

# Instructions for Use

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© PrO2 Fit

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# **DISCLAIMERS**

#### INTENDED USE

The PrO2 device is used to measure and increase respiratory strength and performance through resisted breathing exercises. In independent studies, the PrO2 training methodology has shown benefits across a wide range of physical fitness levels - from inactive people to professional athletes.

Although the PrO2 training has shown positive effects in studies conducted for respiratory related medical conditions such as COPD, CHF and CF, unless prescribed by a medical professional, the PrO2 is not intended to be used in the diagnosis or treatment of disease. Individuals who are not in good health or have a respiratory related medical condition should consult their physician before using PrO2.

# **P**RIVACY

PrO2 Health, Inc. takes your privacy seriously. Our company has access to online data for analysis purposes but all results are anonymous, unless you explicitly grant us access to your personalized information.

# Introduction

The PrO2 is a mobile connected device that measures your inspiratory muscle performance and capacity and can provide guidance to train your inspiratory muscles to increase that capacity.

### **D**EFINITIONS

MIP	Maximum Inspiratory Pressure in the first 1 second of breath.
Power Curve	The power applied by a user in a single resisted inspiration. This reflects respiratory work capacity. Also referred to as SMIP in research papers.
FIT	Fatigue Index Test. A PrO2 patented measurement that combines MIP, Power Curve and inspiration time into a single score to measure how soon the user will reach fatigue and be out of breath.



#### How Does IT WORK?

# **M**EASUREMENT

The PrO2 computes a patented Fatigue Index Test (FIT) score to give you a single number that represents your ability to do exercise before becoming fatigued - essentially your respiratory fitness. The FIT measurement is the respiratory equivalent of stepping on a scale to measure your weight. Even if you don't use the PrO2 for training, the FIT score can be used to easily track how your other exercise activities are impacting your respiratory fitness.

# **T**RAINING

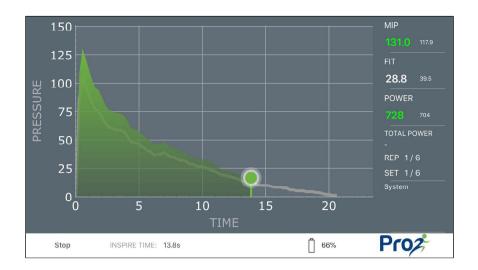
The PrO2 strengthens inspiratory muscles by applying resistance to your breathing muscles in the same way that weights are used to train other muscles. This process is generically known as inspiratory muscle training (IMT), however the PrO2 training program has several unique features that accelerate the improvement and has been scientifically proven to work.

Establishing a baseline is one of these features where, like weight training, a 1 rep maximum is established (baseline) and training is based on 80% of that maximum.

Another of these features is the high intensity training aspect where during training, the app takes you through intervals with a decreasing recovery time after each set of 6 breaths.

Real-time display of your power curve along with visual and audio feedback help motivate you to stay above the 80% target. The full training takes 25 to 30 minutes.





# WHY TRAIN?

Breathing muscles adapt and change with your lifestyle or any exercise regimen. However, they are never specifically trained. This means that even in top athletes, the PrO2 interval training approach could result in increases of up to 40% for FIT, MIP and total power and 10% improvements in VO2MAX. These types of gains have been seen in college athletes and have been documented in various published journals.

Additionally, these changes are associated with real-world exercise test gains, such as shuttle run improvements of around 10%, with associated gains in cardiorespiratory efficiency during treadmill exercise testing.

PrO2 training is also ideal for people with injuries or those unable to aerobically exercise. Athletes who trained while injured were able to return to the field or court long before expected because they maintained their aerobic capacity.



# THE PRO2 DEVICE

The PrO2 device communicates with your mobile device or tablet using Bluetooth Low Energy (BLE). All modern Android and iOS phones and tablets support BLE.

#### Powering On

To power on your PrO2, press and release the power button on the back of the device. After about 1 second the startup screen will be displayed followed by the ready screen.



NOTE: To save battery life, if the PrO2 is not connected to a mobile app via Bluetooth, after 1 minute, the device will automatically power off.

#### CHARGING THE PRO2

device. You can either plug the device into your computer's USB port or use a USB wall charger. When charging is active, you will see the charging icon at the top of the screen.



It is recommended that the device be at 100% charge before your first training. However, if the battery runs low during training, it is safe to plug in your PrO2 and continue training.

#### **C**LEANING

The device has a removable mouthpiece that can be placed in a dishwasher or hand washed. Unscrew the mouthpiece to remove it from the base.

The outer housing can be cleaned with alcohol wipes. The device is not waterproof and should not be submerged in water during cleaning.

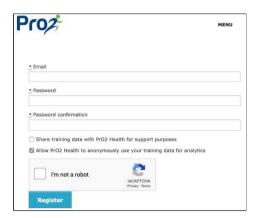


# **O**NLINE **A**CCOUNT

#### CREATING AN ACCOUNT

Create an online account so your results will be stored on the PrO2 Health HIPAA compliant secure server. Doing this will ensure that you will always have access to your data even if your mobile device is lost or if you switch to a new device.

Go to <u>pro2fit.com</u> and click the Register link at the top of the page. Enter your email address and create a password for the site.



You can use this account to view and analyze your results, to see how you are doing relative to others and to share your results with teammates or via social networking.

# PrO2 Fit App

#### DownLoading

The PrO2 Fit mobile application is available for download on the Google Play and Apple App stores. Search for pro2 and download the "PrO2 Fit" app created by "PrO2Health".



iOS link: pro2fit.com/ios



Android link: pro2fit.com/android

Once the app is installed, sign in with your new account or create one if you have not done so already. Once you are logged in, you will see the main screen.







# Using the Device

# SAFETY CHECKLIST



Before you train with the PrO2, always review this safety checklist. Since you will be breathing in deeply, it is important that both your mouth AND the device are free from loose particles that might accidentally be pulled into your lungs.

- Your mouth is clean. Ideally, brush your teeth if you have eaten recently.
- Mouthpiece is clean and dry.
- Mouthpiece is screwed on tight.
- No loose pieces of plastic are visible on the device.

# TRAINING VIDEO

A training video is available online at <a href="mailto:pro2fit.com/train">pro2fit.com/train</a>.



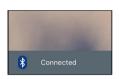
#### CONNECTING TO THE PRO2



The PrO2 Fit app automatically connects to the first powered on PrO2 device it finds. There is no need to discover the device in your Bluetooth settings or pair with the PrO2.

To connect your PrO2 to your mobile device, press the power button on the back of the device. After about 1 second the startup screen will be displayed, followed by the ready screen. The wireless icon will blink signaling the device is ready for connection.





Once the PrO2 is ready, open the app. The device will show connected in the lower left bottom of the screen once the device is connected. If a reconnect button is shown, click that button to begin the connection process again.

NOTE: To save battery life, if the PrO2 is not connected to Bluetooth after 1 minute, the device will automatically power off.

# **B**REATHING **P**OINTERS



When measuring or training with the PrO2, it's most important that you are comfortable and able to focus on getting your maximal breath. Have a glass of water so you can take sips between training breaths if you experience a dry mouth.

Most people stay seated during training. In some cases, people find it helpful to lean on something with one or both elbows to allow them to relax muscles not associated with breathing. The goal is to train your inspiratory muscles.

Nose clips can also be used to prevent air from leaking in through your nose as you are inspiring. Leaks will reduce the training resistance and lower your power curve. A clue that this is happening is that your breath will be noisy or you will see steep drops in the power curve.

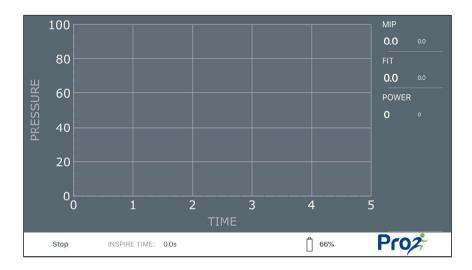


#### MEASURE FIT



Click the Measure FIT button to get your one-breath FIT score. You will see a blank graph if this is your first time. Otherwise, you will see your previous best FIT measurement graph and details.

This is the screen you will see during measurement and training. The screen will be updated real-time with the current inspiratory pressure graph. The right hand column shows your current MIP, FIT and Power calculations.

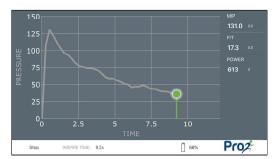


To get your measurement, exhale all the air out of your lungs, place your mouth on the mouthpiece and breath in as strongly as you can for as long as you can through the device. Expect this to be difficult - especially as you get started.

Unless you have health problems that affect your breathing, your curve should look similar in shape to the second graph below. There should be a peak at the beginning with a smooth slope trailing to the end. If the curve is flat or more like a camel's hump, breathe in harder at the beginning.







When you are done, your FIT score will be displayed. You will have options to Recreate this breath, Train or click Done if you only wanted your FIT score.



# EXPECTED RESULTS

A person with no health problems should see at results similar to or greater than those shown in the table below.

Score	Minimum Result
FIT	25
MIP	60
Power	500
Time	12
Total Power (36 breaths)	16,000

