



**CITRUSLABS** 

### Clinical Study:

## A Clinical Trial to Assess the Effects of a Vitamin Shot on Energy Levels

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his trial examines the efficacy of the Vitamin Energy® shots in improving energy levels, mood, and cognitive function over a 14-day trial. Participants consumed the energy shot once daily for 14 days and completed surveys at multiple time points across the trial.

Participants reported on the surveys that they had positive improvements in concentration, mood, brain fog, and productivity across the 28-day trial. 11 out of 12 parameters evaluated demonstrated a significant improvement by Day 7, and this was maintained at Day 14. The product was well received by participants, with the majority in agreement that the product enhances energy levels and reduces the number of caffeinated beverages required during the day.

Overall, the Vitamin Energy\* shots significantly improve energy, mood, and cognitive function and provide an average of 5 hours of energy per shot.

### **ABSTRACT**

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# 1. INTRODUCTION

Many people struggle with poor energy levels, leaving them tired and unproductive during the day. Often people rely on caffeinated drinks, like coffee, to boost alertness and support mental focus.

However, these drinks often do not contain any vitamins or nutrients of benefit to the body and can cause significant withdrawal or 'crashing' as their effects subside.

Vitamin Energy® is a naturally-caffeinated functional energy shot that provides numerous benefits with each shot, unlike many typical artificially-caffeinated energy shots. Each shot contains specific bodybenefiting vitamins and supplements to help anything from muscle aches to clearing brain fog. Unlike many energy drinks that can lead to a sugar crash, Vitamin Energy® contains 0 sugar, providing an alternative for those concerned about sugar intake. With 260mg of natural caffeine, Vitamin Energy® offers an energy boost lasting up to 7+ hours. This can be attributed to the high caffeine content, which may provide prolonged alertness and energy.

Vitamin Energy\* is formulated with various vitamins to support overall body function. Including B vitamins, including B12 and B6, in Vitamin Energy\* supports immune health as these vitamins play a crucial role in maintaining a healthy immune response.

Furthermore, Vitamin B12 in Vitamin Energy® shots can aid in healthy nutrient metabolism, allowing the body to process nutrients more effectively. The shot also contains L-Carnitine Tartrate, an amino acid compound involved in energy metabolism. It plays a role in transporting fatty acids into the mitochondria, the cell's powerhouses, where they are used as a fuel source. By facilitating fat utilization for energy production, L-Carnitine Tartrate may support increased energy levels and potentially contribute to an improved mood.

This study will evaluate the efficacy of Vitamin Energy® shots to improve energy levels, mood, and cognitive function, and support weight loss.

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## 2. METHODS

#### 2.1 PARTICIPANTS

A total of 30 participants were recruited for this study, with 28 completing the final outcome measurement. All participants satisfied the following inclusion and exclusion criteria

#### **Inclusion criteria:**

- Men and women aged 18 years and over
- Self-reported issues with:
  - Energy
  - Focus
  - Brain fog
- · Participants who often feel fatigued
- Willing to maintain the same caffeine consumption during the study period
- Generally healthy don't live with any uncontrolled chronic disease

#### **Exclusion criteria:**

- Any pre-existing chronic conditions that would prevent participants from adhering to the protocol, including oncological and psychiatric disorders.
- Anyone with known severe allergic reactions.
- Women who are pregnant, breastfeeding, or attempting to become pregnant
- Unwilling to follow the study protocol.

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#### 2.METHODS

#### 2.2 STUDY DESIGN

This virtual study required participants to take the product daily, complete questionnaires at home, and complete body weight measurements at home. Consent forms describing the study process, instructions, evaluation methods, and bill of rights were provided to participants before study onboarding.

Following the consent process, participants completed the baseline survey evaluating parameters of interest including energy levels, mood, cognitive function, and productivity. Participants also completed a baseline bodyweight measurement.

Participants were then instructed to use the product in line with specific guidance provided by the sponsor. Participants were instructed to drink one bottle of the Vitamin Energy\* shot every morning. While the study was initially planned to run for 30 consecutive days, the study was terminated on Day 14.

Participants completed a study-specific survey at baseline, Day 7, and Day 14. No repeat bodyweight measurements were collected. Responses were compared from each check-in to baseline to assess improvements in parameters of interest.

#### 2.3 DATA ANALYSIS & STATISTICS

Data was collected using a textual 5-point Likert scale for each question, such as "Never" to "Always." Symptom-related questions were conducted at baseline and each check-in. The textual Likert data was transformed into numerical values of 1-5, where the highest frequency was rated five, and the lowest frequency was rated one.

Therefore a reduction in score in the "How often do you struggle to X" questions indicates improvement. An increase in the mean score indicates an improvement in positively connotated responses (Mood, duration of positive effects).

Data were checked for normality using the Pearson test. A repeated measure analysis was used to compare participant outcomes at each check-in on Day 7 and Day 14 to their baseline response. Data were analyzed using the repeated-measure one-way ANOVA or Friedman Tests based on the normality of the data. Statistical analyses were performed in GraphPad Prism 9.0, and the significance level was set at 0.05.

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### 3. RESULTS

#### 3.1 VITAMIN ENERGY SIGNIFICANTLY IMPROVES ENERGY, MOOD, AND ASPECTS OF COGNITIVE FUNCTION

All subjects self-scored their energy levels, mood, cognitive function, and caffeine intake on a 5-point textual Likert scale at baseline, after 7 days and 14 days of using the test product.

By Day 7 of product use, 11 of the 12 evaluated parameters showed a statistically significant improvement from baseline (P<0.05, Table 1). Caffeine intake was the only parameter that did not change significantly by Day 7. These results were mirrored by Day 14, whereby 11 out of 12 parameters continued to demonstrate statistically significant improvements, apart from caffeine intake.

These positive results suggest that even seven days of product usage is sufficient to experience significant improvements in energy and cognitive function. The mean caffeine intake decreased slightly by Day 7 but had increased minorly above baseline consumption by Day 14 (Figure 1). The analysis highlighted the insignificance of this change.

## 3.2 VITAMIN ENERGY USERS ARE SATISFIED WITH THE PRODUCT AND RESULTS

On Day 7 and Day 14, a range of perceived

product benefits and participant opinions were evaluated using a 'strongly disagree' to 'strongly agree' scale. The 'strongly agree' and 'agree' responses were combined into a single 'combined agree' outcome to better evaluate the overall agreement with the tested parameters. Participants were also asked to rate how long the product's positive effects lasted (Table 2).

Combined agreed responses ranged from 21.4% to 85.7% across all parameters evaluated on Day 7 and 35.7% to 89.3% by Day 14 (Table 2). By Day 14, 11 of the 12 parameters had over 60% agreement, however, participants generally did not agree that the product was effective in supporting weight loss.

Notably, 89.3% of participants agreed that the Vitamin Energy® shots are effective at boosting energy, and 82.1% agreed that they feel energized very quickly after taking the Vitamin Energy® shots. Interestingly, 71.4% agreed that taking a Vitamin Energy® shot reduces the number of caffeinated drinks they need during the day.

When asked on average, how many hours of energy do the Vitamin Energy\* shots give, the mean response for both time points was 5 hours. This was consistent on both Day 7 and Day 14, supporting the reliability of the answer.

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### 4.

### **DISCUSSION**

This study provides data on the effect of the Vitamin Energy® shot on a range of parameters, examined via participants' perceived benefits.

All symptom-related parameters that were compared between baseline, Day 7, and Day 14 showed significant improvement. Notably, all of the parameters had shown considerable improvement by Day 7, suggesting that improvements are already apparent after only one week of use.

Interestingly, although there was not a statistically significant change in the mean number of caffeinated beverages consumed by participants on a daily basis, 71.4% of participants felt that taking a Vitamin Energy\* shot reduces the number of caffeinated drinks they need during the day. This suggests that although there was not a statistically significant numerical change, this change felt substantial to the participants.

Product satisfaction questions on Day 7 and Day 14 received largely positive responses on both Day 7 and Day 14. The only parameter that participants were not in agreement with was pertaining

to the product supporting weight loss. Overall these results are overwhelmingly positive and highlight the participants' satisfaction with the results of the product.

Notably several of the product satisfaction parameters actually decreased in percentage agreement from Day 7 to Day 14. This may simply suggest benefits of the product were more stark and intense during the first week and participants became more adjusted to these immediate changes by Day 14.

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# 5. CONCLUSION

The Vitamin Energy® shot improves energy levels, fatigue, concentration, and brain fog.

Participants were also positive about their perception of the product, noticing improved productivity and task initiation. The Vitamin Energy\* shot is generally well-received, with most participants reporting that the product is a mood booster and reduces the number of caffeinated drinks they require during the day.

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# 5. CONCLUSION

The Vitamin Energy® shot improves energy levels, fatigue, concentration, and brain fog.

5.1 TABLE 1. STATISTICAL OUTCOMES OF THE EFFECT OF VITAMIN ENERGY SHOTS ON ENERGY AND MOOD. Outcomes are positively connotated, where 1 = worst outcome and 5 = best outcome. Therefore, an increase in score from baseline indicates improvement. %Change indicates a change in mean values from baseline to endline. All parameters were analyzed by a repeated measure one-way ANOVA with Dunnett's test for multiple comparisons, except the daily caffeine consumption, which was analyzed with a non-parametric Friedman test with Dunn's test for multiple comparisons.

	Baseline Day 7			Day 14					
Outcome	Mean	STD	Mean	STD	P-value	Mean	STD	P-value	%Change
How would you rate your energy level on a daily basis?	2.39	0.74	3.75	0.80	<0.0001	3.82	0.72	<0.0001	59.70%
How severe is your fatigue?	2.39	0.74	3.39	0.79	<0.0001	3.50	0.79	<0.0001	46.27%
How often do you struggle to focus or concentrate on a task?	2.29	0.66	3.39	0.79	<0.0001	3.54	0.74	<0.0001	54.69%
How often do you struggle with productivity?	2.36	0.62	3.21	0.92	<0.0001	3.57	0.88	< 0.0001	51.52%
How often do you struggle with starting a new task?	2.29	0.53	3.11	0.99	0.0002	3.68	0.86	<0.0001	60.94%
How often do you struggle with brain fog?	2.29	0.76	3.43	1.00	<0.0001	3.50	0.79	<0.0001	53.13%
How often are you easily distracted?	2.32	0.67	3.32	0.82	<0.0001	3.50	0.84	<0.0001	50.77%
How severe are your problems with focus and concentration?	2.50	0.75	3.32	0.94	<0.0001	3.46	0.96	<0.0001	38.57%
How severe is your brain fog?	2.50	0.75	3.50	1.04	<0.0001	3.64	0.99	< 0.0001	45.71%
How would you rate your mood?	2.89	0.69	3.68	0.94	0.0004	3.64	0.83	0.0010	25.93%
How many caffeinated products do you consume on a daily basis?	2.21	1.79	2.68	2.16	>0.9999	2.71	2.52	>0.9999	22.58%
How much do low energy and fatigue interfere with your daily activities?	2.21	0.74	3.54	0.92	<0.0001	3.79	0.88	<0.0001	70.97%

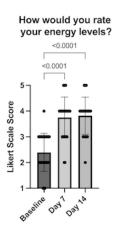
Table 1. Statistical outcomes of the effect of Vitamin Energy Shots on energy and mood.

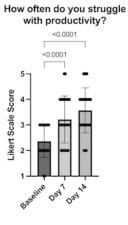
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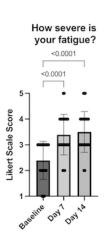
# 5. CONCLUSION

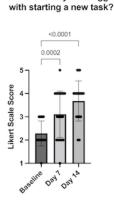
The Vitamin Energy® shot improves energy levels, fatigue, concentration, and brain fog.

FIGURE 1. VISUAL REPRESENTATION OF MEAN LIKERT SCORES AND CHANGE ACROSS EACH TIME POINT.

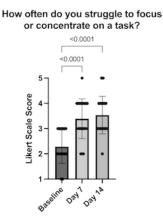


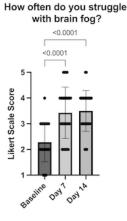






How often do you struggle



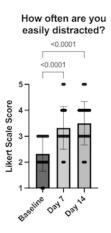


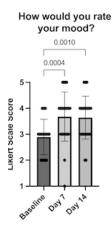
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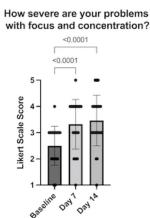
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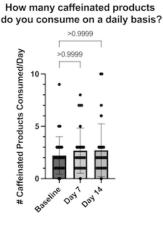
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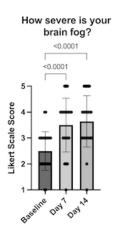
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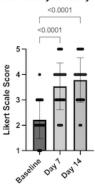








How much does low energy and fatigue interfere with your daily activities?



## CLINICAL STUDY A Clinical Trial to Assess the Effects of a Vitamin Shot on Energy Levels

# 5. CONCLUSION

The Vitamin Energy® shot improves energy levels, fatigue, concentration, and brain fog.

5.2 TABLE 2. PARTICIPANT PERCEPTIONS OF THE EFFECT OF VITAMIN ENERGY SHOTS ON ENERGY AND MOOD OUTCOMES.

	Combin	nbined Agree %	
How much do you agree or disagree with the following statement:	Day 7	Day 14	
The Vitamin Energy® shots are effective at boosting energy.	85.7%	89.3%	
I feel energized very quickly after taking the Vitamin Energy* shots.	64.3%	82.1%	
I feel happier after taking the Vitamin Energy® shots.	57.1%	57.1%	
I feel ready to take on the day after taking a Vitamin Energy® shot.	75.0%	75.0%	
I feel less fatigued throughout the day after taking a Vitamin Energy® shot.	82.1%	67.9%	
I am better able to focus and concentrate after taking a Vitamin Energy® shot.	71.4%	75.0%	
The Vitamin Energy® shots are effective at reducing brain fog.	78.6%	60.7%	
I am less distractible after taking a Vitamin Energy® shot.	71.4%	71.4%	
The Vitamin Energy® shots are a great mood booster.	60.7%	64.3%	
Taking a Vitamin Energy* shot reduces the amount of caffeinated drinks I need during the day.	71.4%	71.4%	
The effects of a Vitamin Energy® shot last longer than coffee or other caffeinated drinks.	78.6%	75.0%	
The Vitamin Energy® shots are effective in supporting weight loss.	21.4%	35.7%	
On average, how many hours of energy do the Vitamin Energy® shots give you?	5	5	

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### A.

### APPENDIX A

#### **Data Interpretation**

(Please consult an attorney before using any claims- these are just example claims from the data that could be used)

- One Vitamin Energy® shot gives an average of 5 hours of energy
- 71.4% of participants agreed that drinking a Vitamin Energy\* shot reduced the number of caffeinated drinks they need during the day.
- After only 7 days of use, Vitamin Energy® shots significantly improved:
  - Energy levels
  - Fatigue
  - Brain fog
  - Mood
  - Problems with focus and concentration
- After taking Vitamin Energy<sup>®</sup> shots for 7 days, participants struggled with focus or concentrating on a task significantly less often.
- After taking Vitamin Energy® shots for 7 days, participants significantly improved how often they are easily distracted.
- After taking Vitamin Energy® shots for 7 days, participants felt productive, significantly more often.

- After 7 days of using Vitamin Energy\* shots:
  - 85.7% of participants agreed that Vitamin Energy\* shots are effective at boosting energy.
  - 82.1% of participants agreed that they feel less fatigued throughout the day after taking a Vitamin Energy\* shot.
  - 78.6% of participants agreed that Vitamin Energy\* shots are effective at reducing brain fog.
  - 78.6% of participants agreed that the effects of a Vitamin Energy<sup>®</sup> shot last longer than coffee or other caffeinated drinks.
- After 14 days of using Vitamin Energy<sup>®</sup> shots:
  - 89.3% agreed that the Vitamin Energy® shots are effective at boosting energy.
  - 82.1% agreed that they feel energized very quickly after taking the Vitamin Energy\* shots.
  - 75.0% of participants feel ready to take on the day after taking the Vitamin Energy\* shots.





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