Kick Starter: Chapter 5 — Training: How It Works

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Welcome

Hi there!

Welcome to the LEVELUP Online Coaching Kick Starter.

Whether you are picking up a barbell for the first time or you have been training for years and are finally ready to do it properly — this is where we build the foundation.

I have put together 7 chapters, each covering a key topic that will set you up to get the most from your coaching. Training, nutrition, mindset, progress tracking, sleep — everything you need to understand what you are doing and why.

Work through these chapters at your own pace. The more you understand the principles behind your programme, the better your results will be.

Let's get to work.

Andrew

What to Expect in Chapter 5: Training: How It Works

1. The Principles of Training
2. Resistance Training — Strength, Hypertrophy, Endurance
3. What Actually Happens When You Train
4. Cardiovascular Exercise
5. Periodisation

The Principles of Training

Before we get into sets, reps, and programmes, it helps to understand the principles that sit behind all of it. These apply whether you are lifting weights, running, cycling, or doing any other form of structured exercise. Understanding them is what separates people who consistently make progress from people who train hard for months and wonder why nothing is changing.

The principles can be grouped under the acronym **SPORT**.

S — Specificity

Your training needs to match your goal. If you want to get stronger, you need to train for strength. If you want to improve your cardiovascular fitness, you need to train your cardiovascular system. The programme I build for you is designed around your specific goals — this is why a generic plan from the internet rarely delivers the results it promises. It was not built for you.

P — Progression

The training has to get harder over time. Your body adapts to the stress placed on it. Once it has adapted, the same stress produces no further improvement. This is why progressive overload — consistently adding weight, reps, or difficulty to your training — is the single most important variable in long-term results. Turning up and doing the same workout with the same weights every week is maintenance at best.

O — Overload

To improve, you have to work beyond your current capacity. This does not mean training to failure every session or destroying yourself — it means applying enough stimulus to drive adaptation. The programme manages this for you. Your job is to push within the rep ranges given and log honestly so we can progress appropriately.

R — Reversibility

The adaptations you build are not permanent if you stop training. Fitness is maintained through consistent effort. This is not a reason to panic if life gets in the way for a week or two — short breaks do not undo months of progress. But it is a reason to stay consistent over the long term rather than cycling through intense periods followed by extended breaks.

T — Tedium

Doing the same thing indefinitely leads to stagnation and boredom. Your programme will be updated every four to six weeks to introduce new stimuli, keep training engaging, and continue driving adaptation.

Resistance Training

Resistance training is the foundation of most effective coaching programmes — including yours. It builds muscle, increases strength, improves body composition, supports bone density, and boosts metabolism. If fat loss or physique change is a goal, resistance training is not optional.

There are three primary training goals within resistance training, each with its own rep ranges and approach.

Strength

Strength training focuses on increasing the maximum force your muscles can produce. The rep range is typically **1 to 6 reps** per set, performed with heavy loads — usually 85 to 100 percent of your one-rep maximum. Rest periods are long, between 2 and 5 minutes, because the nervous system needs adequate recovery between maximal efforts.

This is how powerlifters, Olympic lifters, and strongmen train. If your goal is to move serious weight, this is where you operate.

Hypertrophy

Hypertrophy training focuses on building muscle size. The rep range is typically **6 to 12 reps** per set at 65 to 85 percent of your one-rep maximum, with rest periods of 60 to 90 seconds. It combines compound movements — squats, deadlifts, bench press, rows — with isolation work targeting specific muscle groups.

This is the most common training style for people looking to build a lean, muscular physique. If you want to look like you train, this is the primary approach.

Endurance

Muscular endurance training focuses on the ability of a muscle to sustain repeated effort over time. Rep ranges are typically **12 or more**, loads are lighter, and rest periods are shorter — 30 to 60 seconds. This builds stamina within the muscle itself rather than maximum strength or size.

In practice, most programmes sit somewhere across all three of these — and that is intentional. Building strength makes hypertrophy training more effective. Building muscle increases your capacity to do more work. The rep ranges are a guide, not a rigid box.

Goal	Rep Range	Load (% 1RM)	Rest Period
Strength	1–6	85–100%	2–5 minutes
Hypertrophy	6–12	65–85%	60–90 seconds
Endurance	12+	<65%	30–60 seconds

What Actually Happens When You Train

Understanding the process helps you stay patient when results feel slow. The body does not adapt overnight, and the first few weeks of training look very different to what happens over months and years.

The first 2 to 4 weeks — neural adaptation

In the early stages of a resistance training programme, the primary adaptations are neural rather than muscular. Your nervous system is learning — establishing pathways between the brain and the muscles, improving coordination, increasing motor unit recruitment. This is why someone new to training often feels uncoordinated on exercises they have never done before. It is the same as learning any new skill.

During this phase you may notice strength increasing rapidly — this is not because you have built muscle, it is because your nervous system is getting better at using the muscle you already have. Actual muscle growth comes later, after the neural foundation is established. This is also why people who expect visible physical changes in the first two weeks are always disappointed. The real work is happening at a level you cannot see yet.

Muscle growth — the ongoing process

When you do resistance training you create small amounts of damage to muscle fibres. During recovery — over the following 48 to 72 hours depending on training intensity and your experience level — those fibres repair and grow back slightly thicker and stronger. Over time, with consistent progressive overload, this accumulates into meaningful increases in muscle size and strength.

Two types of hypertrophy drive this process. **Myofibril hypertrophy** — the kind produced by strength training at lower rep ranges — increases the number of contractile proteins within the muscle, directly increasing strength. **Sarcoplasmic hypertrophy** — more associated with moderate rep ranges of 6 to 15 — increases the fluid volume within the muscle cell, contributing more to size than to raw strength.

In practice both are happening simultaneously to varying degrees depending on how you are training.

The adaptation timeline

1

Weeks 1–4

Neural adaptations, improved coordination, early strength gains.

2

Weeks 4–8

Muscle growth begins to become visible, strength continues to increase.

3

Months 3–6

Meaningful changes in body composition, significant strength progress, improved fitness.

4

6 Months+

This is where the real results compound.

> The clients who get the best results are not the ones who trained hardest in the first month. They are the ones who showed up consistently for six months. **Patience is not passive — it is part of the strategy.**

Cardiovascular Exercise

Cardiovascular exercise covers a wide range of activities — running, cycling, rowing, swimming, HIIT, circuit training, walking — but they share the same fundamental objective: raising and sustaining an elevated heart rate to stress the cardiovascular system and drive adaptation.

Regular cardio training produces a range of physiological changes over time. The heart becomes more efficient, pumping more blood per beat and reducing resting heart rate. Work capacity increases — the same effort feels easier. Stroke volume improves, reducing cardiovascular disease risk. Body composition improves as caloric expenditure increases.

> These are meaningful health adaptations, not just aesthetic ones.

The main methods

HIIT — High Intensity Interval Training

Alternates short bursts of high-intensity effort with recovery periods. It is time-efficient and produces significant cardiovascular and metabolic adaptations. It also places more stress on the body, so recovery needs to be managed alongside resistance training.

LISS — Low Intensity Steady State

Sustained, moderate-intensity activity — a 45-minute walk, a steady jog, a long bike ride. It is lower stress on the body, easier to recover from, and highly effective for increasing overall calorie expenditure without significantly impacting recovery from resistance training. For most people in a fat loss phase, LISS is a better fit than HIIT as a primary cardio tool.

Interval Training

Sits between the two — sustained effort at a harder pace than LISS with structured work and rest periods. Effective for improving aerobic fitness and performance.

Circuit Training

Integrates resistance exercises performed consecutively with minimal rest. High volume, time-efficient, targets multiple muscle groups. Can be a useful option when gym time is limited.

The cardio approach in your programme will be matched to your goal and your recovery capacity. The right amount of cardio is the amount that supports your results without compromising your ability to train and recover from the resistance work.

Progressive Overload

Progressive overload is the single most important principle in long-term training. Everything else — exercise selection, rep ranges, nutrition — supports it. But if progressive overload is not happening, meaningful progress is not happening.

The principle is straightforward. Your body adapts to the stress placed on it. Once it has adapted, that same stress no longer produces a significant training response. To keep improving, the demand has to keep increasing.

> Most people understand this in theory but do not apply it in practice. They turn up to the gym, do the same exercises with the same weights for the same reps, week after week, and wonder why their body has not changed in six months. The training is not failing them — they have simply stopped giving the body a reason to adapt.

Progressive overload does not mean adding weight every single session. That is not sustainable and eventually becomes impossible. It means applying progressive challenge over time through a range of variables.



Adding Weight

The most obvious method — the same exercise for the same reps but with more load.



Adding Reps

The same weight but completing more repetitions before reaching failure.



Adding Sets

Increases the total volume of work done in a session.



Reducing Rest Periods

Increases the density of the session — more work in less time.



Improving Technique & Range of Motion

A full-depth squat with 80kg is a greater stimulus than a half-rep squat with the same load.

Your programme tracks all of this. Log your weights and reps honestly in Trainerize after every session. That data is what I use to ensure your programme is progressing at the right rate. **Without it, I am guessing.**

Periodisation

Periodisation is the organised structure of training over time. It is what separates a well-designed coaching programme from a collection of random workouts.

The concept is simple. You cannot train at maximum intensity indefinitely. Trying to do so leads to stagnation, injury, or burnout. Periodisation manages training load by varying intensity and volume in a planned way — building it up across a training block, then deliberately reducing it to allow full recovery before the next phase begins.

A basic periodised structure

1 — Progressive Block

A four to six week block of progressive training — gradually increasing volume and intensity week on week.

2 — Deload Week

Training load is significantly reduced to allow full recovery before the next phase begins.

3 — Next Block Begins

The next block then begins at a slightly higher baseline than the previous one started.

4 — Long-Term Progress

Over months and years, this staircase pattern is what drives consistent long-term progress.

Periodisation also applies to the type of training across different phases.

Phase 1

A phase focused on building a strength foundation.

Phase 2

A phase focused on hypertrophy.

Phase 3

A phase focused on conditioning or fat loss.

Each phase builds on the last and creates a coherent progression towards the overall goal.

> Your programme is structured this way. The phases are designed with an end goal in mind, not just filled with exercises for the sake of it. When your programme updates every four to six weeks, **that is periodisation in action.**

Recovery and Deload

> Recovery is not the absence of training. It is when adaptation actually happens.

The training session creates the stimulus — the damage to muscle fibres, the stress on the nervous system, the metabolic demand. But the body does not get stronger during the session. It gets stronger during the recovery that follows. If recovery is inadequate, adaptation is compromised regardless of how hard you train.

The most important recovery tools



Sleep

At the top of the list — this is when the body does the majority of its repair work, when growth hormone is released, when the nervous system recovers from the demands of training.



Nutrition

Adequate protein provides the building blocks for muscle repair, and sufficient calorie intake ensures the body has the energy resources to adapt.



Stress Management

Chronic stress elevates cortisol, which directly interferes with recovery and muscle protein synthesis.



Managing Training Load

Not training a muscle group before it has recovered from the previous session is fundamental. Allow 48 to 72 hours before training the same muscle group again at high intensity.

Deload weeks

A deload is a planned period of reduced training load — typically one week every four to six weeks — where intensity and volume are brought down to approximately 60 percent of normal. This is not a rest week and it is not a sign that you are overtraining. It is a deliberate part of the programme structure.

The purpose of a deload is to allow the body to fully absorb the accumulated training stress of the previous block. Joints, tendons, and ligaments recover more slowly than muscle tissue. The nervous system — particularly when training at higher intensities — accumulates fatigue that is not always obvious day to day but compounds over weeks. A deload clears that fatigue and allows the next training block to begin from a fully recovered baseline.

Most people feel noticeably better in the week after a deload than they did going into it. Strength often improves in the first session back. This is the process working exactly as it should.

When a deload is scheduled in your programme, complete it as written. The temptation to push harder because the sessions feel easy is understandable but counterproductive. **The reduced load is the point.**

Conclusion

The principles in this chapter underpin everything in your programme. You do not need to memorise them — you need to understand them well enough to train with intention rather than just going through the motions.

Progressive Overload

The mechanism.

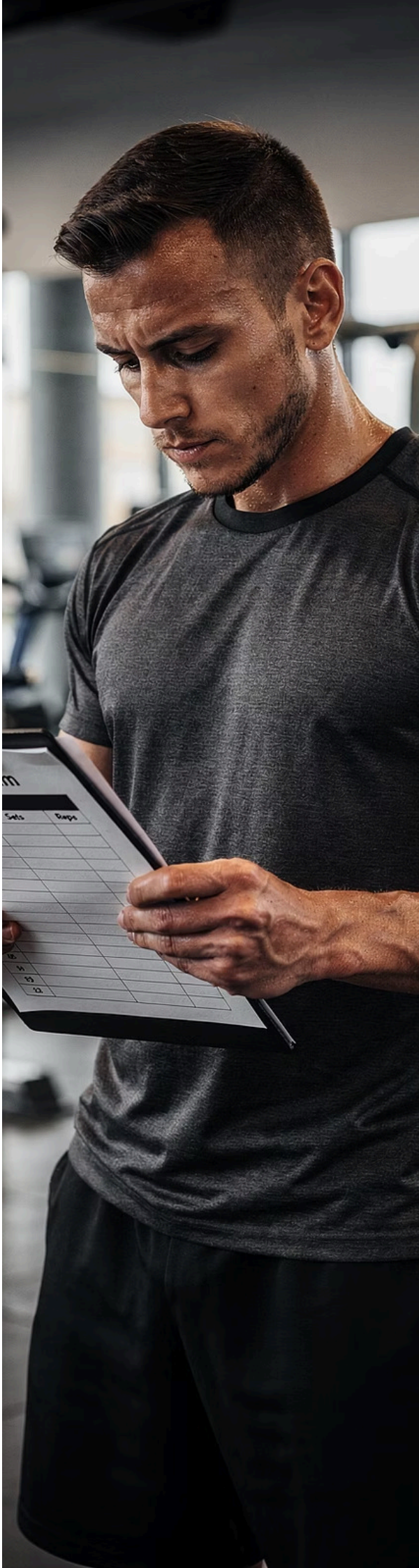
Consistency

The vehicle.

Patience

The strategy.

If you have questions about any exercise in your programme — form, purpose, how it fits into the bigger picture — message me in the app. **Understanding why you are doing something is part of the process.**



Tools and Resources

Recommended Resources

Andrew Caine PT Academy

Access training guides, nutritional resources, and educational content.
www.andrewcainept.com

Andrew Huberman Podcast

Evidence-based content on health, fitness, performance, and neuroscience.

Examine

Research-backed resource covering nutrition and supplements.

YouTube

Useful for exercise tutorials and form guidance.

Andrew Caine PT on Instagram

Regular evidence-based content on training, nutrition, and the balanced lifestyle you are working towards. **@andrewcainept**

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