eating and Emotional Response to Cannabis

- Table 3: Study showing the relationship between cannabis consumption and hedonic factors (enjoyment of eating, texture, sensation of eating, etc. (Roberts et al., 2019).
- Study looking into the relationship between cannabis use and binge eating (Elran-Barak et al., 2025)
- Takeaways: 24% of females suffered from binge eating with no relationship found within males for binge eating. Independent of depressive symptoms there was a direct correlation between appetite induced changes from cannabis in females.

Cannabis Influence on Appreciation of Food - Hedonic (Table 3)

| | |
|---|------|
| Food tastes Better (a) | 0.75 |
| The experience of eating is better in every way | 0.71 |
| Flavours are more complex (a) | 0.77 |
| Taste/Flavor is more intense (a) | 0.80 |
| I can distinguish more flavors (a) | 0.76 |
| Food is more delicious (a) | 0.78 |
| Texture/mouthfeel is more pleasant | 0.74 |

How can Cannabis be used as a Tool?

- Table 4: A study looking into how cannabis can help with weight gain among patients with cancer related cachexia and anorexia syndrome (Bar-Sela, 2019).
- Limited studies on showing data on how cannabis can help people's nutrition that have chronic disease and eating disorders, despite research showing cannabis has the ability to help increase appetite and appreciation for food.
- What we do know: Cannabis will elevate appetite and make food more enjoyable for the majority

Effects of Cannabis on Cancer Related Cachexia and Anorexia Syndrome (Table 4)

| | Appetite Increase | Pain reduction | Sleep Improvement |
|--------------------------------|-------------------|----------------|-------------------|
| Until 2 weeks | 0 | 0 | 0 |
| Between 2 weeks and 4.5 months | 5 (100%) | 0 | 0 |
| 6 months (study completion) | 5 (83.3%) | 3 (50%) | 3 (50%) |

Table 4 reference: Bar-Sela, G., Zalman, D., Semenyts, V., & Ballan, E. (2019). The Effects of Dosage-Controlled Cannabis Capsules on Cancer-Related Cachexia and Anorexia Syndrome in Advanced Cancer Patients: Pilot Study. *Integrative Cancer Therapies*, 18, 153473541988149. <https://doi.org/10.1177/1534735419881498>

Conclusion

- On one hand cannabis can increase appetite, elevate sensations/flavors, and improve the overall experience of eating. This is good for people who struggle with issues that cause undereating.
- On the other hand, cannabis can trigger binge eating patterns in individuals that already struggle with binge eating tendencies. This may lead to the maintenance of binge eating or accelerating it
- Final note: Everyone reacts differently to certain foods and cannabis, which means it is up to the individual whether or not they find cannabis useful in helping with diet, EDs, food relationship, etc. or not.

Future Direction

- What do we need in the future: More long-term studies that involve factors like: cannabis use among people who already have eating disorders(ED), cannabis consumption in the beginning stages of ED, mental health, gender, body fat percentage, and more

References:

