

SUUNTO t1/t1c

USER GUIDE

MODES & VIEWS

Time



- weekday
- date
- seconds
- dual time

Training



- calories
- average heart rate
- lap time
- time
- current heart rate zone

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1 INTRODUCTION

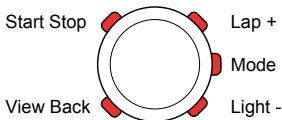
Thank you for choosing Suunto t1/t1c as your training companion. Suunto t1/t1c is a high-precision heart rate monitor designed to make your training as beneficial and enjoyable as possible.

Suunto t1/t1c provides heart rate zone training, accurately measures the calories you burn, and records your training history. It is a device that can grow with you as your fitness improves.

2 GETTING STARTED


2.1 Basic settings

Press any button to activate your Suunto heart rate monitor. You will be prompted to set the display contrast, time, date, as well as your physical characteristics and activity.



1. Change the setting values using the [Lap +] and [Light -] buttons.
2. Accept and move to the next setting by pressing the [Mode] button.
3. Return to the preceding setting, if needed, by pressing the [View Back] button.

When the last setting value is accepted, the device shows “settings ok”. You can now start using the basic time and heart rate monitoring features.

 **NOTE:** Your maximum heart rate is automatically calculated by default using the formula $210 - (0.65 \times \text{AGE})$.

Use the following classifications to help you determine your Activity Class.

Easy going

If you do not participate regularly in recreational sports or heavy physical activity, perhaps just walking or doing some light exercise, use 1.

Recreational

If you participate regularly in recreational sports or do physical work, and your weekly exercise is:

- less than 1 hour, use 2.
- more than 1 hour, use 3.

Fitness

If you participate regularly in sports or other physical activity, and you exercise heavily:

- under 30 minutes per week, use 4.
- 30-60 minutes per week, use 5.
- 1-3 hours per week, use 6.
- over 3 hours per week, use 7.

Endurance or professional

If you train on a regular basis or participate in competitive sports, and your weekly exercise is:

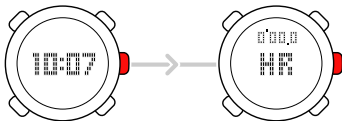
- 5-7 hours, use 7.5.
- 7-9 hours, use 8.
- 9-11 hours, use 8.5.

- 11-13 hours, use 9.
- 13-15 hours, use 9.5.
- over 15 hours, use 10.

2.2 Modes and views

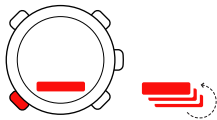
Modes

The main modes are **TIME** and **TRAINING**. Switch modes with [Mode].



Views

Each mode has different views containing supplementary information, such as the day in **TIME** mode or calories in **TRAINING** mode. Change views with [View Back].



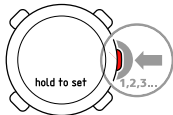
In addition, your heart rate is displayed as a graph on the left edge of the screen.

Button lock and backlight

Lock the buttons by keeping [Light -] pressed. Pressing it briefly activates the backlight. You can still change views and use the backlight when the button lock is activated.

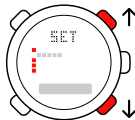
2.3 Menu navigation

Enter menus by keeping [Mode] pressed.

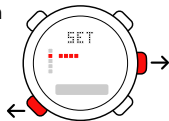


There is one set of menus in Suunto t1/t1c.

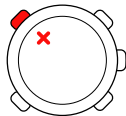
Scroll through the menus using [Lap +] and [Light -].



Move to a setting and accept a value with [Mode]. Return to the previous setting with [View Back].



At any time you can exit by pressing [Start Stop]. The quick exit is indicated by an "X" on the screen.



3 DEFINING MAIN SETTINGS

Before you start training, you need to define **GENERAL** and **PERSONAL** settings. They ensure accurate measurements and calculations.

You are prompted to define the main settings the first time you wake up the device (by pressing any button). If you want to learn more about these settings and modify them, continue reading. Otherwise, you can skip to the next chapter.

3.1 General settings

The **GENERAL** settings define measurement units, time and date format, as well as button tone use. You should define these according to your own preferences.

Setting	Value	Description
tones	on / off	Button tones: on or off
hr	bpm / %	Heart rate units: beats per minute or percent of maximum heart rate
weight	kg / lb	Weight units: kilograms or pounds
height	cm / ft	Height units: centimeters or feet
time	12h / 24h	Time format: 12 hour or 24 hour
date	dd.mm. / mm.dd.	Date format: day-month or month-day

To change **GENERAL** settings:

1. In menu (**SET**), scroll with [Lap +] until you reach **GENERAL**.
2. Enter the setting with [Mode] and set the value using [Lap +] and [Light -].
3. Accept the value and move to the next setting by pressing [Mode].
4. Repeat steps 2 and 3 as needed.
5. Press [Start Stop] to exit.

3.2 Personal settings

Through the **PERSONAL** settings, you tune your Suunto heart rate monitor according to your physical traits and activity. Many of the calculations use these settings, so it is important that you are as accurate as possible when defining the values.

Setting	Value	Description
weight	30-199 kg; 66-439 lb	Weight in kilograms or pounds
height	90-230 cm; 3"-7'11" ft	Height in centimeters or feet
act class	1-10	Activity class
max hr	100-230	Maximum heart rate: beats per minute
sex	female / male	Gender: female or male

Setting	Value	Description
birthday	year / month / day	Date of birth: year, month and day

To change **PERSONAL** settings:

1. In **TIME** mode, enter the menu (**SET**) and scroll with [Lap +] until you reach **PERSONAL**.
2. Enter the setting with [Mode] and set the value using [Lap +] and [Light -]. Keep in mind the units you defined in **GENERAL**.
3. Accept the value and move to the next setting by pressing [Mode].
4. Repeat steps 2 and 3 as needed.
5. Press [Start Stop] to exit.



TIP: Weigh yourself regularly and update the value in your settings. This helps keep the training calculations accurate.

3.2.1 Maximum heart rate

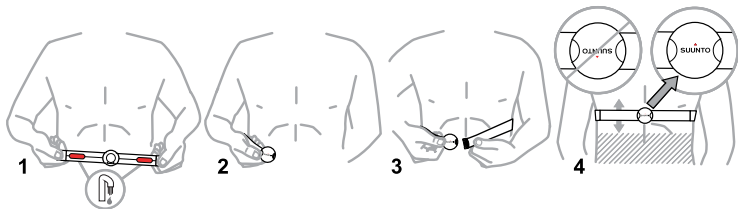
Once you have entered your date of birth, your device automatically sets the maximum heart rate (**MAX HR**) using the formula $210 - (0.65 \times \text{AGE})$. If you know your real maximum, you should use that value.

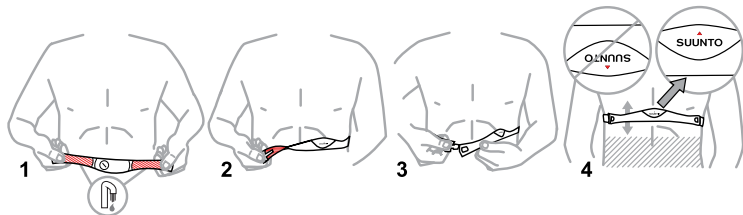
4 USING TRAINING MODE

The **TRAINING** mode handles measurement of all your training activity.

4.1 Putting on your transmitter belt

Put on the belt as illustrated and switch to **TRAINING** mode to start monitoring your heart rate. Moisten both contact areas (1) with water or gel before putting the belt on. Ensure the belt is centered on your chest.





⚠ WARNING: *If you have a pacemaker, defibrillator, or other implanted electronic device, you use the transmitter belt at your own risk. Before using it, we recommend an exercise test with your Suunto heart rate monitor and belt under a doctor's supervision. Exercise may include some risk, especially for those who have been inactive. We strongly advise you to consult your doctor prior to beginning a regular exercise program.*

4.2 Starting a training session

When you enter **TRAINING** mode, your Suunto heart rate monitor automatically searches for signals from a transmitter belt. Once found, your heart rate is displayed on the screen.

Recording a training session

To start recording your training session:

1. Start your training session by pressing [Start Stop].
2. While the timer is running, you can record/store laps by pressing [Lap +].
3. Stop the timer by pressing [Start Stop].
4. To reset the timer and clear the session, keep [Lap +] pressed.

If your peak heart rate exceeded the defined maximum, your Suunto heart rate monitor will ask you if you want to update to the new peak value when you clear the session.

4.3 During training

Your Suunto t1/t1c has a number of visual and audio indicators to help guide you during training. This information can be both helpful and rewarding.

Here are some ideas on what to do while training:

- Lock the buttons to avoid accidentally stopping your log recorder.
- Switch to average heart rate view to check your training intensity.
- Switch to calories view to watch them tick away. You may be surprised how rewarding this can be!
- Switch to time view if you need to get back home for dinner.

4.4 After training

4.4.1 Viewing training sessions

After training, you can review the data recorded during the session. You can check, for example, your peak heart rate, your average heart rate, calories burned, and more.

To view your latest training session summary:

1. Press [Lap +] while in **TRAINING** mode.
2. Scroll through the summary information using [Lap +] and [Light -].
3. Press [Start Stop] or [View Back] to exit.

4.4.2 Viewing training totals

Your Suunto t1/t1c stores your training sessions and summarizes the data according to weeks and months.

The available time periods are:

- **THIS WEEK:** current week, Monday through Sunday
- **LAST WEEK:** previous week, Monday through Sunday
- **THIS MONTH:** current month according to current date
- **LAST MONTH:** previous month according to current date

The available summary information per time period is:

- **COUNTS:** number of training sessions
- **KCAL:** total calories burned
- **TIME:** total training time

- **ZONE 1:** % of time your average heart rate was within Zone 1
- **ZONE 2:** % of time your average heart rate was within Zone 2
- **ZONE 3:** % of time your average heart rate was within Zone 3
- **ABOVE:** % of time your average heart rate was above Zone 3
- **BELOW:** % of time your average heart rate was below Zone 1

To view your training totals:

1. Press [Lap +] while you are in **TIME** mode.
2. Scroll through the time periods using [Lap +] and [Light -].
3. Scroll through summaries for the time period using [View Back] and [Mode].
4. Exit **TOTALS** by pressing [Start Stop].

4.5 Measuring your training intensity

Training with heart rate monitors is traditionally based on heart rate zones. The intensity of your training is determined by the time you spend in each of three zones. All Suunto heart rate monitors support zone training.

- Zone 1 (60-70%): fitness zone; improves basic fitness and is good for weight control.
- Zone 2 (70-80%): aerobic zone; improves aerobic fitness and is good for endurance training.
- Zone 3 (80-90%): threshold zone; improves aerobic and anaerobic capacity and is good for improving peak performance.


To provide even more useful and accurate guidance, Suunto t3d and t4d also use a different measurement called Training Effect. This measurement determines the impact of a training session on your aerobic fitness using a simple 1-to-5 scale.

Training Effect	Result	Description
1.0-1.9	Minor	Improves recovery ability; in longer sessions (over one hour) also improves basic endurance. Does not significantly improve aerobic performance.
2.0-2.9	Maintaining	Maintains aerobic fitness. Builds base for harder training in the future.
3.0-3.9	Improving	Improves aerobic performance if repeated 2-4 times a week. No special recovery requirements.
4.0-4.9	Highly improving	Rapidly improves aerobic performance if repeated 1-2 times a week. Requires 2-3 recovery sessions (TE 1-2) per week.
5.0	Over-reaching	Extremely high effect on aerobic performance if adequate recovery allowed; should not be done often

To train with a TE target level (Suunto t3d and t4d only)

1. Press [View Back] in **TRAINING** mode until you see the **TE** view.
2. Adjust the target level by keeping [Light -] pressed while in **TE** view.

The countdown timer to the right of the TE target value indicates how much time remains for you to reach the target at your current heart rate (training intensity).

 **NOTE:** You can change the main view of **TRAINING** mode to show the current (achieved) Training Effect by keeping [View Back] pressed. Repeat to switch back to the heart rate view.

5 USING HEART RATE LIMITS AND ZONES

5.1 Heart rate limits

Setting upper and lower heart rate limits for yourself can help you keep your exercising at the correct intensity.

In the **HR LIMITS** menu, you can set the heart rate limits on or off, define the upper and lower limits, and turn the heart rate alarm on or off.

Setting	Value	Description
hr limits	on / off	Heart rate limits feature: on or off
lower	bpm / %	Lower heart rate limit: according to selected units in GENERAL settings
upper	bpm / %	Upper heart rate limit according to selected units in GENERAL settings
alarm	on / off	Outside the limit alarm: on or off

To change **HR LIMITS** settings:

1. Enter the menu (**SET**) and scroll with [Lap +] until you reach **HR LIMITS**.
2. Enter the setting with [Mode] and set the value using [Lap +] and [Light -].
3. Accept the value and move to the next setting by pressing [Mode].
4. Repeat steps 2 and 3 as needed.
5. Press [Start Stop] to exit.



NOTE: The heart rate limits are displayed with dashes on the left outer rim of the display if the limits are activated.

Possible real life situation: Staying in the zone

You want to have a good, tough training session today, so you set your heart rate limits to equal your Zone 3 limits and turn the heart rate limit alarm on. Your Suunto heart rate monitor notifies you when you go too slow, or push too hard!


5.2 Heart rate zones

Training with heart rate monitors is traditionally based on heart rate zones. The intensity of your training is determined by the time you spend in each of three zones.

Heart rate zones are defined as percentages of your maximum heart rate. Zone training is an established training method, so there are pre-set defaults as follows:

- Zone 1 (60-70%): fitness zone; improves basic fitness and is good for weight control.
- Zone 2 (70-80%): aerobic zone; improves aerobic fitness and is good for endurance training.
- Zone 3 (80-90%): threshold zone; improves aerobic and anaerobic capacity and is good for improving peak performance.

If you are following a personal training program that uses zone training, enter the values defined by the program.

 **NOTE:** The zone defaults follow the guidelines of the American College of Sports Medicine for exercise prescription.

In the **HR ZONES** menu, you can turn on the zone feature, define zone limits, and turn tones on or off. When the zones feature and the tones are turned on, your device alerts you with a beep when you move from one zone to another.

Setting	Value	Description
hr zones	on / off	Heart rate zone feature: on or off
z1	% - %	Zone 1: upper and lower limit in percent of maximum heart rate
z2	%	Zone 2: upper limit
z3	%	Zone 3: upper limit
tone	on / off	Zone tone: on or off

To change **HR ZONES** settings:

1. Enter the menu (**SET**) and scroll with [Lap +] until you reach **HR ZONES**.
2. Enter the setting with [Mode] and set the value using [Lap +] and [Light -].
3. Accept the value and move to the next setting by pressing [Mode].
4. Repeat steps 2 and 3 as needed.
5. Press [Start Stop] to exit.



TIP: *If your heart rate varies significantly during training, for example, when running in hilly terrain, following your real-time average heart rate is better guidance than following zone limits.*

6 USING TIME MODE

TIME mode handles the time of day in two time zones: main time and dual time. In the **TIME-DATE** menu, you have the following settings:

Setting	Value	Description
alarm	on / off	Alarm feature: on or off
alarm	hours / minutes	Alarm time: hours and minutes
time	hours / minutes / seconds	Main time: hours, minutes and seconds
dual time	hours / minutes	Dual time: hours and minutes
date	year / month / day	Current date: year, month and day


6.1 Setting time and dual time

To change time and dual time:

1. In menu (**SET**), scroll with [Lap +] until you reach **TIME-DATE**.
2. Enter the setting with [Mode] and set the value using [Lap +] and [Light -].
3. Accept the value and move to the next setting by pressing [Mode].
4. Repeat steps 2 and 3 as needed.
5. Press [Start Stop] to exit.

Possible real life situation: Knowing the time at home

You are traveling abroad and you set the dual time to be the time at home. The main time is the time at your current location. Now you always know the local time and you can quickly check what time it is at home.

 **NOTE:** *We recommend that you set the current time at your current location as the main time because the alarm clock operates according to the main time.*

6.2 Setting the alarm

To set the alarm:

1. In menu (**SET**), scroll with [Lap +] until you reach **TIME-MODE**.
2. Enter the setting with [Mode] and set the value using [Lap +] and [Light -].
3. Accept the value and move to the next setting by pressing [Mode].
4. Repeat steps 2 and 3 to set the alarm time.
5. Press [Start Stop] to exit.


Alarm snooze

Deactivate the alarm by pressing [View Back]. Pressing any other button activates the alarm snooze function. Each snooze lasts 5 minutes. The snooze function can be activated 12 times.

7 GENERAL FEATURES

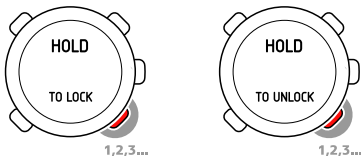
7.1 Backlight

You activate the backlight by pressing [Light -]. The backlight turns off automatically. If you want to use the backlight when changing settings, you need to activate it before entering the settings. The backlight will re-activate whenever a button is pressed. This feature will stay on until you exit the settings.

 **NOTE:** Heavy use of the backlight significantly reduces battery life. To save power, backlight blinks when used in **TRAINING** mode.

7.2 Button lock

You can lock and unlock the buttons in any mode by keeping [Light -] pressed.



When the buttons are locked, you can still change views and turn on the backlight.



TIP: We recommend you lock the buttons, for example, after you have started a training session or are storing the device in a travel bag.

7.3 Sleep mode

You put your Suunto heart rate monitor to sleep to extend battery life or to erase the recorded training history. Personal settings are not erased.

1. To switch to sleep mode, simultaneously keep [Start Stop], [Lap +], [Light -] and [View Back] pressed.
2. To reactive your device, press any button.



NOTE: Basic settings need to be set each time the device is reactivated.

7.4 Belt code

Your Suunto t1/t1c uses coded transmission technology to ensure accurate readings from your heart rate transmitter belt.

To check your belt code:

1. Put on your heart rate transmitter belt.
2. Switch to **TRAINING** mode.
3. Keep [View Back] pressed until the code is shown.

To change your belt code:

1. Remove the battery from your belt.

2. Press the battery into the compartment positive side down to reset the belt.
3. Put the battery back in correctly and close the cover.
4. Switch to **TRAINING** mode.

Use this same procedure to pair your belt with your Suunto t1/t1c.

8 TROUBLESHOOTING

Suunto t1/t1c uses coded transmission to prevent reading disturbances. However, exercising near overhead power lines or magnetic or electronic devices may cause interference with the signal.

If you lose the signal, try the following:

- Exit and then re-enter **TRAINING** mode.
- Check that you are wearing the belt correctly.
- Check that the electrode areas of the belt are moist.
- Move away from any potential sources of interference.
- Replace the battery (of the belt and/or wristop) if problems persist.
- Check the code; if **CODE NOT FOUND** is shown, re-pair the belt.

9 CARE AND MAINTENANCE

9.1 General guidance

For all Suunto Training devices:

- Only perform the procedures described in Suunto guides.
- Do not disassemble or service your device yourself.
- Protect your device from shocks, hard and sharp objects, extreme heat and prolonged exposure to direct sunlight.
- Store your device in a clean, dry environment at room temperature.
- Do not place the device where it could be scratched by hard objects.

Removing scratches

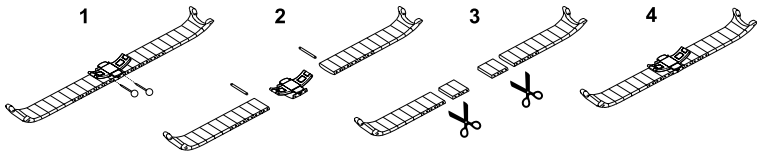
Use Polywatch to remove small scratches in the screen. It is available at authorized Suunto dealers, in most watch stores, and from Suunto Web Shop (shop.suunto.com). A protective plastic shield can also be placed over the screen to prevent scratches.


Cleaning and chemicals

Clean your device with a moist cloth. For stubborn marks, use a mild soap. Do not use gasoline, cleaning solvents, acetone, alcohol, insect repellents, paint, or other strong chemicals on your device.

9.2 Changing strap length

If you have a strap with a latch buckle, you can change the strap length by removing the buckle and cutting the strap as illustrated here.

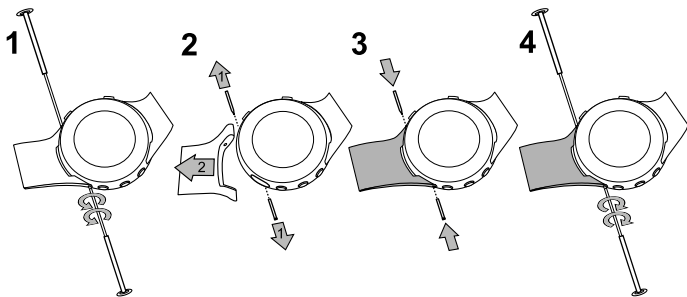


 **TIP:** Remove one piece at a time and test the new length to ensure you do not remove too many.

9.3 Changing straps

There are many different straps available for your Suunto heart rate monitor. Visit the Suunto Web Shop (shop.suunto.com) to see what is available.

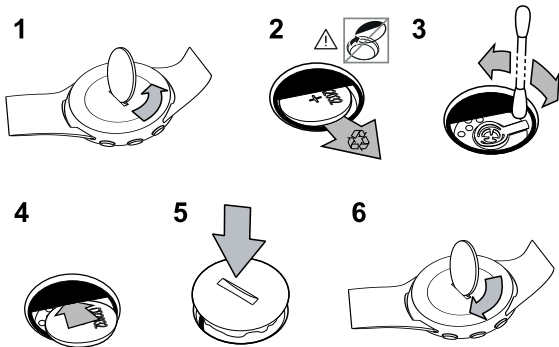
Change to a new strap as illustrated here:




9.4 Replacing wristop battery

Replace the battery with extreme care to ensure your Suunto heart rate monitor remains water resistant. Careless replacement may void the warranty.

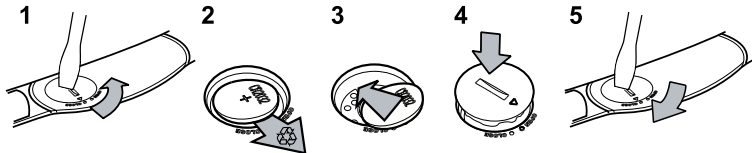
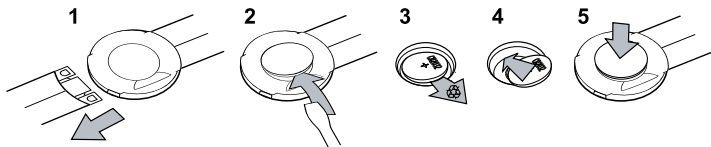
Replace the battery as illustrated here:




 **NOTE:** *If the cover threads are damaged, please send your device to an authorized Suunto representative for service.*

9.5 Replacing belt battery

Replace the battery as illustrated here:



 **NOTE:** We recommend that you replace the cover and O ring along with the battery to ensure the transmitter remains clean and water resistant. Replacement covers are available with replacement batteries.

10 SPECIFICATIONS

10.1 Technical data

General

- Operating temperature: -20°C to +60°C / -5°F to +140°F
- Storage temperature: -30°C to +60°C / -22°F to +140°F
- Weight (device): 45 g / 50 g / 65 g (depending on strap type)
- Weight (belt): max. 61 g (depending on belt type)
- Water resistance (device): 30 m / 100 ft (ISO 2281)
- Water resistance (belt): 20 m / 66 ft (ISO 2281)
- Transmission frequency (device/belt): 5.3 kHz
- Coding: 29 codes
- User-replaceable battery: (device / belt) 3V CR2032
- Battery life: approximately 1 year in normal use (4 hours of exercise with HR per week)

Log recorder

- Maximum lap time: 99 hours
- Lap/split times: 30 per session (log)
- Resolution: 0.1 second

Heart rate

- Display: 30 to 240
- Limits: 30 to 230
- Maximum for percentage display: 240

10.2 Trademark

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The CE mark is used to mark conformity with the European Union EMC directives 89/336/EEC and 99/5/EEC.

10.5 Patent notice

This product is protected by the following patents and patent applications and their corresponding national rights: US 11/432,380, US 11/181,836, US 7129835, US 11/808,391, US 7,526,840, USD 603,521, USD 29/313,029 and EU Design 000528005-0001/000528005-0010. Additional patent applications have been filed.

10.6 Disposal of device



Please dispose of the device in an appropriate way, treating it as electronic waste. Do not throw it in the garbage. If you wish, you may return the device to your nearest Suunto representative.

11 DISCLAIMERS

11.1 User's responsibility

This instrument is intended for recreational use only. Suunto heart rate monitors must not be used as a substitute for obtaining measurements that require professional or laboratory-quality precision.

11.2 Warnings

If you have a pacemaker, defibrillator, or other implanted electronic device, you use the transmitter belt at your own risk. Before using it, we recommend an exercise test with your Suunto heart rate monitor and belt under a doctor's supervision. Exercise may include some risk, especially for those who have been inactive. We strongly advise you to consult your doctor prior to beginning a regular exercise program.

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