

Fueling Recovery

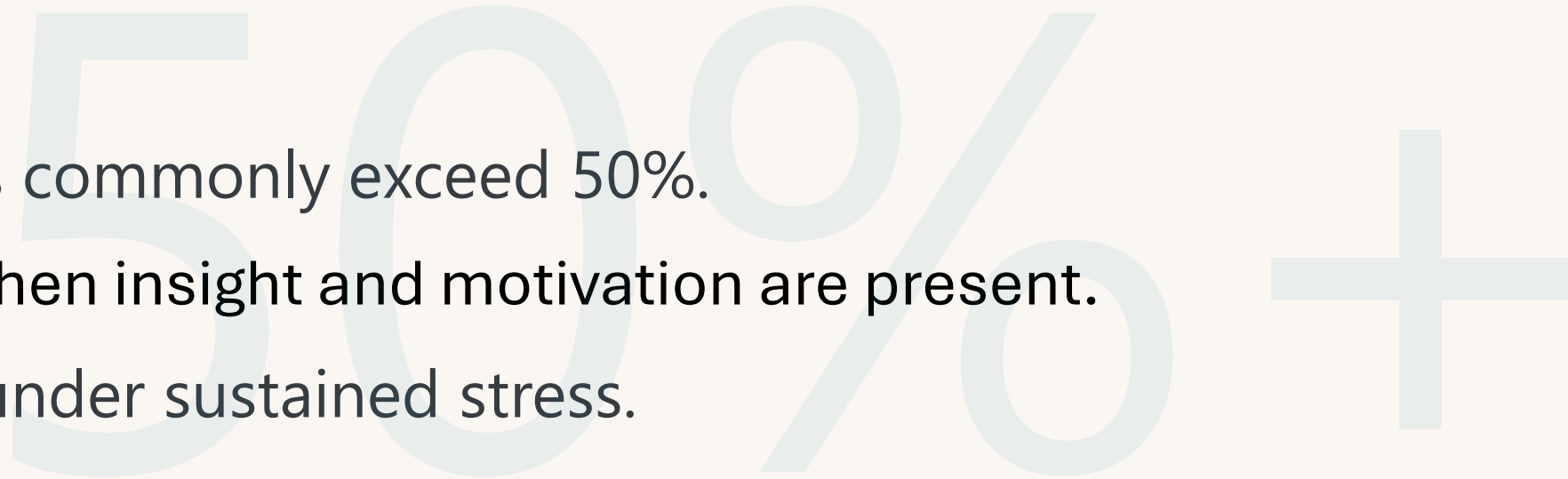
How Amino Acid Therapy & Nutrition
Rebuild the Addicted Brain



HEATHER DALE
EAT TO BEAT YOUR ADDICTION

The Clinical Reality

Relapse rates commonly exceed 50%.
Often even when insight and motivation are present.
Rates climb under sustained stress.



How Recovery is Commonly Framed

Psychological
insight

Behavior
Change &
Coping Skills

Community &
Accountability

Meaning /
Spirituality

What If This Isn't Enough?

Insight

Skills

Community

Meaning

And Still.

Relapse rates exceed 50%.

What Determines Stability?

Biological Capacity

Brain chemistry • Blood sugar • Stress physiology

When Capacity is Depleted

Volatile mood

Intense cravings

Poor stress tolerance

Fragmented sleep

Low motivation despite insight

What Drives Depletion?

Neurotransmitter depletion

Inflammation and stress-system activation

Metabolic instability

If These Drive Depletion...

What Does the Brain Need
to Rebuild?

Why Nutrition Matters

The brain must rebuild what addiction depleted.

Neurotransmitters are made — not imagined.

They require amino acids & micronutrient cofactors.

They depend on stable metabolic energy.

Amino Acid Therapy

Precursors for neurotransmitter repair

Targeted & symptom-guided

Introduced gradually & individually

Designed to support — not replace — recovery work

Nutritional Foundations for Repair

Adequate protein intake

Micronutrient repletion

Blood sugar stabilization

Case Example

Biochemical Stabilization in Recovery

49-year-old woman, one year sober

Persistent anxiety, early waking, low stress tolerance

Symptoms intensified under cognitive and emotional load

No relapse — but no relief

Intervention Logic & Outcomes

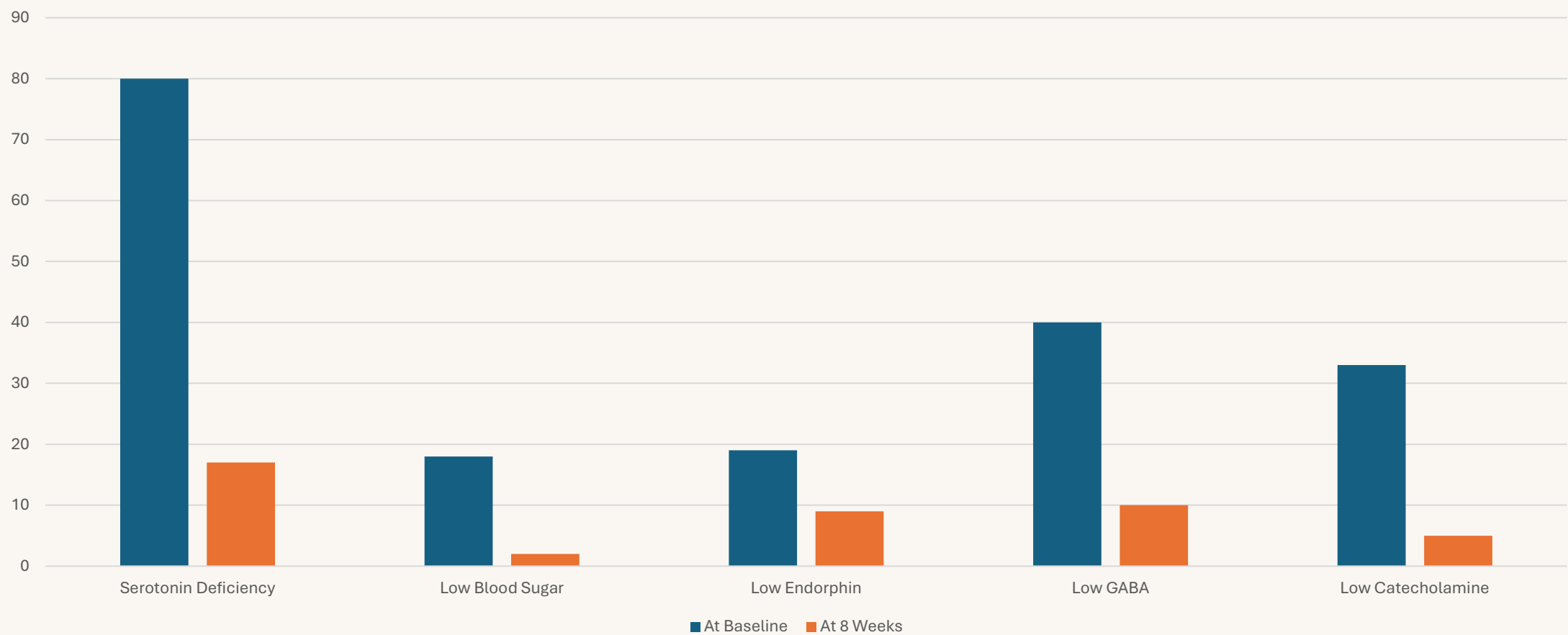
Targeted amino acid support (symptom-guided)

Protein adequacy and blood sugar stabilization

Micronutrient cofactors

Recovery work unchanged

Amino Acid Therapy Symptom Scores Before vs After Intervention



The Biology Is Well Documented

Reward Circuitry & Dopamine Adaptation

Persistent alterations in mesolimbic signaling after chronic use (*Volkow et al., 2016*)

Addiction Neurocircuitry

Stress–reward system dysregulation contributes to relapse (*Koob & Volkow, 2010*)

Brain Stress Systems

Chronic activation of stress pathways sustains negative reinforcement (*Koob, 2008*)

Inflammation & Mood Regulation

Cytokine signaling linked to mood instability and stress sensitivity (*Raison et al., 2006*)

What We Consistently See

Reduced baseline anxiety

Improved stress tolerance

Reduced stress-driven cravings

Greater engagement in therapy

When Capacity Stabilizes

Anxiety becomes manageable

Stress no longer escalates into urgency

Cravings lose intensity

Therapy gains traction

Case Example: Capacity Under Stress

38-year-old male, early recovery

High occupational stress

Family conflict

Sleep disruption

Intervention Logic

Regular protein intake to support neurotransmitter synthesis

Structured meals to stabilize blood sugar

Targeted amino acids to support catecholamine signaling

OUTCOME:

Stabilization Under Stress

No escalation in cravings during stress

No stress-triggered relapse

Maintained engagement in therapy and recovery supports

Stabilizing Blood Sugar

Regular, structured meals

Adequate protein intake

Avoiding reactive hypoglycemia

Reducing stress-hormone volatility

Micronutrient Cofactors

Magnesium (GABA modulation, stress buffering)

Vitamin B6 (neurotransmitter synthesis)

Zinc (dopamine regulation)

Iron (dopamine & norepinephrine synthesis)

Folate & B12 (methylation support)

Targeted Amino Acid Support

Symptom-guided assessment

GABA support for hyperarousal

Dopamine precursors for low drive & anhedonia

Serotonin support for mood instability

Glutamine for alcohol-related cravings

Integration With Recovery Work

Therapy remains intact

Recovery framework remains intact

Biological capacity stabilized

Craving intensity reduced

Stress response buffered

A More Complete Recovery Model

Behavior & Choice

Therapy • Skills • Community • Meaning

BIOLOGICAL CAPACITY

Brain chemistry • Blood sugar • Stress physiology

What This Changes in Recovery

Addiction has biological consequences.

Recovery becomes fragile when biological capacity is depleted.

Rebuilding biology makes recovery work more sustainable.

Recovery is Rebuilding

Not Just Abstaining.



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