



RRR Training Team 2.0

Calculate Your Heart Rate (HR) Zones

First: Find your Maximum Heart Rate using a basic and well-tested formula.

220 - your age = your maximum HR

For example: $220 - 40 = 180$

*based on a 40 year old person

Next: Do some simple calculations based on your Max Heart Rate (MHR) and increasing levels of effort.

MHR x 0.5 =

MHR x 0.6 =

MHR x 0.7 =

MHR x 0.8 =

MHR x 0.9 =

Now you are ready to plug the numbers into your training zones!

Zone 1 (50-60% MHR):

Zone 2 (60-70% MHR):

Zone 3 (70-80% MHR):

Zone 4 (80-90% MHR):

Zone 5 (90-100% MHR):

Using a 40 year old as the example:

Zone 1 (50-60% MHR): 90 - 108 beats per minute (bpm)

Zone 2 (60-70% MHR): 108 - 126 bpm

Zone 3 (70-80% MHR): 126 - 144 bpm

Zone 4 (80-90% MHR): 144 - 162 bpm

Zone 5 (90-100% MHR): 162 - 180 bpm

The Zones Explained

Zone 1

Zone 1 is used primarily for:

- Warming up
- Cooling down
- Resting between intervals
- Recovering

Zone 1 should feel almost **effortless**. It is a very easy, comfortable pace that you should ultimately be able to maintain for hours and hours at a time. You should be able to carry on a full-blown conversation with a fellow runner and breathe comfortably through your nose.

Benefits of Training in Zone 1

Training in zone 1 is used to get you warmed up and moving with little to no stress on the body. It also allows you to recover between intervals, lower your heart rate, and prepare yourself to train in higher intensity zones.

Workout Examples in Zone 1

- 15-minute warm up or cool down before and after main training sessions
- 40-minute recovery run after a previous day of intense training

Zone 2

Zone 2 is used primarily for:

- Long Runs
- Endurance
- Base Training

Zone 2 is a small step up from Zone 1 as it should *still feel comfortable* and you should be able to carry on a conversation with someone running alongside you. This is a zone you are able to sustain for hours at a time as well. It is predominantly used for long runs and base training sessions as it works your aerobic energy system.

Benefits of Training in Zone 2

Zone 2 focuses on improving your basic cardiovascular training and overall endurance. Working at this low intensity will ultimately result in being able to run faster, at the same effort level. Your muscle endurance will improve and your body will become a fat-burning machine.

This is truly the zone for endurance athletes to focus on. In your training plans, you will notice that about 70-80% of your training is in zones 1 & 2.

Workout Examples in Zone 2

- 2 hour consistent long run
- 45 minute recovery run

Zone 3

Zone 3 is used primarily for:

- Improving aerobic conditioning
- Marathon effort training
- Steady state runs

Zone 3 is where training becomes slightly uncomfortable due to the fact that lactic acid is beginning to build up. It's a strange in-between, not too easy yet not too hard. Even though it's a bit uncomfortable, it's an effort level you should be able to maintain *for an hour!*

Conversation in zone 3 is now reduced to incomplete sentences before a breath is needed.

Benefits of Training in Zone 3

In zone 3, we improve our speed, strength, efficiency, and running economy. After working this zone, harder sustained efforts will begin to feel less taxing and result in less fatigue.

Workout Examples in Zone 3

- 3 x 15 min zone 3 with 3 min zone 1 recovery between sets
- 25 – 60 min bouts in zone 3

Zone 4

Zone 4 is used primarily for:

- Long intervals
- Threshold training

We're not in Kansas anymore Toto...

Here is where training gets tough, real tough. Conversation has become a thing of the past, your breathing becomes heavy and labored, and you are just trying to push through these intervals.

Why does this zone feel so hard?

Because your body is switching from its aerobic to anaerobic energy system, arriving at the infamous **lactate threshold**. This is when lactic acid builds up in your muscles faster than your body can process it, which in turn makes your legs begin to burn.

Benefits of Training in Zone 4

Now that we are crossing over into long interval training, we will improve our power output, speed and leg turnover. We will also develop running efficiency and tolerance of moving at a harder pace for a more extended period of time.

Workout Examples in Zone 4

- 8 x 1 km zone 4 with 2-3 min zone 1 in between
- 4 x 8 min zone 4 with 2 min zone 1 in between

Zone 5

Zone 5 is used primarily for:

- Sprinting
- Short intervals
- Max speed

Zone 5 is where you are running at your **absolute maximum effort!** This means you will be unable to work at this intensity for more than a few minutes. Your heart will be pumping close to capacity, and you will be building up lactic acid so fast that your body will not be able process it.

Benefits of Training in Zone 5

In zone 5, you are working on improving your running economy including your form, turnover, max speed, reaction time, and power.

Workout Examples in Zone 5

- 6 x 400 meters zone 5 with 3-4 min complete rest in between
- 5 x 2 min zone 5 with 3 min walk in between