Cold Exposure Protocol

Evidence-based cold water immersion — session by session

BEFORE THE SESSION

- [ ] Hydrate — drink 250-500ml water
  30 min before, not immediately before
- [ ] Set a timer — start at 60 seconds
  Build to 3 min over 2-4 weeks
- [ ] Target temp: 10-15C (50-59F)
  Colder is not better; this range is optimal
- [ ] Note baseline mood/energy (1-10)
  Tracks adaptation over time

DURING THE SESSION

- [ ] Breathe slowly — nasal if possible
  Urge to gasp passes in ~30 seconds
- [ ] Keep torso submerged — not just limbs
  Core cooling drives the hormonal response
- [ ] Stay still — movement warms the water
  Thermocline effect reduces stimulus
- [ ] Track time, not sensation
  Discomfort is not a signal to stop

AFTER THE SESSION

- [ ] Reheat passively — move, do not towel
  Active thermogenesis drives brown fat activation
- [ ] Avoid hot shower for 10 minutes
  Thermal contrast blunts the dopamine peak
- [ ] Note mood/energy 30 min post
  NE peak typically 15-30 min after immersion

FREQUENCY

3-5 sessions/week optimal for adaptation.
Daily use blunts the hormetic stimulus.
Morning: norepinephrine peak aids focus.
Post-workout: wait 4h — blunts hypertrophy.

THE EVIDENCE

Norepinephrine: Cold at 14C raises NE 300% (Siems et al., 1994).

Dopamine: 250% increase sustained 2-4 hours post-immersion (Sussman et al., 2022).

Inflammation: CWI reduces IL-6 and CRP in athletes (Bleakley et al., 2012).

Fatigue: Cold showers reduced fatigue 54% over 90 days (Buijze et al., PLOS ONE, 2016).

PROGRESSION SCHEDULE

Week 1	60 sec	15C / 59F
Week 2	90 sec	14C / 57F
Week 3	2 min	13C / 55F
Week 4+	3 min	10-12C / 50-54F

CONTRAINDICATIONS

- Raynaud's disease or peripheral neuropathy
- Cardiovascular disease (consult physician)
- Open wounds or active skin infections
- Pregnancy
- Immediately post-exercise (30 min wait)