

# EXERCISE GUIDE

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**POLAR®**

# CONTENTS

1. Say Yes to Fitness	4
2. Setting Your Goals	7
3. Type of Exercise	11
4. Testing Your Fitness	14
5. Your Personal Fitness Program	18
6. Burn Calories	22
7. OwnZone Training	26
8. It's Not Only Exercise!	29
9. Getting on with the Program	33

## 1. SAY YES TO FITNESS



## It's an undisputed fact. Fitness is good for you!

Our bodies are made for moving. Unfortunately, the modern way of life is a sedentary one. Our forefathers sweated it out in the fields to survive, while, today, our work consists mostly of sitting on a chair, tapping away at a computer. This explains why fitness has become such an important lifestyle choice for so many of us.

Exercise makes us feel good. Exercise makes us strong and healthy. Saying yes to fitness is to increase quality of life. Here are the main benefits associated with exercise.

- it improves overall health and fitness
- it increases well-being, and reduces stress

With increased physical fitness, your body's ability to take in and use oxygen increases. Your muscles become stronger, your joints more flexible, and the amount of fat in your body decreases. Men and women of any age will experience these benefits.

Your body is a complex, sensitive piece of machinery. Becoming more knowledgeable about what's right and what's not in fitness can make all the difference. This guidebook presents you, therefore, with the correct principles of exercise - knowledge that will translate into greater success for you.

For you to be successful, you should make exercise a constant part of your life. Exercise needs to be regular for you to reap its benefits. This is probably the first golden rule. Another key principle is determining the amount of exercise that best corresponds to your personal fitness needs. How often you should exercise, how long and at which intensity level are important issues taken up in this guidebook.

Since our bodies are psychophysical entities, the mind will need to be in on it, as well. Knowing when to relax and recover is as important a part of fitness as the exercise itself. This guidebook provides you with advice to help keep you motivated and on-track.

Turn the page for knowledge that can change your life - for good!

## 2. SETTING YOUR GOALS



*The importance of setting personal goals can hardly be exaggerated. If you don't know where you are going, you will probably end up getting lost.*

To select appropriate goals for yourself, start by giving thought to why you want to exercise in the first place. Is it because you want to become fitter or lose weight? Or maybe improving the state of both your body and mind is what you are after? You might want to increase your endurance capacities or are just concerned about preserving your health. There may be a variety of reasons for you taking up exercise, and they are all valid. But an important part of *achieving* goals is knowing which ones to choose and how to define them.

Goals should be

- specific, not general
- challenging, but achievable
- divided into short-term subgoals

Goals that are too general, vague or unrealistic will leave you feeling frustrated and demoralized. Such goals will probably lead you to discontinue your exercise regimen, or make you exercise in an ineffective or counterproductive manner.

Crosscheck the benefits of a specific type of exercise with your personal goals to make sure you are doing the right thing. None of us has time to exercise the wrong way.

Goals don't have to be too rigid or easy. They should challenge you and give you a clear direction, but you should be able to revise them or clarify them as you go along.

Keep your goals short-term by dividing them into subgoals - a good way to keep your motivation up for a longer period of time.

Setting quantifiable goals or subgoals for yourself is also a smart way to keep you motivated.

A quantifiable subgoal is something you can measure, like heart rate:

- Record your average heart rate at a constant workload performance of, for example, 10-15 minutes. If you're using fitness equipment like a treadmill, a stationary bicycle or rowing machine, a certain load (resistance) and rate can be set. As you get more fit, your average heart rate drops for a constant performance. If you don't have access to such equipment, you can instead run on an outdoor track or use a set of stairs. Simply walk/run at a certain speed and for a certain length of time or journey.
- As you get fitter over time, your average heart rate gets lower and lower. Correspondingly, your speed increases or time to walk/run decreases at a certain heart rate.

You will be given tools throughout this guidebook that will help you clarify your goals and make them work for you. In the following chapters, you will find information on different types of exercise and exercise volumes to aim for. You will also be given hints on rest and recovery and on burning calories. Use this information to set your personal exercise goals, then plan your program and stick to it.

**Average heart rate**

*A value in beats per minute (bpm) representing the average heart rate measured over a period of time.*

**Endurance**

*The body's ability to resist fatigue; includes cardiorespiratory endurance and muscular endurance.*

### 3. TYPE OF EXERCISE



*Different types of exercise make your body do different things. The benefits, therefore, vary. Some are good for the heart, others increase your muscular strength, maybe in specific parts of your body, many are great for burning fat. Choosing the type of exercise that suits you will depend mainly on your personal goals.*

Here are some questions you can ask yourself when choosing an exercise.

- Why do I want to exercise?
- Am I an outdoorsy type or do I prefer being indoors?
- Do I like exercising alone or in groups?
- What part of my body do I want to work on?
- What gives me pleasure?

Your needs and preferences should be driving the choices you make. If strengthening your heart and getting fitter is important to you, then go for exercise that is aerobic, i.e. cardiovascular, like walking or running. For muscle strength, do circuit or strength training. If you want both a strong heart and strong muscles, combine the two by including aerobic and resistance training in your weekly schedule. Such a combination also works well for weight management. Practice yoga or gymnastics to increase flexibility, mental well-being and concentration. Or try out the many new exercise forms that improve body alignment and condition the midsection for added strength and balance. Good choices for exercise beginners are walking, cycling and swimming.

Doing something you enjoy increases your motivation, and helps you make exercise a regular - and fun - part of your life.

At the end of the day, the type of exercise you will likeliest stick to is the type of exercise that makes you feel good.

#### ***Aerobic exercise***

*Training that improves cardiorespiratory (heart, lungs and other respiratory passages) endurance by improving the efficiency of the body's aerobic energy-producing systems.*

#### ***Endurance activities/endurance training***

*Repetitive, aerobic use of large muscles (activities such as walking, cycling, rowing etc.).*

#### ***Resistance training (Strength training)***

*Weight training. Training designed to increase the body's strength, power, and muscular endurance.*

#### ***Circuit training***

*Circuit training is a group of exercises that are completed one after another. Each exercise is performed for a specified number of repetitions or for a set time period before having a quick rest and moving on to the next exercise. It can involve e.g. press-ups, sit-ups, bench dips, skipping, shuttle runs, squat thrusts, aerobics, burpees and step ups.*

## 4. TESTING YOUR FITNESS



*It is important to consider your current fitness level before you begin designing your exercise plan. Having this information will help you choose a more accurate and realistic goal for yourself, and, in fact, will influence the entire makeup of your program. But what does being fit mean? And how can it be tested?*

### **What is fitness?**

There are four main elements that define physical fitness:

- *aerobic (cardiovascular) fitness*: your ability to take in and supply your body with oxygen
- *muscular fitness*: muscle strength and endurance
- *flexibility*: ability to move joints and stretch muscles
- *body composition*: the proportion of body fat to fat-free mass.

All these are important elements to consider when analyzing your personal fitness. But aerobic fitness is a central component. Increasing your aerobic fitness has many health benefits, and can best be improved with exercise that dynamically employs large muscle groups, such as walking, cycling, rowing and cross-country skiing.



## Testing your aerobic fitness

There are numerous ways to test your aerobic fitness, ranging from sophisticated lab tests to simple field tests. All are designed to measure or predict maximal oxygen uptake. The easiest way to test your own fitness level is the Polar Fitness Test™.

### The Polar Fitness Test

You can perform the Polar Fitness Test\* easily and reliably in the privacy of your own home. All you need is your Polar Heart Rate Monitor and five, short minutes to get a measure of your current fitness level. It is a safe test, even if you are unfit, as it does not require any physical exertion whatsoever. In fact, you should perform the test at complete rest.

The test is based on several variables (heart rate, heart rate variability, age, body weight, gender and level of physical activity). The result of the Polar Fitness Test is OwnIndex®. This is a value that is comparable to your maximal oxygen uptake ( $VO_{2max}$ ), a commonly used descriptor of aerobic fitness. OwnIndex rises as you get fitter, and can range from about 25 for sedentary or unfit persons to 95, a level reached by some Olympic-level endurance athletes.

\* The Polar Fitness Test is included in Polar F11™ Fitness heart rate monitor.

Progress in your OwnIndex will gradually occur over time. Testing yourself once or twice a month will give you a good picture of these changes, making the OwnIndex an excellent yardstick to track the way your aerobic fitness is improving.

And knowing that you are improving is a surefire way to keep you motivated.

#### **Aerobic (cardiovascular) fitness**

*Reflects the amount of oxygen present in blood pumped by your heart and transported to working muscles, as well as the muscles' efficiency in using that oxygen.*

#### **Maximal oxygen uptake ( $VO_{2max}$ )**

*The maximum capacity for oxygen consumption by the body during maximum exertion.  $VO_{2max}$  is a commonly used descriptor of aerobic fitness. The better your aerobic fitness the higher your  $VO_{2max}$ . The most accurate way to measure your  $VO_{2max}$  is to have it tested in maximal exercise stress test in a laboratory.*

#### **Heart rate variability**

*Heart rate varies from heartbeat to heartbeat. Heart rate variability (HRV) is the variation in lapses between successive heartbeats i.e. R-R intervals. HRV is affected by aerobic fitness. HRV of a well-conditioned heart is generally large at rest. During exercise, HRV decreases as the heart rate and exercise intensity increase.*

## 5. YOUR PERSONAL FITNESS PROGRAM



*The makeup of your exercise program depends on your current fitness level and on your fitness goals. You know where you are at now, and where you want to be in the future. What you still need is a plan to reach your target, a plan that will let you know how, what and when. The Polar Keeps U Fit™ workout program is designed just for that. The Polar Keeps U Fit workout program is included in Polar F11 Fitness heart rate monitor. Alternatively you can use the Polar Keeps U Fit workout program in Polar Fitness Trainer service at [www.PolarFitnessTrainer.com](http://www.PolarFitnessTrainer.com).*

The elements in a *Polar Keeps U Fit workout program* include

- how often – the number of exercise sessions per week
- how hard – the intensity of each exercise session (as heart rate)
- how long – the duration of each exercise session

These comprise your exercise dose. The type of sports or exercise is, of course, free for you to choose.

*The Polar Keeps U Fit workout program* will recommend an individual exercise dose per week according to your fitness level and goal. An exercise dose is expressed in kilocalories to be burnt during one week, and is broken down into a specific number of exercise sessions per week, with assigned exercise duration, a heart rate target zone and kilocalorie target for every session.

*The Polar Keeps U Fit workout program* is divided into three categories based on your personal exercise target: to maintain, improve or maximize aerobic fitness.

## PROGRAM TARGET

### Maintain

This is a program to maintain the fitness level you are currently at. Such a program requires not more than three exercise sessions a week. Since it is advisable to start out slowly, this program is also suitable for beginners or if you haven't exercised in a long time. But even if your fitness level is high, following a maintain program during recovery periods, for instance, will be beneficial.

### Improve

If improving fitness is your goal, then your exercise program will be about twice as demanding as a program to maintain fitness at current level. For this, you will need to reserve time for more sessions per week, and some of the sessions will need to be longer and tougher.

### Maximize

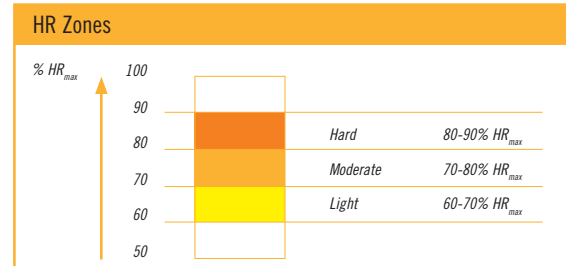
A program that maximizes your fitness level goes slightly towards what athletes do in their training. To move on from the *Improve* level, this program increases exercise volumes even further. Go for this program only after a 10-12 week period of regular training in maintain or improve volumes.

### Heart rate measures intensity

Heart rate is an accurate measure for training intensity. Maximum heart rate, or  $HR_{max}$ , is the highest number of heartbeats per minute (bpm) achieved in an all-out effort.  $HR_{max}$  is a useful tool in determining training intensities, which can be expressed as percentages of  $HR_{max}$ .

### Heart Rate Target Zones

In the *Polar Keeps U Fit workout program*, there are three different exercise zones with three different intensity levels. Each of these intensity levels corresponds to various health and fitness improving mechanisms in your body.



In the *Maintain* program, the emphasis will be on the moderate intensity zone including some exercises in lighter intensity. In *Improve* and *Maximize* programs, the main emphasis is on the moderate intensity zone, but a clearer combination of light as well as hard intensity zones will also be included.

If your exercise program contains three or more exercise sessions per week, the program alternates between shorter and longer sessions. The longer sessions will clearly be lower in intensity while the shorter ones will be higher in intensity. This helps you avoid fatigue and overexertion.

## 6. BURN CALORIES



*The Polar Keeps U Fit workout program expresses an exercise dose in calories. Calories are energy units, and the energy you burn is a measurement of the work your body does. Daily and weekly exercise targets can conveniently and easily be set in terms of calories (kilocalories).*

Knowing how many calories you burnt during your morning run, for instance, gives you information on how much (or little) you worked. Also, keeping tabs on calories is a great motivational tool. Aiming to burn e.g. 2000 kilocalories per week through exercise, for example, is a goal you can easily verify. Learning about how and how much your body burns calories during exercise is also useful for weight management.

You can use the calorie calculation feature in your Polar Heart Rate Monitor regardless of the *Polar Keeps U Fit workout program*. The feature counts the calories you burnt during your exercise session, and will save the information as a running sum over as many exercise sessions as you choose. This way, you can crosscheck that information against your target, or for weight management, against the calories in your food.

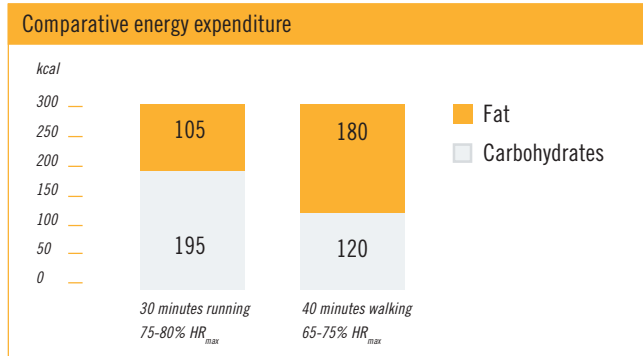
### **When do they burn?**

The amount of calories burnt during exercise depends on workout duration and intensity, and your body weight. In other words, the longer an exercise session and the higher the intensity, the more calories will burn. A heavier person will burn more calories than a lighter person doing the same exercise. And men will burn more calories than women for the same exercise because men have more muscles. Moreover, calories burn more readily

during exercise that employs large muscles, like rowing or running. Exercise that requires you to support your own weight will generally use up more energy than if weight is supported by equipment.

### What burns?

When you burn calories, your body uses fat and carbohydrates as sources of energy. The amount of fat burnt varies according to exercise intensity. Even though more calories burn at higher exercise intensity, the proportion of fat use of total energy expenditure is less than at lower intensities.



Here are a few examples of burnt kilocalories per hour for a person weighing 155 pounds / 70 kg:

Examples	kcal	Mark here your own
Walking	200-300	
Light aerobics	200-400	
Gymnastics	200-500	
Cycling	250-700	
Step aerobics	300-500	
Swimming	300-700	
Tennis	400-500	
Rowing	500-600	
Running	600-900	
Cross-country skiing	600-900	

### Kilocalorie (kcal)

A measure of the energy value in food and physical activity. "Kilocalorie" is the more accurate term for the commonly used abbreviation "calorie." 1 kilocalorie (kcal) = 1 Calorie (Cal) = 1000 calories (cal)

## 7. OWNZONE TRAINING



### What is Polar OwnZone®

The unique Polar OwnZone\* defines your personal exercise zone for aerobic training. The OwnZone function guides you through your warm-up and, taking your present physical and mental condition into account, will automatically determine an individual and safe exercise intensity zone, your OwnZone.

### How to use the Polar OwnZone

The Polar OwnZone can be used in two ways:

To adjust the training zones of your *Polar Keeps U Fit workout program*

- your OwnZone can be determined for every individual exercise session, but should especially be used when changing exercise environment or exercise type, or if you are unsure about your present physical or mental state.

Or, for effective and versatile training

- make use of the entire OwnZone range by exercising mostly at moderate and lower intensities and, if you are in good condition, occasionally, at hard intensity.

\*Polar OwnZone® function is included in the Polar F6™ and F11™ heart rate monitors.

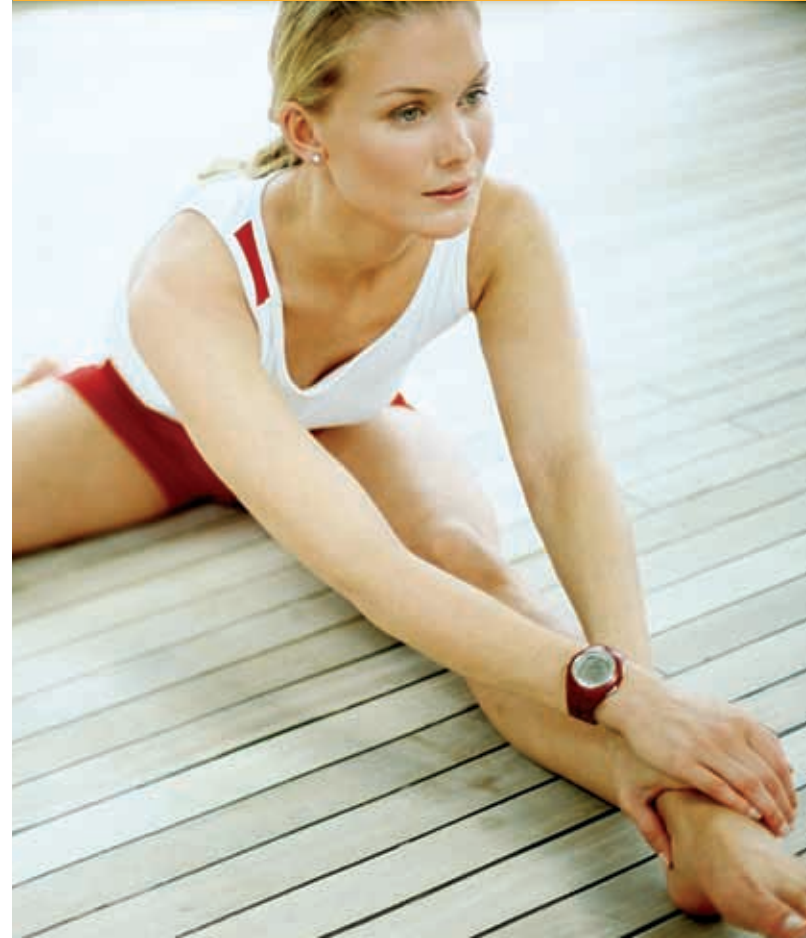
## 8. IT'S NOT ONLY EXERCISE!

### Why Train With Polar OwnZone?

Listening to and interpreting the signals your body sends during physical exertion is an important part of getting fit. Since warm-up routines differ for different types of exercise, and since your physical and mental state may also vary from day to day (e.g. due to stress or illness), using the OwnZone function for every session guarantees the most effective heart rate target zone for that particular type of exercise and day.

Training within the heart rate limits of your Polar OwnZone:

- improves overall fitness
- supports your weight management goals
- decreases stress levels
- improves health
- boosts general performance



*Regardless of the type of sport you choose, warm-up, cool-down and stretching are as important to fitness as exercise itself. Including recovery periods in your weekly schedule is crucial to fitness, as well.*

To maximize the benefits to your heart and safeguard against injuries, be sure your workout session always includes all three of the following phases:

1. Warm-up
2. Exercise in target heart rate zone
3. Cool-down and stretching.

### **Warm-up**

A proper warm-up prior to an exercise session prepares your heart and muscles for the action that lies ahead. It stimulates blood circulation and makes muscles more flexible. It is considered a crucial part of injury prevention. Begin each workout slowly, giving your body a chance to warm up for 5 to 10 minutes at a heart rate below your selected target zone. Then gradually increase the intensity of your exercise until your heart rate reaches your target zone.

### **Exercise in Target Zone**

Once your heart rate has reached your target zone, maintain that intensity for a set amount of time (typically 20 minutes or more), making sure you stay inside your target zone. It's important to be sensitive to your body's reactions while you exercise. Be sure to keep your breathing regular. If you feel exceptionally breathless or dizzy, you're probably working too hard (and pushing your heart rate beyond your target zone), so ease up a little.

### **Cool-Down and Stretching**

Cool down by gradually reducing the intensity of your exercise to bring your heart rate back down to below your target zone. Then, stretch the main muscles you just worked to prevent injury and stiffness. For example, stretch your leg muscles after a run. And keep the following guidelines in mind while stretching:

- Don't bounce
- Stretch slowly and steadily
- Hold the stretch for a slow count of ten
- Don't push yourself into a painful stretch

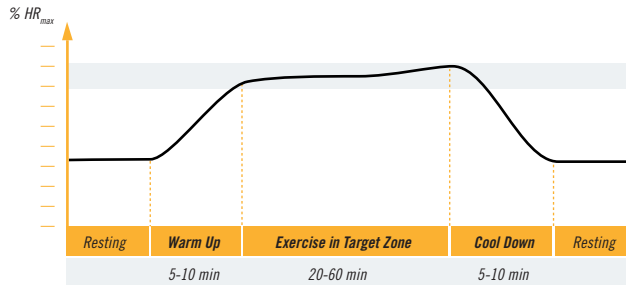
It's important to be sensitive to your body's reactions while you exercise.



## Recovery

Exercise puts positive stress on the body by forcing it to function outside its comfort zone. During rest, the body will make adjustments to better face the challenge next time you exercise. These adjustments are what will make your body stronger. In other words, fitness improves not during exercise but during rest. Giving your body ample time to recover from exercise is therefore crucial to getting fit. Disregarding the need to rest and recover is quite common practice and may lead to injury, overtraining or fatigue. Resting properly isn't the same as skipping workouts or being lazy. Resting is about giving your body the time it needs to get stronger and fitter.

An example of the structure of an exercise session



## 9. GETTING WITH THE PROGRAM



### Anne

Anne is a 40-year old maths teacher and mother of two, who decides it's time to get fit again after several years of inactivity. She wouldn't mind losing a few pounds either, since she's slightly overweight. The Polar Heart Rate Monitor she received as a birthday present from her husband tells her that her fitness level is low. Anne knows that the key to success in fitness is perseverance and starting out slowly. She defines her goals, and chooses a maintenance program. *Polar Keeps U Fit workout program* suggests a 30-minute exercise session, three times a week, at a moderate intensity level of 70%-80% HR<sub>max</sub>. She opts for cycling, since she likes the sport and learns in the Polar Exercise Guide that this type of endurance exercise is ideal in helping her reach her goals.

### Frank

Frank is a 30-year old project manager with precious little time on his hands. To keep fit he sweats it out on the treadmill as often as he can manage - usually not more than 4 times a week. Frank's treadmill sessions are important to him, they help him take the edge off after work. Lately, though, he has been feeling run-down after every session and he isn't exactly sure why. Frank owns a Polar Heart Rate Monitor, and having read about the Polar OwnZone feature, decides to try it out. Following the instructions and beginning with a proper warm-up, his OwnZone for the day recommends a target heart rate zone much lower than he expected. Effectively, Frank's OwnZone was a clear indication he needed to ease up on the pace.

### Harriet

Harriet is 32 and has been doing aerobics regularly for the past 3 years. She performs a Polar Fitness Test on her friend's Polar Heart Rate Monitor and is surprised her fitness level is below average. She realizes she must be doing something wrong, so she buys herself a Polar Heart Rate Monitor. Having read the Polar Exercise Guide, Harriet realizes she needs to make her training more diverse, and to increase exercise volumes to three hours each week. Instead of the same aerobics class twice a week, she follows the *Polar Keeps U Fit workout program* instructions and varies session durations and intensity levels, and adds a session of resistance training and yoga, as well.





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