



To learn about recording data, maintenance, sanitation,
specifications, and more, scan the QR Code or visit:
www.vo2master.com/manual



VO2 MASTER

VO2 MASTER ANALYZER - GETTING STARTED



MADE IN CANADA
EST. 2013

www.vo2master.com/support





VO2 Master democratizes human performance and metabolism information to everyone's benefit. For the better part of a century, labs and research facilities have had access to VO₂ analysis, which is the gold-standard in the assessment of athletes' performance, and diet planning through weight management. With VO2 Master, this valuable information is now accessible by everyone. Gone are the days of guesswork in prescribing training plans, tracking recovery, and balancing the caloric throughput.

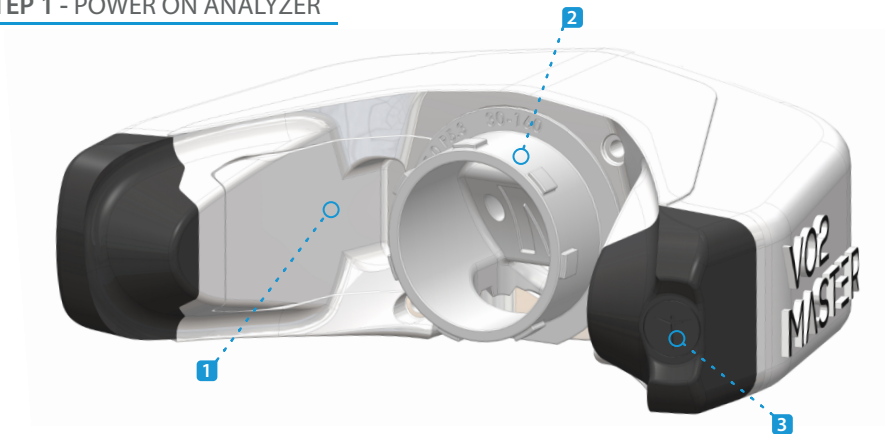
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QUICK START

STEP 1 - POWER ON ANALYZER



REPLACE BATTERY

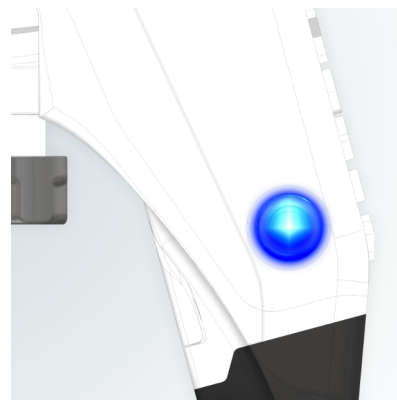
Remove the battery door **1** by unscrewing the user piece **2**. The battery door then unhinges to reveal a AAA battery.

POWER ON/OFF

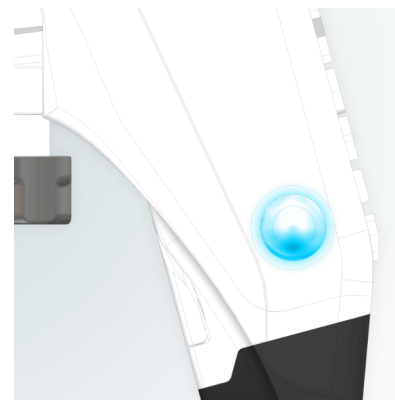
Hold the power button **3** for two seconds.

ZERO CALIBRATION

After powering on, the analyzer must sit still to get a “zero” reading of its environment. Wait at least ten seconds for the bottom LED light to turn from blue to white before continuing.



Calibrating...



Calibrated.

QUICK START

STEP 2 - CONNECT TO APP

DOWNLOAD APP

Download VO2 Master Manager from the app store or from:
www.vo2master.com/mobile-application



CONNECT SENSORS

VO2

VO2 Master



Heart Rate



Power



Thermometer

MO2
BLUE

Muscle Oxygenation



GPS



Speed and Cadence



Smart Trainer



Record



Sessions



Athlete



Settings



Devices

COMPLETE ATHLETE PROFILE



Record



Sessions



Athlete



Settings



Devices



TO SELECT PROTOCOL SETTINGS



Step Test



RMR



Intervals



5-1-5



Free



Mask



User Piece Size



Record



Sessions



Athlete



Settings



Devices

QUICK START

STEP 3 - CALIBRATE FLOW SENSOR

ASSEMBLE ANALYZER ON SYRINGE

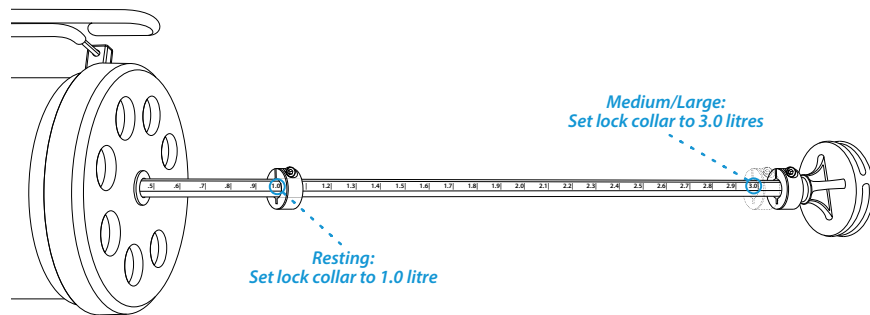


Change the filter disc every test



Calibrate flow sensor.

SELECT LOCK COLLAR POSITION



CHECK APP VOLUME, PRESS

Start

Gently apply 10 syringe “breaths” to complete calibration. Ensure you pump the syringe to both extremities at a rate approximately 20 breaths per minute.

QUICK START

STEP 4 - CALIBRATE GAS SENSOR



Calibrate gas sensor.

NAVIGATE TO GAS CALIBRATION VIEW

The Gas Calibration View follows the Syringe Calibration. You do not have to be on this app screen to complete calibration.

Ensure the analyzer has been exposed to the testing environment for 30 minutes prior to calibration.

GENTLY PUMP SYRINGE FOR 1-2 MINUTES

Exact volumes pumped do not matter at this stage. Pump at a rate of approximately 20 breaths per minute.

Calibrating

QUICK START

STEP 5 - BEGIN SESSION

ASSEMBLE MASK AND WEAR IT

Connect VO₂ Analyzer and straps to mask, then place on athlete.



TAP  TO BEGIN



SPECIFICATIONS

PACKAGE CONTENTS



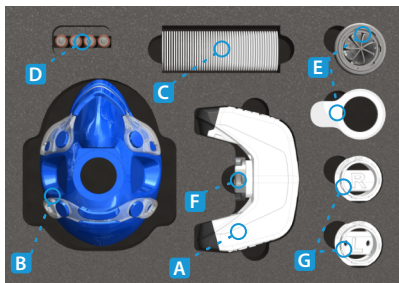
VO2 MASTER ANALYZER **A**

The main enclosure that contains the sensors and electronics.

MASK AND HEADGEAR **B**

Comfortably fits the device to any face. Different sizes are available for different users. Small is standard.

Ensure everything is clean and dry before storing in the case. Keep fresh desiccant packs in the case to avoid long-term humidity wear. Store in a dry place.



50x FILTER DISCS **C**

Filter that is replaced every test or once per hour. It is crucial that the filter is always used to ensure sanitation.

AAA BATTERIES **D**

Device uses a AAA battery.

CALIBRATION SYRINGE ADAPTER **E**

Adapts the Analyzer to the calibration syringe as seen in **STEP 3**. The silicone piece ensures an airtight seal.

MASK LOCKING NUT **F**

Normalizes airflow and ensures the Analyzer stays connected to the mask.

USER PIECES **G**

Filter lock and spit guard that accepts the air the user breathes. Each size covers an intended ventilation range. Medium and Large are for exercise testing. Resting is for RMR and light walking.

VENTILATION RANGES

R	M	L
3 - 50	30 - 160	40 - 220



SPECIFICATIONS

MAINTENANCE + ACCESSORIES

FILTER DISCS

Filter disc **MUST** be replaced after every use or once per hour. Thoroughly wash and dry the user piece, mask, and locking nut after every use.

DESICCANT CARTRIDGE

The desiccant cartridge **MUST** be replaced annually, or any time liquid enters the proximal port. See the Maintenance section of the product manual for more information.

OXYGEN SENSOR

The oxygen sensor **MUST** be replaced annually. The Analyzer **MUST** be shipped to VO2 Master for sensor replacement and re-calibration to ensure reliability and accuracy.



SPECIFICATIONS

TECHNICAL SPECIFICATIONS

HARDWARE

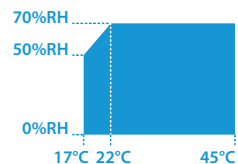
Oxygen Sensor Accuracy	.....	± 1%
Flow Sensor Accuracy	.....	± 2% With Syringe Calibration, ± 4% Without
Weight	.....	320g (200g Analyzer + 120g Mask)
Battery Life	.....	8+ Hours
Bluetooth Range	.....	30 Meters (90 Feet)

SESSION DURATION AND DOWNTIME

Maximum Duration	.....	1 Hour
Minimum Downtime Between Sessions	.....	30 Minutes
Maximum Sessions Per Day	.....	8 With Downtime

ENVIRONMENT

Temperature	.....	17 - 45°C
Humidity	.....	0 - 70% Non-Condensing (Avoid testing in Rain)
Altitude	.....	<3,000 Meters (10,000 Feet)
Headwind	.....	Headwind decreases accuracy



For best results, test inside, in a fresh air environment. Place a fan behind a stationary user for optimal accuracy.


MOBILE APP


HOW TO RECORD DATA

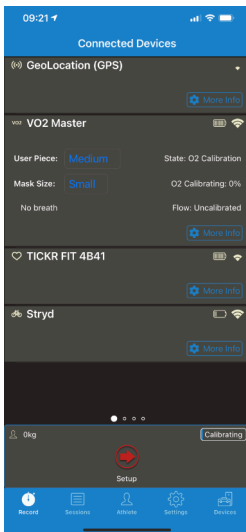
STEP 1

Ensure your Bluetooth devices appear in "Record" tab. If they do not, navigate to "Devices" to connect them.

STEP 2

Check your user piece and mask selection, and tap the record button  to start the session.


Tap the pause button  to stop recording.



MOBILE APP

SAVING RECORDED DATA

STEP 1

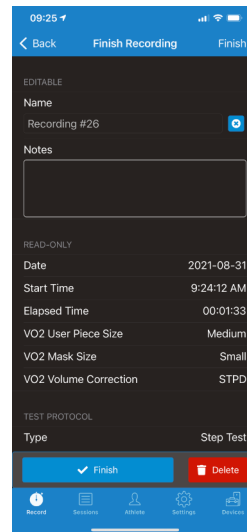
To save recorded data, tap the  beside the record button. You cannot save while recording.

STEP 2

Give the session a name and optionally notes. Session names and notes can help keep data organized for later.

STEP 3

Tap "Save" to complete the saving process. Saved sessions can be reviewed.



MOBILE APP

SHARING RECORDED DATA

STEP 1

Navigate to the “Sessions” tab and tap on a session.

STEP 2

Tap the three dots at the top-right of the screen. From the pop-up menu make a choice:

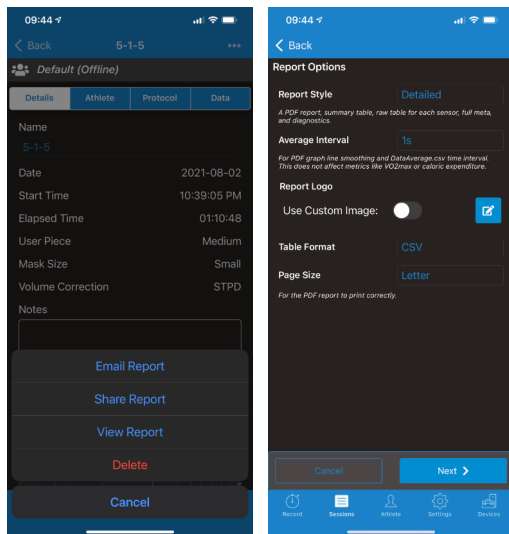
Email: email to yourself and others.

Share: share Zip file.

View: view on your mobile device.

STEP 3

Choose your options and tap “Next”



MOBILE APP

SWITCH ATHLETE PROFILES

STEP 1

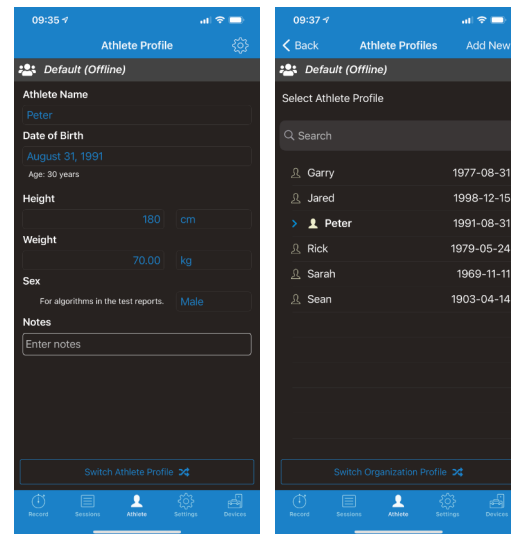
Navigate to the “Athlete” tab.

STEP 2

Tap the Switch Athlete Profile button.

STEP 3

Either tap “Add New” at the top-right of the screen or tap an “Existing Athlete Profile.”



MOBILE APP

CUSTOMIZE LIVE DISPLAYS

CHANGE VIEWS

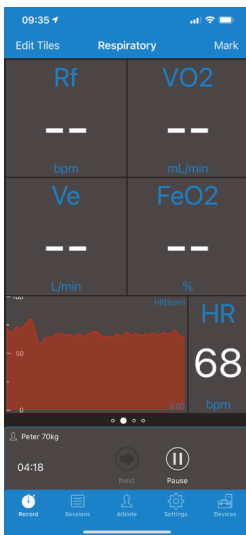
Swipe left or right to change views.

MOVE OR RE-SIZE

Move or re-size a tile by tapping on it.

ADD OR REMOVE

Add or remove tiles by tapping the "Edit" button at the top left.



LEGAL

IMPORTANT SAFETY AND PRODUCT INFORMATION

Your VO₂ Device comes with the “Getting Started” information booklet containing:

1. Quick Start Guide
2. Mobile App Guide
3. Important Safety and Product Information
4. Limited Warranty Information
5. Risks and Release of Liability

CAUTION: For your safety, always read and follow all operating and cleaning instructions carefully before using your VO₂ Device

CAUTION: Consult your doctor before use if you have any pre-existing medical or health conditions that might be affected by your use of this VO₂ Device.

WARNING

1. Use this device only for its intended use as described in the Getting Started information booklet. Failure to do so may result in serious injury.
2. Do not expose your VO₂ Device to extremely high (above 45 degrees Celsius) or low (15 degrees Celsius) temperatures.
3. Do not use your VO₂ Device in a sauna, steam room, or shower.
4. Use your VO₂ Device outdoors at your own risk.
5. Do not place in or submerge into water or any other liquids.
6. Do not insert any object into, or otherwise block, any opening on the VO₂ Device. Keep all openings free of hair, dirt, or other debris.
7. Do not use your VO₂ Device if it has been dropped or damaged, submerged into water, or if you see any cracks on the mouthpiece. If such an event occurs, return the device to an authorized service centre for examination and repair.
8. Do not use abrasive cleaners to clean your VO₂ Device.
9. Remove your VO₂ Device if it feels warm or hot.

10. Substances in this product and its battery may harm the environment or cause injury if handled and disposed of improperly.
11. Do not use or operate the VO₂ Device while driving or in other situations where distractions could be hazardous. Always be aware of your surroundings while exercising.
12. This product is not a toy. Do not allow children or pets to play with you VO₂ Device. The product may contain small components that can be a choking hazard.
13. The VO₂ Device may pose risks to users with certain health conditions. Consult your doctor prior to use if you:
 - a. have a heart, respiratory, or other cardiovascular condition;
 - b. are taking any medication;
 - c. suffer from claustrophobia;
 - d. have epilepsy or are sensitive to blinking lights;
 - e. have reduced circulation or bruise easily; or
 - f. have neck, upper back, or other musculoskeletal disorders.
14. Consult your doctor before beginning or modifying any exercise program.
15. Risks of using the VO₂ Device may include, but are not limited to:
 - a. inhaled or contacted contaminants (particulates or microbes) causing trauma or illness;
 - b. irritation, abrasion, or ulceration caused by the friction of the facial mask;
 - c. biological effect on mucous, lungs, or skin;
 - d. excessive re-breathing of exhaled air from increased airway dead space or breathing resistance causing an imbalance of blood gases, strain, or atelectasis;
 - e. flow diverted or leaked from or into the oxygen sensor gas circuit causing erroneous test results.
16. If you notice any skin irritation, difficulty breathing, or other health or medical irregularity while or after wearing your VO₂ Device, remove your VO₂ Device immediately, discontinue use, and consult your doctor.
17. This product is not a medical device and is not intended to diagnose, treat, cure, or prevent disease. With regard to accuracy, the VO₂ Device has leading hardware and algorithms to track the volume of oxygen consumed by the human body. We are constantly improving our products to calculate measurements as accurately as possible. The accuracy of VO₂ Devices is not intended to match medical devices or scientific measurement devices, but is intended to give you the best information available in a wearable VO₂ analyzer.

REGULATORY INFORMATION
Federal Communications Commission (FCC) Statement [USA]



Contains FCC ID: 2AA9B04

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try correct the interference by one or more of the following measures:

- 1) Re-orient or relocate the receiving antenna.*
- 2) Increase the separation between the equipment and receiver.*
- 3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- 4) Consult the dealer or an experienced radio/TV technician for help.*

CAUTION: Changes or modifications to the VO₂ Device could void the user's authority to operate the equipment.

Industry Canada RSS-310 Compliance Label:

VO2 Master Health Sensors Inc.

Model: VO2 Master Analyzer

Canada 310

Contains IC ID: 12208A-04

This device complies with Industry Canada's Licence-exempt RSSs. Operation is subjected to the following two conditions:

- (1) This device may not cause interference; and*
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.*

Declaration of Conformity with regards to the EU Directive 1999/5/EC

This device complies with EU Directive 1999/5/EC

For other regional-specific compliance information, please contact us by visiting: www.vo2master.com/support



LEGAL LIMITED WARRANTY

To register your VO2 Master Analyzer for support and warranty, visit: www.vo2master.com/warranty

LIMITED PRODUCT WARRANTY

VO2 Master Health Sensors Inc. ("VO2 Master") warrants to the original purchaser that your VO2 electronic device (the "Product") shall be free from defects in materials and workmanship under normal use for a period of one (1) year from the date of purchase, except that if you reside in the European Economic Area (EEA) and you purchased your VO2 device in the EEA, the warranty period is two (2) years from the date of purchase. (the "Warranty Period"). VO2 Master does not warrant that the operation of the Product will be uninterrupted or error-free. VO2 Master is not responsible for damage arising from failure to follow cleaning or operating instructions relating to the Product's use. This Limited Warranty does not cover software embedded in the Product and the services provided by VO2 Master to owners of the Product. Refer to the license agreement accompanying the software and the VO2 services terms of use for details of your rights with respect to their use. This Limited Warranty does not cover the replacement of consumable sensors like the oxygen sensor, which must be replaced approximately annually.

REMEDIES

If a hardware defect arises and a valid claim is received by VO2 Master within the Warranty Period, VO2 Master will, at its option and to the extent permitted by law, either: (1) repair the Product at no charge, using new or refurbished replacement parts; or (2) replace the Product with a new or refurbished Product. In the event of a defect, to the extent permitted by law, these are your sole and exclusive remedies. Shipping and handling charges may apply except where prohibited by applicable law. This Limited Warranty is valid only in the jurisdictions where the Products are sold by VO2 itself or through its authorized reseller or agent, and is valid to the extent permitted by applicable laws of such jurisdictions. Any replacement hardware product will be warranted for the remainder of the original Warranty Period or thirty (30) days, whichever is longer, or for any additional period of time that may be applicable in your jurisdiction.

HOW TO OBTAIN WARRANTY SERVICE

To obtain warranty service, you must deliver the Product, in either its original packaging or packaging providing an equal degree of protection, to the address specified by VO2 Master. In accordance with applicable law, VO2 Master may require that you furnish proof of purchase details and/or comply with registration requirements before receiving warranty service. It is your responsibility to backup any data, software, or other materials you may have stored or preserved on the Product. It is likely that such data, software, or other materials will be lost or reformatted during service, and VO2 Master will not be responsible for any such damage or loss. For specific instructions on how to obtain warranty service on your Product, contact us by visiting: vo2master.com/contact.



LEGAL

RISKS AND RELEASE OF LIABILITY

EXCLUSIONS AND LIMITATIONS

This Limited Warranty applies only to the Product manufactured by or for VO2 Master that can be identified by the "VO2 Master" trade name, or logo affixed to it. The Limited Warranty does not apply to any: (a) VO2 products and services other than the Product; (b) non-VO2 Master hardware products; (c) consumables (such as batteries); or (d) software, even if packaged or sold with the Product or embedded in the Product. This warranty does not apply to a Product or part of the Product that has been altered or modified (e.g. to alter functionality or capability) by anyone who is not a representative of VO2 Master. In addition, this Limited Warranty does not apply: (a) to damage caused by use with non-VO2 Master products; (b) to damage caused by accident, abuse, misuse, flood, fire, earthquake, or other external causes; (c) to damage caused by operating the Product outside the permitted or intended uses described by VO2 Master; or (d) to damage caused by service (including upgrades and expansions) performed by anyone who is not a representative of VO2 Master. Recovery and re-installation of software programs and user data are not covered under this Limited Warranty. No VO2 reseller, agent, or employee is authorized to make any modification, extension, or addition to this Limited Warranty. If any term is held to be illegal or unenforceable, the legality or enforceability of the remaining terms shall not be affected or impaired.

IMPLIED WARRANTIES

EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ALL IMPLIED WARRANTIES (INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) SHALL BE LIMITED IN DURATION TO THE DURATION OF THIS LIMITED WARRANTY. Some jurisdictions do not allow limitations on the duration of an implied warranty, so the above limitation may not apply to you.

LIMITATION OF DAMAGES

EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, VO2 MASTER HEALTH SENSORS INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL, INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, REVENUE, OR DATA, RESULTING FROM ANY BREACH OF EXPRESS OR IMPLIED WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY, EVEN IF VO2 MASTER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Some jurisdictions do not allow the exclusion or limitation of special, indirect, incidental, or consequential damages, so the above limitation or exclusion may not apply to you.

GOVERNING LAW

This Limited Warranty shall be governed by the laws of the Province of British-Columbia, Canada, without giving effect to any conflict of laws principles that may provide the application of the law of another jurisdiction.

NATIONAL STATUTORY RIGHTS

Consumers in some jurisdictions may have legal rights under applicable national or local legislation governing the sale of consumer goods, including without limitation, national laws implementing EC Directive 99/44. These rights are not affected by the warranties in this Limited Warranty.

ASSUMPTION OF RISKS

You acknowledge and agree that participation in physical activities, and the use of the VO2 Master Analyzer during physical activities, carry inherent risks which may include, but are not limited to, heart attacks and the risk of catastrophic injuries, including paralysis and death.

You should consult with a physician before using the VO2 Master Analyzer to ensure it is appropriate for you. If you suffer from diabetes, clinical obesity, chronic obstructive pulmonary disease or any pre-existing respiratory or cardiovascular conditions, you should only use the VO2 Master Analyzer with your physician's express approval and under your physician's direct supervision.

By using the VO2 Master Analyzer, you acknowledge and voluntarily accept all risks, dangers and hazards, including injury or death, that may result from your use of the VO2 Master Analyzer.

RELEASE OF LIABILITY

By using the VO2 Master Analyzer, you unconditionally and irrevocably waive, release, agree not to sue, and forever discharge VO2 Master Health Sensors Inc. And its directors, officers, employees, contractors, agents, professional advisors, representatives, successors and assigns (collectively, the "releases") from any and all claims, liability, or rights of action you may have that are related to, arise out of, or are in any way connected with your use of the VO2 Master Analyzer, including for bodily injury and death, and including in the event of any negligent acts or omissions of any of the releases. You further acknowledge and agree that this release is binding on your heirs and successors.

You acknowledge and agree that the foregoing assumption of risks and release are intended to be as broad and inclusive as is permitted by law and that if any portion thereof is held invalid, the balance shall notwithstanding that invalidity continue in full legal force and effect.

HOLD HARMLESS

You acknowledge and agree to indemnify and hold the releases harmless from any and all claims, liability, rights of action, damages, losses, fines, penalties and costs (including legal fees and expenses on a full indemnity basis) brought against, suffered or incurred by any of the releases as a result of your use of the VO2 Master Analyzer.

The VO2 Master Analyzer is not a medical device and the information and data collected from your use of the VO2 Master Analyzer, and use of the site or services, are not to be used for medical diagnosis, treatment or advice.

By using the VO2 Master Analyzer or by accessing the site or services you will give up certain legal rights, including the right to sue.