

CONKA

Real-World Evidence Report

Cognitive performance patterns from 712 app users and 7,593 in-app cognitive tests, measured with an FDA-cleared assessment over 30 months.

Report series: APP-01 to APP-05 · **Dataset window:** Nov 2023 – Jun 2026

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What this document is — and is not. This is a **real-world evidence report**: a transparent summary of observational, self-reported data collected inside the CONKA app. It is **not a clinical trial** and does not establish that CONKA causes any outcome. Findings are per-user, self-controlled observations, graded by strength of signal. Where samples are small, we say so. Cognitive test scores reflect test performance only and do not constitute health claims about CONKA products.

Food supplements are not a substitute for a varied and balanced diet and a healthy lifestyle. The in-app assessment is FDA-cleared as a medical device for measuring cognition; that clearance applies to the measurement instrument, not to CONKA products.

Executive summary

CONKA is unusual among supplement brands in that it runs a measurement loop: users take the product, then complete a five-minute cognitive test inside the app that plots against their own personal baseline. Over 30 months this produced 7,593 tests from 712 users. This report formalises the five patterns that recur in that data.

712

Users tracked

7,593

Cognitive tests

30

Months

5

Patterns reported

The measurement instrument

Scores come from a cognitive assessment developed by Cognetivity Neurosciences from Cambridge University research, FDA-cleared as a medical device, with 93% sensitivity for detecting cognitive change and 87.5% test-retest reliability, validated across 14 NHS Trusts (ADePT Study, PMC10533908; HRA ISRCTN95636074). The strength of this report rests on the instrument being validated even though the deployment is observational.

How to read the findings

Grade	Meaning	Use it for
Strong	Large sample, consistent direction, effect visible across many users	Confident description of the pattern
Moderate	Clear direction but smaller sample or more confounds	Directional insight; hypothesis for testing
Directional	Very small n (often <30, sometimes <15); shown for transparency	Signal only — never a conclusion

The core methodology, in one line. Every figure uses a **per-user delta**: each person is compared only to their own baseline, never to other people. This removes differences in natural ability and is the right design for observational self-tracking — but it cannot, on its own, prove causation.

The five patterns at a glance

#	Pattern	Headline observation	Sample	Grade
01	Time of day	Sharpest 9am–3pm; ~0.82 pts below average by 9pm	712 users · 7,593 tests	Strong
02	Mental fatigue	Fatigued days ~1.8 pts off personal best; +24ms slower	260 users · 1,248 tests	Strong
03	Stress	Moderate stress ~5.4 pts off calm baseline; in 53% of sessions	12 users · 44 tests	Moderate
04	Alcohol	<6 drinks: no clear signal; 6+ : ~4.9 pts next morning	27 users · 113 tests	Moderate
05	Coffee vs CONKA	Coffee alone ~flat; gains tracked with CONKA logging	501 tests · 19 months	Moderate

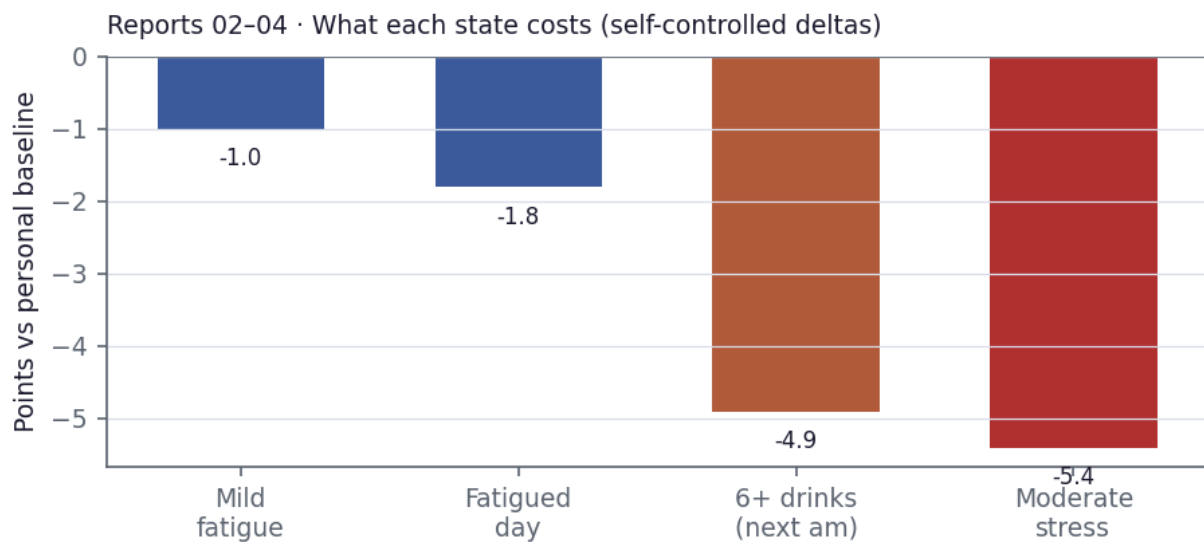


Figure A. What each impaired state costs, in points off the individual's own baseline. Values as reported in the app dataset. Fatigue and stress are the two largest recurring signals.

Cognitive performance runs on a daily curve

Headline: Sharpest hours are 9am–3pm. By 9pm, scores drop nearly a full point below the daily average.
Grade: Strong — 712 users · 7,593 tests · 30 months.

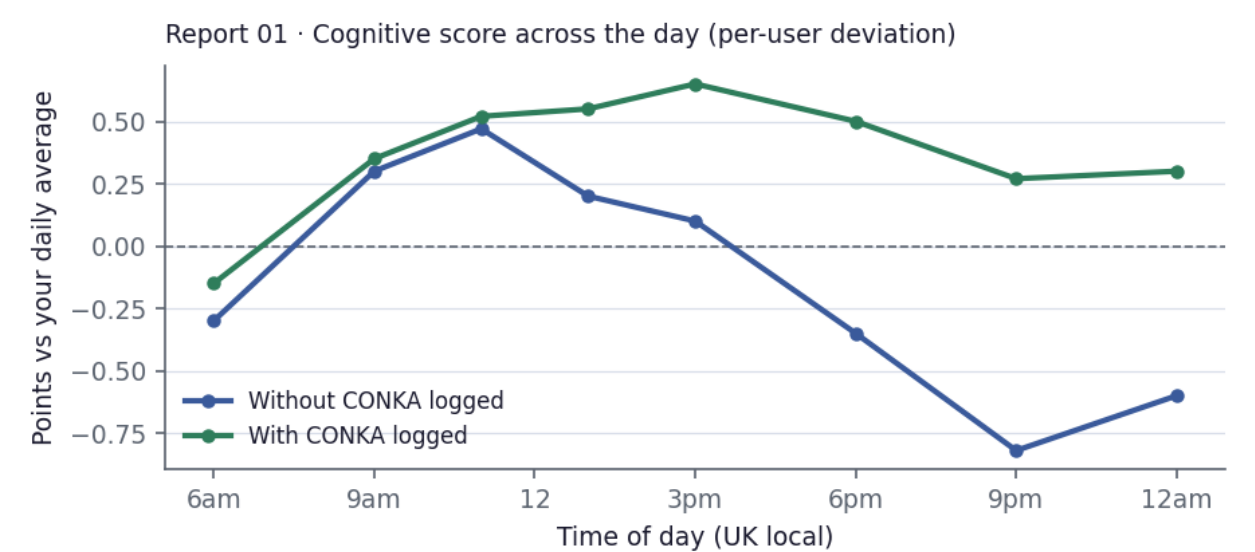


Figure 1. Per-user deviation from personal daily average across the day. **Curve shape is illustrative**, reconstructed from reported anchor points (morning peak +0.47 at 9am–12; evening trough –0.82 at 9pm; CONKA-day dip-window lift +1.09). Replace with the raw per-hour series in the published version.

Window	Effect	Detail	Sample
Morning peak	+0.47	Sharpest 9am–noon, ~half a point above daily average	n=1,650 · 09–12
Evening dip	–0.82	Real, measurable trough by 9pm	n=818 · 21–24
CONKA-day (obs.)	+1.09	On CONKA-logged days, scores held above the non-CONKA curve in dip windows	n=74 · 18–21

Observation, not claim

On CONKA-logged days, scores stayed above the daily average precisely in the windows where the curve normally drops most (late afternoon and evening), while the mid-morning gap nearly disappeared. This is a consistent directional pattern across all four dip windows (247 CONKA-tagged tests), but users may differ in unmeasured ways.

Methodology. Per-user deviation from personal mean; each test compared to that user’s own daily average across all hours. 7,593 tests · 712 users · Nov 2023–May 2026. Timestamps treated as UK local time (timezone not stored — a known limitation for this report specifically).

What everyday states cost

Report 02 · Mental fatigue — Grade: Strong

Fatigued days cost ~1.8 points off personal best and slow reaction time ~24ms (~6%). On days users self-reported not being at their best, scores sat 2.7 points below their peak — the subjective sense and the objective score agreed. A small split (n=15 with both conditions) showed 41ms faster reaction on CONKA-logged fatigued days: directional only.

Independent ingredient evidence (as published, not extrapolated to product effect): Acetyl-L-Carnitine improved psychomotor speed and reduced mental fatigue (RCT, 125 subjects, 90d; PMID 18937015); Rhodiola rosea showed an anti-fatigue effect (Phase III DBPC, 60 subjects, 28d; PMID 19016404).

Report 03 · Stress — Grade: Moderate

Moderate stress was the single largest signal in the dataset: ~5.4 points off calm-day baseline and ~41ms (~10%) slower reaction. It is also the background state — 53% of all sessions were logged under at least mild stress. Only 3 users had stressed days both with and without CONKA, which is below the threshold to report a CONKA-effect observation, so none is made.

Ingredient evidence: Ashwagandha (KSM-66) reduced perceived stress and serum cortisol (RCT, 64 subjects, 60d; PMID 23439798); Lemon Balm reduced induced-stress anxiety ratings (DBPC crossover, 24 volunteers; PMID 16444660); Rhodiola reduced awakening cortisol response (PMID 19016404).

Report 04 · Alcohol — Grade: Moderate

Under 6 drinks produced no consistent signal. At 6+ drinks the next morning showed ~4.9 points off sober baseline, ~29ms (~7%) slower reaction, and a self-reported 16% drop in readiness that the scores matched. A split at n=11 showed 56ms faster reaction on CONKA-logged hangover mornings — directional, and the sample may reflect lighter drinking nights.

Why the small-n cells stay in. The stress (n=12) and CONKA-effect splits (n=11–15) are deliberately shown rather than hidden. Reporting them **with their limitations attached** is what makes the whole document trustworthy — and is exactly the transparent, sourced style that answer engines and careful readers reward. They are signals to test, not results to cite.

Coffee gets the credit; the data gives it to CONKA

Headline: Measured against each user's own baseline, coffee alone barely moved scores. The lifts in score and error rate tracked with CONKA logging. **Grade: Moderate** — 501 tests with both logged · 19 months.

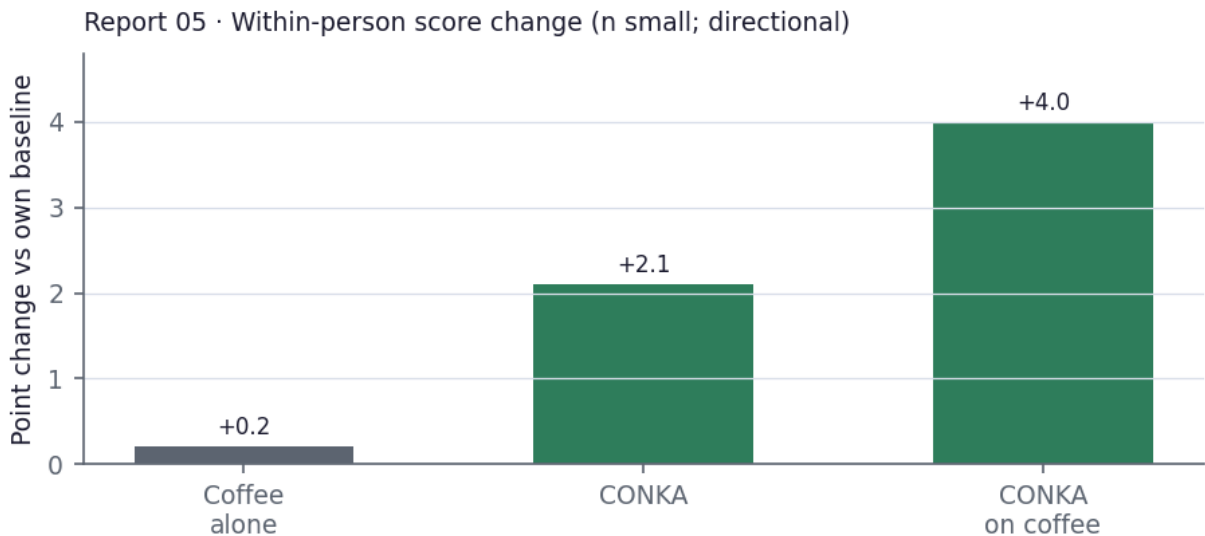


Figure 2. Within-person score change vs each user's own intake history. Coffee-alone sits level with drinking nothing; CONKA-containing conditions are higher. The CONKA-only cell is small (n=12) and reaction-time signals disagree between raw group means and within-person deltas — so score, not milliseconds, is the lead metric.

Condition	Within-person change	% improving	Sample
Coffee alone	+0.2 pts (≈ flat)	—	n=104–222
CONKA	+2.1 pts	60%	n=47
CONKA on coffee	+4.0 pts	64%	n=22

Interpretation

The cleanest signal is the interaction: among 22 users with both a coffee-only and a coffee-plus-CONKA history, adding CONKA was associated with +4 points and nearly two in three improving. This is observational and self-reported; it is consistent with, but does not prove, a CONKA contribution.

Methodology. Two methods. Raw group means average each metric within four consumption groups; per-user deltas compare each user to their own intake history and govern where the two disagree. Any caffeine = coffee; any dose = CONKA. 501 tests with both factors logged, practice tests excluded. Nov 2024–Jun 2026.

Limitations, stated plainly

This report's credibility depends on being honest about what the data cannot do. The following apply to every finding above:

- **Observational, not experimental.** No randomisation and no control group. Associations are not causal.
- **Self-reported states.** Alcohol, fatigue, stress and readiness are opt-in self-reports at test time, subject to recall and reporting bias.
- **Selection effects.** People who choose to test — and who log CONKA on a given day — may differ systematically (e.g. a CONKA-logged hangover may follow a lighter night).
- **Practice effects.** Repeated testing can shift scores independent of any intervention; practice tests are excluded from Report 05 but the risk is not fully eliminated.
- **Small CONKA-effect cells.** The within-CONKA splits (n=11–74) are directional signals, not conclusions.
- **Timezone.** Test timestamps are treated as UK local; exact timezone is not stored, affecting Report 01 precision.

What would raise the evidence grade

These app findings are hypothesis-generating. Confirmatory evidence for any CONKA effect requires a randomised, controlled design — which CONKA runs separately with professional sports organisations (15+ trials; results held under NDA). The right role for this report is to describe real-world cognitive patterns and to motivate controlled testing, not to substitute for it.

Suggested citation

Kurup, R. (2026). *CONKA Real-World Evidence Report: Cognitive performance patterns from 712 app users (APP-01–APP-05)*. CONKA. Retrieved from <https://www.conka.io/app-insights>

References (instrument & ingredient evidence)

- ADePT Study — Cognetivity ICA validation. PMC10533908.
- NHS Memory Clinic validation. HRA ISRCTN95636074.
- Malaguarnera et al. (2008), Acetyl-L-Carnitine and mental fatigue. PMID 18937015.
- Olsson et al. (2009), Rhodiola rosea, fatigue and cortisol. PMID 19016404.
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- Kennedy et al. (2006), Lemon Balm and induced stress. PMID 16444660.

Publishing note. This document is designed to be released as a downloadable PDF from conka.io/app-insights and, in a fuller form with a named academic co-author, posted to a preprint server (e.g. medRxiv) as a real-world-evidence / methods paper about cognition measured in the wild. Reserve the term "clinical study" and "white paper" for the randomised sports trials, where efficacy claims can legitimately live.