



## Running Specific Training

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*This training protocol is designed to provide you with a series of exercises and ideas on how to get the most out of your POWERbreathe, specifically focussing on the demands of running. All the techniques and exercises within this training protocol are intended as a guide and can be adapted and tailored to suit the abilities and requirements of the user.*

**Establish your correct training load/level:** Before commencing POWERbreathe® training it is essential that you establish the correct training load/level on your unit. Comprehensive guidance can be found in the User Manual, and also the POWERbreathe® instructional DVD. As is the case with your normal POWERbreathe training you will be working towards completing 30 breaths. However in order to reach your 30 breaths, the exercises in this training programme will often be broken down into undertaking 3 sets of 10 breaths throughout the exercise.

If you find that completing 30 breaths is easy whilst doing the exercises, increase the training load/level and resistance by one turn. If you find the exercises too hard to complete, reduce the training load/level and resistance by one turn.

## **1) Using POWERbreathe® as part of your warm up and recovery**

### **Pre-Training Warm-up:**

Working on a load/level 1 ½ levels below your current training load/level, take 30 controlled breaths no more than 10 minutes before you begin your training.

### **Pre-Race Warm-up:**

Working on a load/level 1 ½ levels below your current training load/level, take 30 controlled breaths immediately before you begin your warm-up prior to your race.

<b>Current Training Load/Level</b>	<b>Ideal Warm Up Load/Level</b>
Level 9	Level 7
Level 8	Level 6
Level 7	Level 5.5
Level 6	Level 4.5
Level 5	Level 4
Level 4	Level 3
Level 3	Level 2
Level 2	Level 1.5
Level 1	Level 0.5
Level 0	Level 0

### **POWERbreathe & Recovery<sup>1</sup>:**

After intense exercise, there is an accumulation of a metabolite called lactate in the blood. Lactate is produced by muscles when they work intensely, and it has been linked to fatigue. For many years, athletes have used active recoveries to get rid of lactate more quickly (when working at low intensities, muscles can consume lactate).

Breathing against a small inspiratory load immediately after exercise reduces lactate by 16%. What's more, unlike a normal active recovery which takes around five minutes to speed-up lactate clearance, inspiratory loading reduces lactate as soon as exercise stops. Furthermore, when using the inspiratory load, lactate

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<sup>1</sup> A recent study has shown that the metabolite lactate is cleared from the blood more quickly if athletes breathe against a low inspiratory load during recovery<sup>1</sup>.

concentration after just 5 minutes is equivalent to that achieved in 15 minutes during passive recovery.

This means that POWERbreathe® can be used as a recovery tool for any situation in which you want to get rid of lactate as quickly as possible to speed recovery.

**Recovery set:**

Adjust the load/level on the POWERbreathe® to 2 levels below your training load/level and breathe deeply and slowly against the load continuously for 5 minutes, or for as long as you have available.

**2) POWERbreathe® Body Conditioning Programme**

The following exercises can be introduced into a conditioning and training programme to create a more intense POWERbreathe training experience whilst targeting muscle groups associated with the demands of running.

Table X in section 4 provides an example of how these exercises can be integrated into a daily programme. These exercises are designed as a guide and can be adapted to suit the performers' needs and requirements.

**(i) Dumbbell Dynamic Lunge**

**Main muscles worked:** Quadriceps, Gluteus Maximus, Inspiratory Muscles

**Secondary Muscles worked:** Calves

**The POWERbreathe® impact:** This exercise requires good balance and body posture as you lean into the lunge, and develops strength in the leg muscles through isometric contraction as you lean and hold the lunge. By pumping the arms in this position as you undertake your breathing you begin to replicate the postural demands on the body associated with running. The exercise will improve inspiratory power and endurance, as well as enhancing running-specific core stability.

**Equipment:** 2 x Light Dumbbells (2.5 – 5kg), POWERbreathe®

**Mechanics Type:** Isometric (as you hold lunge), Isotonic (as you pump arms)

**Programme:** 3 sets of 10 breaths. Undertake 5 breaths then change legs and complete a further 5 breaths. This is one set. Repeat 3 times. Allow 30 seconds recovery between sets.



**Coaching points:** Place the POWERbreathe® in your mouth and pick up the dumbbells one in each hand. Pull shoulders back and lift up your chest looking forward. This tightens the chest muscles ready for your POWERbreathe® training and breathing.

Place your right foot forward taking a large stride breathing in. Place your foot far enough forward so that when you bend your knee, the thigh and lower leg create a right angle. Bend your knees slowly lowering your hips so your rear knee is just above the floor.

Hold this position and complete 5 breaths whilst quickly pumping the arms back and forward from the shoulder as if you were running. After 5 breaths return to start position and change legs (without removing your POWERbreathe). Undertake a further 5 breaths pumping the arms as before and when complete, return to the start position. This is one set. Repeat the process 3 times.

You can add difficulty to the exercise by placing one or both feet on a Bosu ball, or stability cushion, such as Togu Dynair cushion (36cm) or XXL Sports cushion.

(ii) **Diagonal Wood Chop**

**Main Muscles Worked:** Lower Back, Obliques, Inspiratory Muscles

**Secondary Muscles Worked:** Triceps

**The POWERbreathe Impact:** Enhances the engagement of core and torso stabilising muscles as you move through the exercise and inhale through the POWERbreathe®. Promotes breathing control and respiratory power and endurance, as well as enhancing running-specific core stability.

**Equipment:** Resistance Band or Cord; POWERbreathe

**Mechanics Type:** Compound

**Programme:** 3 sets of 10 breaths. Undertake 5 breaths then change sides and complete a further 5 breaths. This is one set. Repeat 3 times. Allow 30 seconds recovery between sets.



**Coaching points:** Place your POWERbreathe® in your mouth and stand with your legs shoulder width apart. Loop the band under your left foot. Grab the two ends of the resistance band or cord with both hands and pull up in a diagonal wood chopping motion towards your right shoulder, breathing in through your POWERbreathe as you do this. Then extend hand down towards the left ankle, breathing out through the POWERbreathe to complete the movement.

During this motion ensure that feet stay stationary and you rotate your trunk muscles. Return back to the start position as you breathe out through the POWERbreathe. Repeat on the other foot and in the opposite direction after 5 reps. When completed, this constitutes one set. The resistance band or cord are optional and the exercise can be completed without resistance.

### (iii) **POWERbreathe® Plank and Leg Raises**

**Main muscles worked:** Core, Erector Spinae and Inspiratory Muscles

**Secondary muscles worked:** Quads, Hamstrings

**The POWERbreathe® impact:** By lying in the plank position you are placing an extra demand on the core muscles such as the transverses abdominals, obliques and rectus abdominals. As you bring your legs forward into the move you are placing further demand on the rib cage and diaphragm. By utilising the POWERbreathe in this exercise you are intensifying the exercise by further loading the inspiratory and core muscles.

**Equipment:** POWERbreathe

**Mechanics Type:** Compound

**Programme:** 3 sets of 10 breaths, alternating between legs. Allow 30 seconds recovery between sets.



**Coaching points:** Place the POWERbreathe® in your mouth and get into a push up position but with your elbows on the floor. Place your forearms flat on the ground. Your arms should be bent at a right angle. Keep your whole body as straight as possible.

Once in the aforementioned position bring your right leg out to the side and move your knee up towards your the rib cage, as demonstrated in the above image. As you bring your knee up, breathe in through your POWERbreathe®. As you return the leg back into the start position, breathe out. Repeat the exercise on your left leg, and continue to alternate legs, until you have completed 10 reps.

You can add difficulty to the exercise by placing your elbows and/or feet on a Bosu ball, or stability cushion such as a Togu Dynair cushion (36cm) or XXL Sports cushion.

**(iv) Upright Leg Raise with Crunch**

**Main muscles worked:** Abdominals, Obliques, IMT Muscles

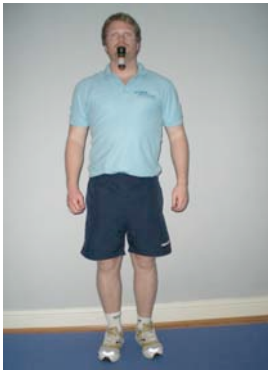
**Secondary muscles worked:** Quads, Hamstrings

**The POWERbreathe® impact:** This exercise places a significant demand upon the intercostal muscles and the diaphragm as you crunch down and raise your leg. This creates a more demanding inspiratory muscle workout, whilst simulating the postural demands of running. The exercise also improves balance and core control.

**Equipment:** POWERbreathe

**Mechanics Type:** Compound

**Programme:** 3 sets of 10 breaths alternating between legs. Allow 30 seconds recovery between sets.



**Coaching points:** Standing upright with your back straight and legs shoulder width apart, place the POWERbreathe® unit in your mouth and place your hands by your side, opening up the chest.

Bring your left leg up and across your body, trying to meet your left knee with your right elbow, bringing the upper body down in a twisting crunching movement. Try not to flex your shoulder to bring your elbow towards your knee. As you do this movement breathe in. As you return to the start position breathe out.

Repeat this exercise for 10 breaths alternating between the left and right legs and elbows. You can add difficulty to the exercise by standing on a Bosu ball, or Togu stability cushion such as Togu Dynair cushion (36cm) or XXL Sports cushion.

### **3) POWERbreathe® additional Training Applications**

#### **(i) POWERbreathe® Circuits:**

POWERbreathe® can also be integrated into your circuit training as a breathing station. This is an example of how POWERbreathe® could be integrated into circuit training. This circuit becomes progressively harder over a 6-week period. Allow only 1-minute recovery between exercises and repeat 3 circuits. Use weights that are about 30% - 40% lighter than you would normally lift.

During the POWERbreathe® stations undertake 10 breaths on your current training load/level and adjust the resistance load/level throughout the 6-week programme as indicated.

	<b>Week 1</b>	<b>Week 2</b>	<b>Week 3</b>	<b>Week 4</b>	<b>Week 5</b>	<b>Week 6</b>
<b>Intensity</b>	Low	Med	High	Low	Med	High
<b>Stations</b>						
Calf Raises	30 sec	30 sec	45 sec	30sec	30 sec	45 sec
Ab Crunches	20	25	30	20	30	30
Dumbbell Lunges	40 sec	50 sec	1min	40 sec	50 sec	1min
Push-Ups	40 sec	50 sec	1min	40 sec	50 sec	1 min
POWERbreathe Training	10 breaths	10 breaths	10 breaths (+1/2 a turn)	10breaths	10breaths	10breaths (+1/2 turn)
Side Throws	40 sec	50 sec	1 min	40 sec	50 sec	1 min
Squat Thrusts	40 sec	50 sec	1 min	40 sec	50 sec	1 min
<b>No of Circuits</b>	3	3	3	3	3	3



## **(ii) POWERbreathe® Intervals**

POWERbreathe® can also be integrated as part of your interval training. By including the POWERbreathe® into an interval session during recovery periods you can improve your respiratory endurance and also hasten recovery. Below is a simple example of how this could be done. You can tailor your POWERbreathe® interval training to the demands of your running discipline:

1. Warm up for 10 minutes with an easy light jog.
2. Run at an intense interval pace (a step up from your usual pace) for one minute.
3. Jog for a two-minute recovery interval.
4. Undertake 10 POWERbreathe® breaths at your current training load/level.

Repeat stages 2 to 4 three times.

After your interval session, cool down by doing 5 minutes gentle jogging followed by 5 minutes of breathing through your POWERbreathe®, 2 levels below your current training load/level. This will aid the recovery process, improving lactate clearance. Finally stretch for a further 5 minutes.

## **4) Integrating POWERbreathe® into an overall fitness programme**

Table X: An example of how to fit the exercises discussed in this protocol into a daily training regime:

	<b>Exercise 1</b>	<b>Exercise 2</b>
<b>Sunday</b>	Rest Day	
<b>Monday</b>	Dumbbell Dynamic Lunge	PB Diagonal Wood Chop
<b>Tuesday</b>	POWERbreathe Circuit Training	
<b>Wednesday</b>	POWERbreathe Plank and Leg Raises	Up Right Leg Raise with Crunch
<b>Thursday</b>	POWERbreathe Intervals	
<b>Friday</b>	Rest Day	
<b>Saturday</b>	Race Day Warm-Up	Race Day Cool-Down

## References

1. Chiappa GR, Roseguini BT, Alves CN, Ferlin EL, Neder JA, Ribeiro JP. Blood lactate during recovery from intense exercise: impact of inspiratory loading. *Med Sci Sports Exerc* 2008;40(1):111-6.