

# KATE SIELMANN

MOUNTAINEERING & TREKKING TRAINING

*Caffeine & Endurance*

The Science-Backed Protocol for  
High-Performance in the Mountains

*By Kate Sielmann*



# *The Science-Backed Protocol for High-Performance in the Mountains*

## **3–5 DAYS** before your summit push or overnight effort

Reduce your caffeine intake to **reset caffeine sensitivity** and maximise its effect when you need it most (*Guest et al., 2021*). This strategy helps prevent tolerance buildup, ensuring that when you finally take caffeine, **it has the strongest possible impact**.

## **THE FIRST 12 HOURS:**

At the start of your summit push or overnight effort, avoid heavy caffeine intake and instead:

Keep doses low—**ideally 25–50 mg**, if needed.

Rely on natural energy reserves for as long as possible.

*Why?* Caffeine is most effective when fatigue starts setting in (*Burke, 2008*). If you take too much too early, your body burns through its reserves before you actually need them.

## **12–24 HOURS:**

At this point, fatigue is accumulating, and your body likely needs a bit of extra support. This is the point at which caffeine is most useful for delaying exhaustion and maintaining focus (*Spiet, 2014*).

Take moderate doses—**50–100 mg every 3–4 hours** to keep energy levels stable.

Pair caffeine with carbohydrates (such as energy gels or chews) to enhance energy absorption and performance (*Graham, 2001*).

Some energy gels and chews already contain caffeine, while others don't. It's entirely up to you how you prefer to take it—whether through gels, capsules, or a small amount of coffee.

## **My Recommended Energy Gels & Chews:**

Precision Fuel & Hydration – PF 30 Chews

GU Energy Lab – Energy Chews

GU Energy Lab – Energy Gels

These aren't ads—they're just my personal go-to's that have worked for me and my clients.

*P.S. If you're now here... Hey, I'm Kate Sielmann*

I'm a sport scientist, author, coach, mountaineer, proud mum to twin girls, and en route to my Masters in Performance Psychology. Welcome to my little slice of downloadable goodness entirely focused on helping you get better prepared for your next high altitude adventure.

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