

Running Load Management

How to Train Smarter, Recover Better and Stay Injury-Free as a Runner

Most running injuries are not caused by bad luck or weak bodies — they are caused by loading the body faster than it can adapt. Understanding how to manage your training load is one of the most powerful injury-prevention tools available. This resource explains the key principles, gives you practical frameworks to use every week, and helps you recognise warning signs before they become injuries.

1 What Is Training Load?

Training load refers to the total stress placed on your body through running. It has two dimensions:

Load Type	What It Includes	Why It Matters
External load	Distance (km/miles), time on feet, sessions per week, elevation gain, pace	The physical work your body performs — measurable from your watch or training log
Internal load	Perceived effort (RPE), heart rate, sleep quality, stress levels, nutrition, life demands	How hard your body is working to absorb the external load — two runners doing the same mileage can have very different internal responses

Key insight

Both matter. If your life is stressful, your sleep is poor, or you are under-fuelling, the same training session is harder for your body to absorb. Managing load means managing both.

2 The 10% Rule — Useful but Incomplete

You may have heard the advice to increase mileage by no more than 10% per week. This is a reasonable starting point, but research shows it does not fully explain injury risk. A more useful concept is the acute:chronic workload ratio (ACWR).

Concept	What It Measures	Practical Meaning
Acute load	Your total training load over the past 7 days	What you have done this week — your current fatigue level
Chronic load	Your average weekly load over the past 28 days	What your body is used to — your fitness and resilience base
ACWR ratio	Acute divided by chronic (e.g. 1.2 = 20% more than average)	A ratio of 0.8-1.3 is considered the 'sweet spot'. Above 1.5 significantly increases injury risk.

ACWR Range	Risk Level	What It Looks Like
Below 0.8	Undertraining zone	Mileage well below what your body is adapted to — reduced fitness benefit, may increase fragility over time
0.8 – 1.3	Optimal training zone	Challenging but manageable. Body is adapting. Injury risk is low when other factors (sleep, nutrition) are managed
1.3 – 1.5	Caution zone	Spike in load. Body may not fully absorb the stress. Reduce intensity, monitor how you feel closely
Above 1.5	High injury risk zone	Significant overload spike. Injury risk rises sharply. This is the zone most injured runners were in the week before their injury

3 Building Mileage: A Practical Framework

Principle	What It Means in Practice
The 3:1 build pattern	Increase load for 3 weeks, then take a recovery week (reduce by 20-30%). This allows tissue to remodel and adapt before the next loading block.
Hard/easy distribution	80% of your running should feel easy (conversational pace, low effort). Only 20% should be hard. Most recreational runners do the opposite, which is a major driver of overuse injury.
Respect your longest run	The long run should not exceed 30-35% of your total weekly mileage. Disproportionately long runs are a strong predictor of stress fractures and tendon problems.
Increase one variable at a time	Do not add mileage, intensity and a new session type in the same week. Change one variable at a time. When increasing distance, keep pace easy. When adding speed work, keep volume steady.
Return after a break	After any break of 2 or more weeks, restart at 50-60% of your previous volume regardless of how fit you feel. Cardiovascular fitness returns faster than tendons and bone adapt.

4 Warning Signs: When to Back Off

Pain is a signal, not a weakness. Learning to differentiate between the normal discomfort of training and warning signs of tissue damage is a key running skill.

Signal	What It May Mean	What to Do
Pain that warms up and disappears	Early tendon irritation or mild inflammatory response	Monitor closely. Do not increase load this week. If it persists beyond 2-3 sessions, seek assessment.
Pain that gets worse as the run goes on	More significant tissue irritation — the structure is not tolerating load	Stop the run. Rest 2-3 days. See a clinician if it does not settle.
Pain the morning after a run	Tissue has been loaded beyond its current tolerance	Reduce load by 30-40% for 1 week. Only return to previous level once symptom-free for 3 sessions.
Sharp, localised bony pain	Potential stress reaction or fracture — particularly in the metatarsals, tibia or navicular	Stop running immediately. Seek assessment. Do not train through bony pain.
Persistent soreness for 3+ days	Insufficient recovery between sessions	Add a rest day. Review sleep and nutrition. Consider reducing weekly volume for 1-2 weeks.
Pain that changes your running form	Compensatory patterns that load other structures and drive secondary injury	Stop. Running through altered mechanics risks creating a second injury site.

5 Recovery: The Other Half of Training

Recovery Factor	Why It Matters for Runners	Practical Target
Sleep	Tissue repair, growth hormone release, and nervous system recovery all happen during sleep. Poor sleep increases injury risk and reduces performance.	7-9 hours per night. Sleep quality matters as much as quantity.
Nutrition timing	Muscles and tendons repair using protein. Carbohydrate replenishes glycogen for the next session. Running fasted chronically increases injury risk.	Protein at every meal (1.4-1.8g per kg bodyweight per day). Eat within 30-60 min after hard sessions.
Rest days	Adaptation happens during rest, not during the run. Rest days are not wasted days.	At least 1-2 full rest days per week. More when your internal load is high (stress, illness, travel).
Easy runs	80% of runs at easy pace allows active recovery while maintaining aerobic base. Junk miles (moderate, not easy) accumulate fatigue without training benefit.	If you cannot hold a conversation, you are running too fast for an easy day.
Cross-training	Swimming, cycling or strength training maintains fitness during injury or recovery without adding impact load to healing tissue.	Replace high-impact sessions with low-impact alternatives during recovery phases.

The long game

The runners who stay injury-free long-term are not those who train the hardest — they are those who manage load consistently, respect recovery, and respond early to warning signs. Consistency over months and years is what builds a resilient body.