Polar OwnTest™ System 5.4

Users Guide

Manual Version 1.1
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1. About the Polar *OwnTest*™ System

The Polar OwnTest™ System is an all in one computerized fitness assessment machine used to calculate the Polar BodyAge™. The Polar OwnTest™ System includes everything needed to calculate a client's BodyAge including a Strength Platform, Skinfold Calipers, Flexibility measurement device, Blood Pressure Device, heart rate system and powerful software to guide the user through many other assessments and create personalized exercise prescriptions. Other assessments include OwnIndex®, OwnZone® check, sit-up, wall-sit and an optional Tanita Bioimpedance body fat and body water assessment.

The Polar OwnTest™ System was designed to be administered by the exercise professional or instructor on apparently healthy clients between the ages of 18 to 79.

The Polar OwnTest™ System is based on the BodyAge™ system created by Polar HealthFirst in the United States. The *BodyAge*™ system was developed from information gathered and testing in over 1300 health clubs in the U.S. between 1991-2001.

1.1 About the *BodyAge*™ Score

The *BodyAge*™ score is an integral part of the Polar *OwnTest*™ System and software developed by Polar. The instruments used to calculate the *BodyAge*™ score are validated and published in their respective fields and are listed on the following pages. All normative and percentile ranking references are listed in the technical references. *BodyAge*™ simplifies fitness test results into one number that the non-professional can understand. Using *BodyAge*™ has been shown to increase motivation levels of clients and increase exercise compliance.

Calculation of BodyAge™

The *BodyAge*™ calculation is based on a population of 6,469 apparently healthy 18-79 year-old men and women. Low levels of cardiovascular fitness and elevated blood pressure levels have been shown to increase risk of premature death, therefore are weighted more heavily in the calculation. This results in more years being added or taken away from the *BodyAge*™ score depending on each test result. Assessments that affect quality of life rather than longevity are weighted slightly less, such as flexibility and strength. A minimum of four assessments must be taken in order to calculate *BodyAge*™. Two of the four assessments must be strength, flexibility , cardiovascular or body composition assessments. The other 2 can be any of the other assessments; systolic blood pressure, diastolic blood pressure, total cholesterol, HDL, body composition, cardiovascular, flexibility or strength.

1.2 The Polar BodyAge™ System in the United States

Since it's introduction in 2001, *BodyAge*™ System has been implemented and adopted by over 900 health and fitness centers, major universities and corporations in the United States. A partial list of customers include; United Parcel Service (UPS), United States Air Force, Department of Education, Department of Defense, PGA West, Ford Motor Company, Gold's Gym, Wal-Mart, US Marines, Boeing International, YMCA, Lifetime Fitness, Pepperdine University and Florida State University.

1.3 The Polar OwnTest™ System in Europe

The BodyAge™ System was released in Germany under the name Polar OwnTest™ System in 2004. Before that time a pilot study was done by the German based research organization, LINK Institute to evaluate the effectiveness of the system in the European market. An overview of the study design, results and conclusions are listed below.

Target and Study Design

- The target of the study was to evaluate the use and feasibility of the Polar OwnTest™ System as well as validity of measurements by collecting the feedback from clients of the pilot clubs.
- The pilot was carried out in three fitness clubs in Germany.
- Each club provided a Polar OwnTest™ System pilot test battery and feedback for a minimum of 50 typical club members with a pre-test and post-test, minimum 5 weeks between tests.
- After taking part in the assessment, each participant received a questionnaire (Q1) and after the retest they received a second questionnaire (Q2).
- The instructors received a questionnaire at the end of the pilot (T).

Test Battery of Pilot Project

- PAR-Q
- Medical Questionnaire
- Weight and Height for BMI
- Body Composition (skinfold or bioimpedance)
- Polar OwnIndex® for $V0_{2MAX}$
- Polar OwnZone®
- Crunch Test
- Biceps Strength Test
- Wall Sit Test
- Sit and Reach Test

Results: Club Members

- 90% of club members believe that the Polar OwnTest™ assessment is important.
- 80% of members believe going through the Polar OwnTest™ System is rather easy (not difficult).
- 76% of the club members think the reports are Very Useful (6 on a 6 point scale) and 86% believe it is well presented.
- 81% of the members felt that the BodyAge™ Score was motivation for further training.
- In 7 out of the 8 tests, all the people on average improved their results from the first test to the second test. This supports the results that the members felt that the Polar OwnTest™ System and BodyAge™ Score were motivation for further exercise training.

Results: Instructors

- The instructors judge the importance of the Polar OwnTest™ System as high and the difficulty as low.
- The reports are judged as useful and no additional materials are needed in the reports.
- On average the instructors suggest they need 41 minutes to conduct the test.
- The instructors agree with the club members that the BodyAge is a very meaningful parameter.
- The instructors feel a high increase of quality of work, a high support in motivating clients and a high support in communicating heart rate controlled training.

1.4 Polar OwnTest™ System DECLARATION OF CONFORMITY

The Polar OwnTest™ System (AKA Model TriFIT 700) is tested under the EU Medical Device Directive –93/42/ECC. A Class 1 Electrical Medical Device Type BF Protection. Testing standards used are the EN 60601 – Safety of Electrical Medical Equipment. The Polar OwnTest™ System (AKA Model TriFIT 700) bears the CE MARK as verified by investigation by the EU Notified Body, TUV Rheinland.

The Polar OwnTest System (AKA Model TriFIT 700) Product complies with the RoHS Directive 2002/95/EC and WEEE Directive 2002/96/EC mandatory as of July 1st, 2006.

2. Setting up the Polar OwnTest™ System

In this section

- Requirements and Recommendations
- Unpacking the Polar OwnTest™ System
- Packing List
- Compatible Hardware
- Assembling the Polar OwnTest™ System

2.1 Requirements and Recommendations

The Polar OwnTest™ System is designed to gather, process, interpret and display fitness and wellness data. The Polar OwnTest™ System was designed to be used by exercise professionals.

These items are necessary to operate the Polar OwnTest™ System:

- 220 Volt Power outlet ***highly*** recommended to be a dedicated line. A dedicated line is where only one circuit is servicing the outlet.

These items are recommended:

- Private/quiet environment for fitness testing
- Cool temperature (72°F, 22°C), moderate humidity and good air circulation (fan recommended for bike & treadmill testing).
- Telephone with outside line for emergency access and technical support.
- Flat, firm surface for the platform/scale.

2.2 Unpacking the Polar OwnTest™ System

Once the system is out of the shipping container and on the floor;

- Remove all packing materials
- Move the scale and any boxes off of the cart
- Mount the monitor onto the main post, being careful not to pinch any of the cables (see photo)

2.3 Packing List

The following is a list of all the items included with your system. These are standard items included with every system. You may have other items as part of you individual order.

1. Polar heart rate transmitter belt and elastic strap
2. Strength handle and strength strap assembly
3. On-line Skyndex Skinfold calipers w/calibration dowel
4. Flat Panel LCD monitor w/speakers
5. Keyboard
6. Mouse
7. Printer
8. Power cord attached for the cart power
9. Polar OwnTest™ System cart with integrated range of motion (ROM) unit
10. Heart rate receiver
11. Platform/scale
12. 2 Allen wrenches for assembly/repair.
13. Polar OwnTest™ System software (factory installed).
14. Blood Pressure included with 3 cuffs.

2.4 Compatible Hardware

Compatible Hardware
• Tanita BF-350 Bioimpedance Unit • Tanita BC-418 Bioimpedence Unit • Ergofit Ergometers: cycle 3000 med (series), recumbent 3000 med (series), and circle 3000 med (series).

2.4.1 Tanita Bioimpedance

Contact your Polar dealer for more information on where to purchase the Tanita BF-350 or BC-418.

Tanita BF-350
The Tanita BF-350 Interfaces with the Polar OwnTest System to obtain Body Fat % and Total Body Water.

Tanita BC-418
The Tanita BC-418 Interfaces with the Polar OwnTest System to obtain Body Fat % and Total Body Water.

2.4.2 ErgoFit Ergometer

Contact your Polar dealer for more information on where to purchase the ErgoFit Ergometers. OwnTest is compatible with ErgoFit cycle 3000 med (series), ErgoFit recumbent 3000 med (series), and ErgoFit circle 3000 med (series).

2.5 Assembling the Polar OwnTest™ System

2.5.1 Interface Connections

Noting that the interface box is secured to the top of the computer with a velcro strip, connect the following peripherals to the OwnTest™ interface:

Skinfold Calipers 

Platform 

Heart Rate Cable/RPM cable interface 

ROM (Range of Motion) Unit 

2.5.2 Printer

Plug the power and data cables into the printer.

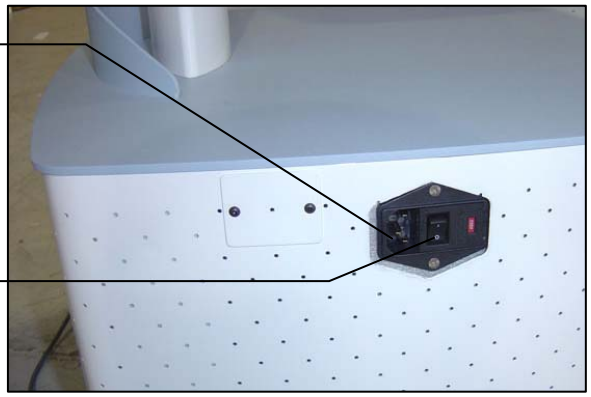
Plug in Printer Power and USB Cables

2.5.3 Main Unit Power

Using the main power cable, plug the system into a wall outlet. Power is applied to the system via the Power Entry Module located on the left rear of the cart.

Plug power cable into the power entry module into a 220v Shucko style plug.

Always use the System Main Power Switch to turn the entire system on and off. On is "|" and off is "o".



2.5.4 Power Entry Module Information

The Power Entry Module is a switchable power supply between 110v (USA and Canada) and 230v (European). The unit is shipped from the factory with the 230v selected.

Fuse Types:

For the 110Volt (USA and Canada), the fuses are ¼ x 1 ¼" 250Volt, 2 Amps, Slow Blow Fuses.

The 230Volt (European), the fuses are 5mm x 20mm, 250Volt, 3.0-3.5 Amp Slow Blow Fuses.

Replacing the Fuses:

- To replace the fuses, be sure the power is unplugged and completely disconnected from the power.
- Next, using a small flathead screwdriver, pry the cover open on the far right side.
- Carefully pry the fuses out and insert the new fuses.
- Close the cover, insert the power cord and turn the power switch on "|".

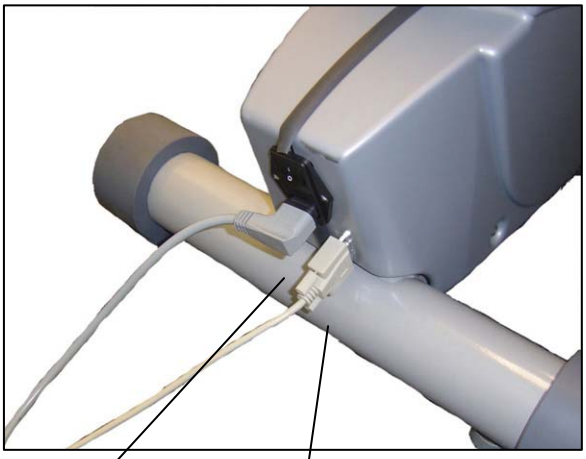
2.5.5 Platform/Scale

- Screw in the eyebolt on the scale strap assembly into the top of the platform. Make sure it is tightened all the way.
- Attach the "C" connector on the strength strap assembly to the strength handle. Make sure it is tightened all the way.
- Check the strap for any wear or defects before each use, as this could cause injury to the client being tested on the Biceps Strength Test.

2.5.6 Ergofit Ergometer

The ErgoFit bike needs to be connected to the Polar OwnTest™ System with a null modem cable. This cable plugs into the back bottom of the ErgoFit ergometer. Plug the other end of the serial cable into an available serial port in the back of the CPU. *See section 8.14 for complete list of certified compatible ergometers.*

***Note**: The serial cable is a 9-pin Null-Modem Cable. You must use a Null-Modem cable or a Null-Model adaptor for the Ergofit Ergometer to function properly with the Polar OwnTest™ System.*



Power cable for the Ergofit.

Plug the null modem serial cable into the Ergofit serial plug.

2.5.7 Tanita BF-350 or BC-418

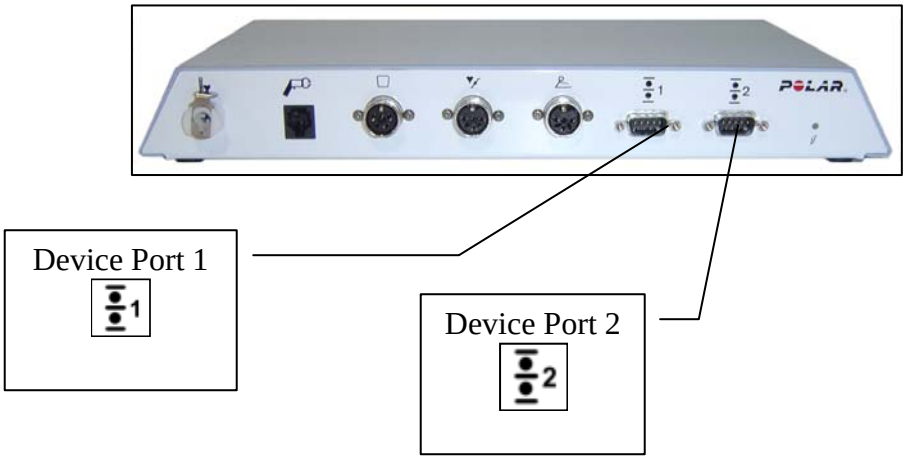
The Tanita BF-350 or BC-418 is a unit to measure bioimpedance using the Polar OwnTest™ System. It interfaces to the OwnTest™ System with a serial cable.

***Note**: The serial cable is a 9-pin Null-Modem Cable. You must use a Null-Modem cable or a Null-Model adaptor for the Tanita BF-350 to function properly with the Polar OwnTest™ System.*

Plug the power cord into a 220v power outlet.

Plug the serial cable into the Tanita BF-350 or BC-418 as shown here.

Plug the other end of the serial cable into ***Device Port 1*** or ***Device Port 2*** on the TF700iu box.

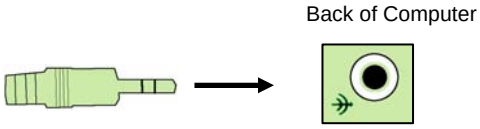


2.5.8 Polar Sonic Interface™

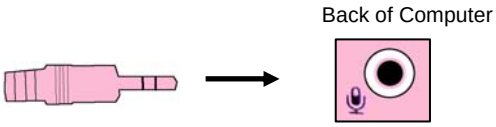
The Polar Sonic Interface™ uses the speaker and microphone ports on your PC to send and receive information to Polar heart rate monitors (F11, F6, F4 and all Polar UpLink enabled monitors).

Installation Instructions

1. Plug the GREEN Polar Sonic Interface cable into the Speaker port on the computer.
   Alternately, This can be plugged into a headphone jack on the computer



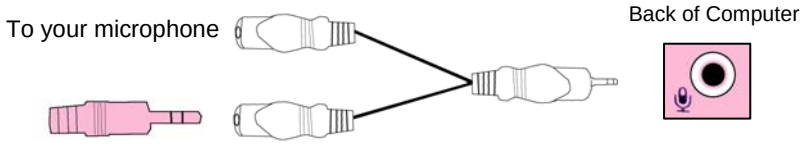
2. Plug the PINK Sonic Interface cable into the Microphone port on the computer.



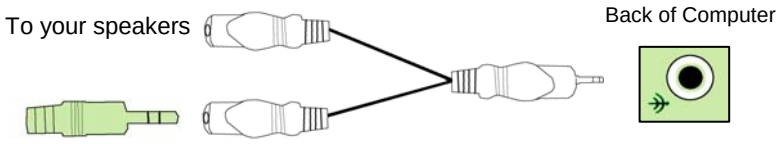
Using the Polar Sonic Interface
When using the Polar Sonic Interface, it does not make any sound. If you have your PC Speakers enabled using the "Y" Splitter (below), you will hear a sound from your PC speakers when setting the Heart Rate Monitors. There is never sound when uploading files from the monitor to the PC. You will need to adjust the speaker and mic volume for proper operation, depending on the noise of your environment and computer sound card type. For details on using the Sonic Interface, please see the tutorials that are installed in C:/Program Files/TF4/Tutorial.

OPTIONAL INSTALLATION
Use the included "Y" splitters if you wish to use your existing speakers and microphone on your PC.

Mic



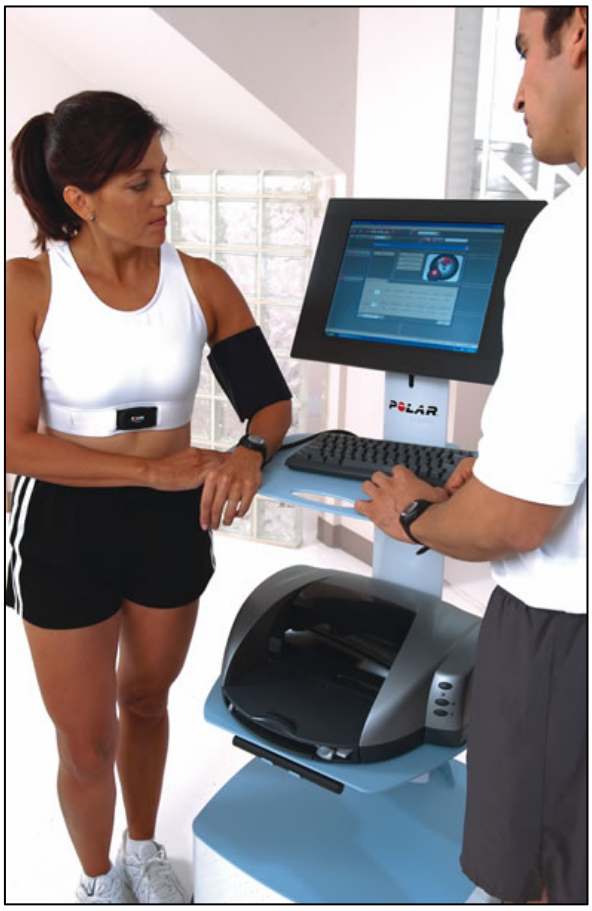
Speakers



3. Operation of the Polar *OwnTest*™ System

In this section:

- Recommendations for the Operating Staff
- Turning on the Polar OwnTest™ System Power
- Shutting Down the Polar OwnTest™ System
- Calibrating the Polar OwnTest™ System
- Transporting the Polar OwnTest™ System



3.1 Recommendations for Operating Staff

It is recommended that **ALL OPERATORS** have a ***basic understanding of Windows operating system.*** If not, it is recommended that the primary operator take a course in the basic operation of Windows.

Polar recommends that the operator of the Polar OwnTest™ System be certified in CPR and hold a certification in Fitness Assessment or Sports Degree.

3.2 Turning on the Polar OwnTest™ System Power

- After checking all the cable connections as outlined previously, you are ready to turn on your system.
- Turn on the System Main Power switch located at the left side of the cart.

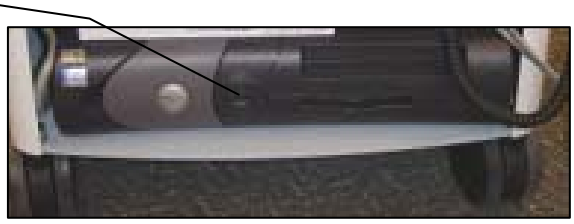
Main Power switch

- When the power is applied to the unit, a green light should be on the TF700iu above the power indicator .

Green Light

- Turn on the monitor and CPU.

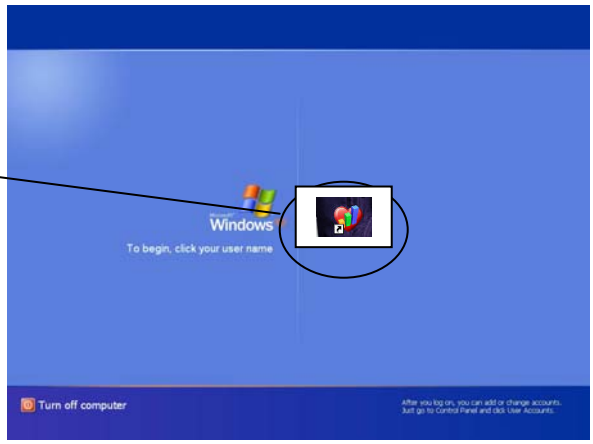
CPU Power Button



- Turn the power to the printer on.
- Turn on the monitor

Printer Power Button

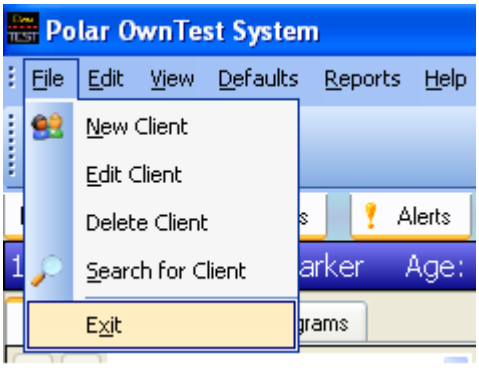
- As the computer boots up, a screen similar to the one to the right will appear. Click on the OwnTest icon.
- To open the Polar OwnTest™ System Software, double click on the OwnTest™ icon from the desktop of the computer.



3.3 Shutting Down the Polar OwnTest™ System

Before turning off the power to the system, it is important to ***Shut down the Polar OwnTest™ System properly:***

- Click the "X" in the upper right corner, or go to "File" and select "Exit" to Exit the Polar OwnTest™ System software.



- Go to Start at the bottom taskbar and select "Turn off Computer…". Then the screen to the right will appear. Select "Turn Off", and the computer will turn itself off.

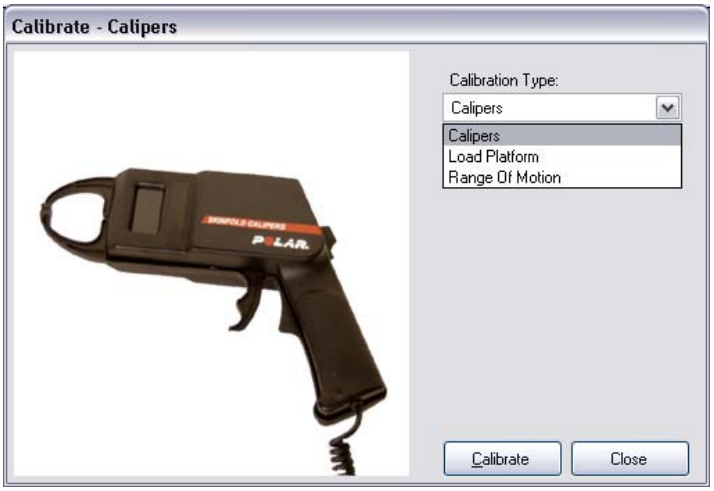
- Now, turn off the power to the printer, by pressing the printer power button located on the front of the printer.

- Turn off the main power on the right side of the cart.

3.4 Calibrating the Polar OwnTest™ System

When initially setting up your OwnTest™ System and from time to time after that, it is important that the **Load Platform**, **Skinfold Calipers** and **Range of Motion** unit be calibrated to ensure accurate results. There are 3 components to calibrate on the Standard TriFIT 700 system:

- Load Platform (which calibrates both scale and biceps strength test)
- Calipers
- Range of Motion



3.4.1 Skinfold Calibrations

Select the '**Default**' tab on the main screen tool bar.

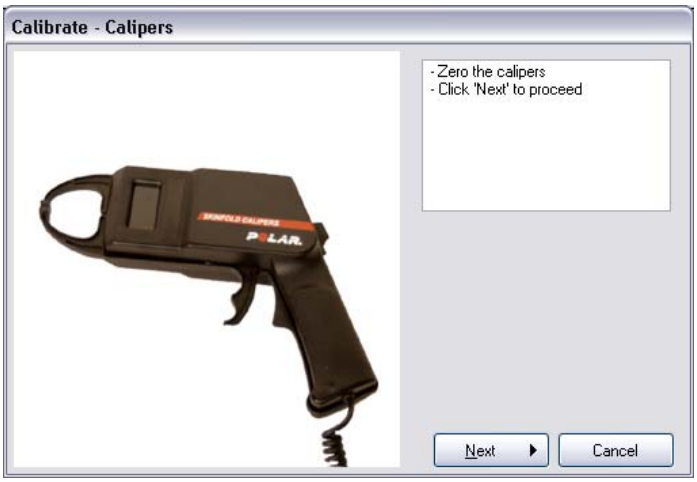
Select '**Calibrations**'

Select '**Calipers**' from the drop down box.

Click '**Calibrate**'

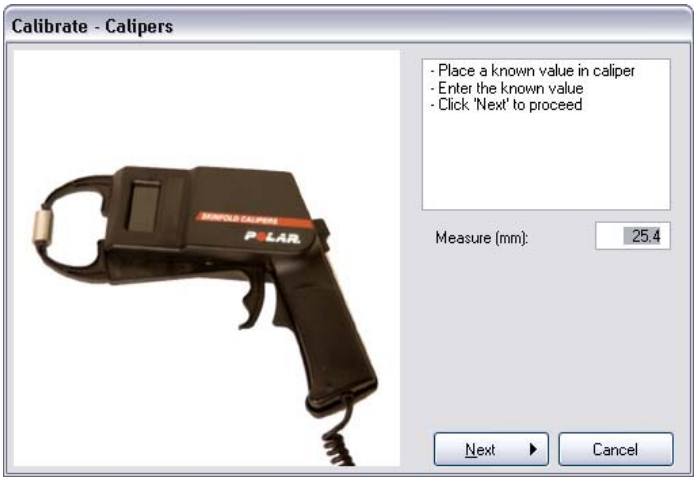
Make sure the caliper jaws are in the closed position.

Click '**Next**'

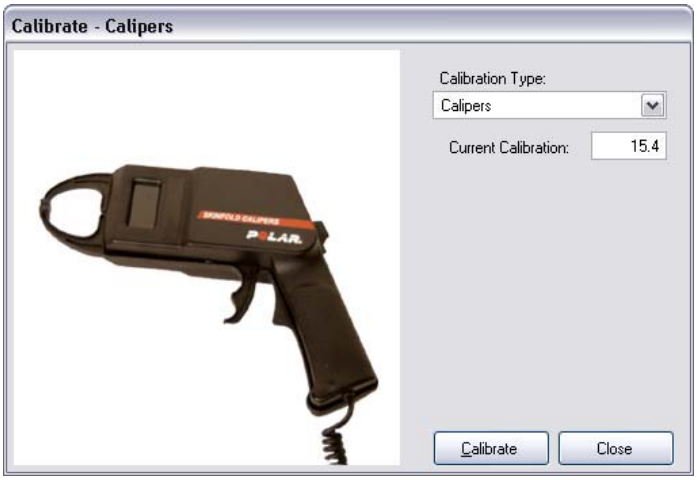


If using the metal dowel that is provided, place it lengthwise between the calipers as shown. The measurement of the dowel is exactly 25.4 (that is the defaulted value). If you are measuring something other than the dowel, enter that measurement in text box.

Click '**Next**'



Make sure the current calibration reading is between 14.0-17.5



3.4.2 Platform Calibration

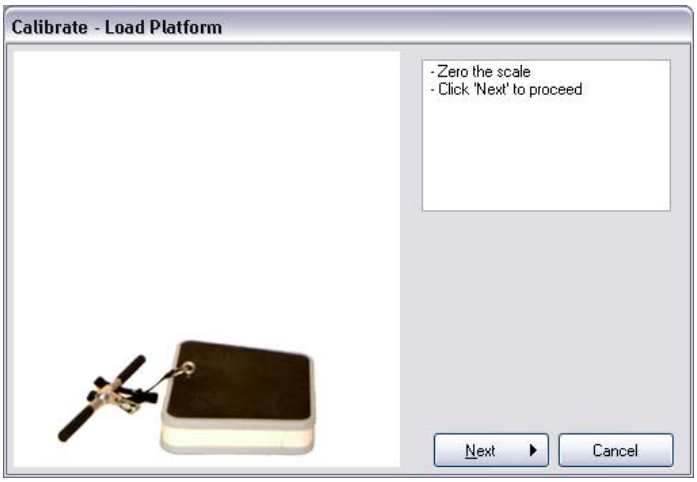
Select the '**Default**' tab on the main screen tool bar.

Select '**Calibrations**'.

Select '**Load Platform**' from the drop down box.

Click '**Calibrate**'.

Make sure nothing is on the scale.
Click '**Next**'



Have someone step on the scale that knows his or her exact weight. Have them measure their weight on a scale that is known to be accurate (i.e. Triple beam balance scale). Use that measurement when you enter the value while they are standing on the Polar scale.

Click '**Next**'

Make sure the current calibration reading is between 0.4-2.0

*It is best to use a person that knows their exact weight and weighs between 68 and 86 kg to calibrate the scale, as weight plates are not always the exact weight as printed on them. Make sure the person has the same clothing on they were wearing when measuring and calibrating. The weight scale is accurate to within 0.2 kg.

**A better calibration will result if two people calibrate the platform-one standing on the platform and the other types in the weight.

3.4.3 Range of Motion Calibration

Select the '**Default**' tab on the main screen tool bar.

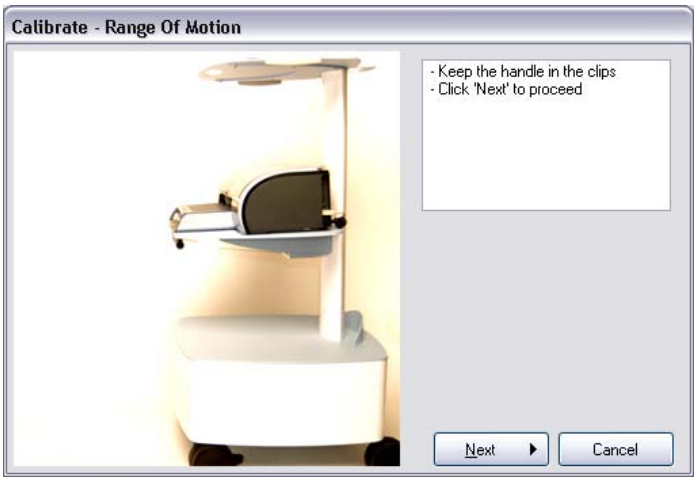
Select '**Calibrations**'

Select '**Range of Motion**' from the drop down box.

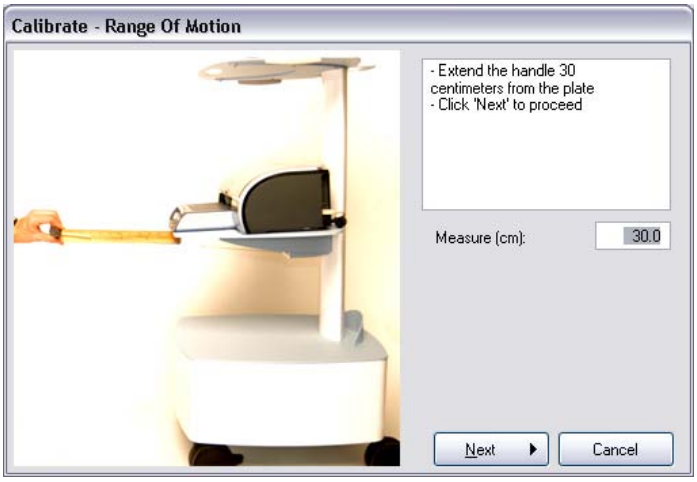
Click '**Calibrate**'.

Make sure the handle is in the handle clips.

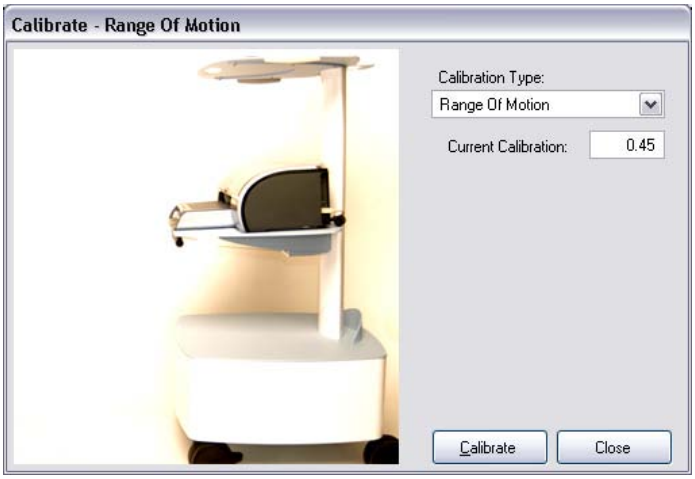
Click '**Next**'



Pull the handle out exactly 30 cm. Click '**Next'**



Make sure the current calibration reading is between 0.35-0.55.



***** It is recommended that you have a 30 cm ruler when performing this calibration.

Note: It is easier and typically more accurate to use two people when calibrating the Range of Motion.

WARNING*: Use care when pulling out and returning the handle. Do not pull the handle out too far and when a client has finished the test be careful they do not let go of the handle and let it snap back. This is a delicate measurement device.*

3.5 Transporting the Polar OwnTest™ System

Before transporting your system;

- Unplug the following peripherals: Skinfold Calipers, Platform. Leave the bike cable plugged in; coil and store in the computer compartment.
- Secure the CPU with foam or other materials such as wadded paper or bubble wrap to prevent shifting.
- Consider dismounting the monitor and wrapping with bubble wrap.
- Secure the printer on its' tray with an elastic cord around the top of the printer or use stretch wrap.
- ***Avoid*** laying the system on its side. The CPU is not secured with anything except the materials you place in the compartment. If you must lay it down, make sure the CPU compartment opening is facing upwards.

4. Quick Overview to Using the Polar *OwnTest*^{TM} System

In this section:

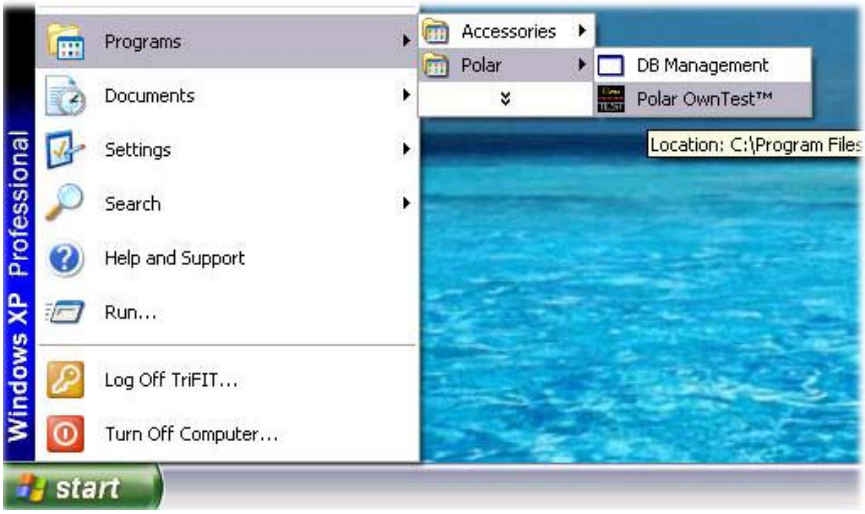
- Introduction
- Opening the *OWNTEST*^{TM} Software
- Adding a New Client
- Running a Test in AutoPilot

4.1 Introduction

The Polar OwnTest™ System is an integrated health management system that includes everything you need to perform complete fitness assessments. It combines interactive protocols for Biometrics, Body Composition, Cardiovascular Fitness, and Flexibility/Strength. You can provide personalized fitness reports and create customized exercise programs for individuals. The end result gives the client a clear picture of the age of their body in comparison to their Chronological age.

4.2 Opening the Polar *OWNTEST™* System Software

 To open the Polar OwnTest™ System Software, double click on the OwnTest™ icon from the desktop of the computer, or…



Go to the **Start Menu**

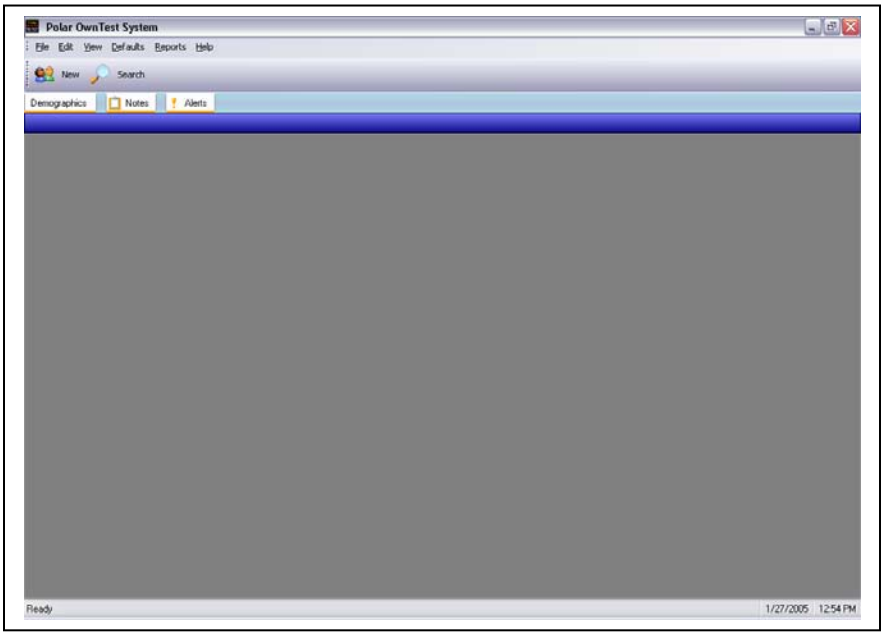
Select '**Programs**'

Select '**Polar**'

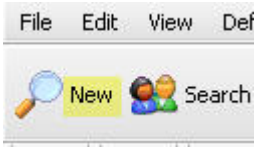
Double click on the '**Polar OwnTest™** Icon'

4.3 Adding a New Client

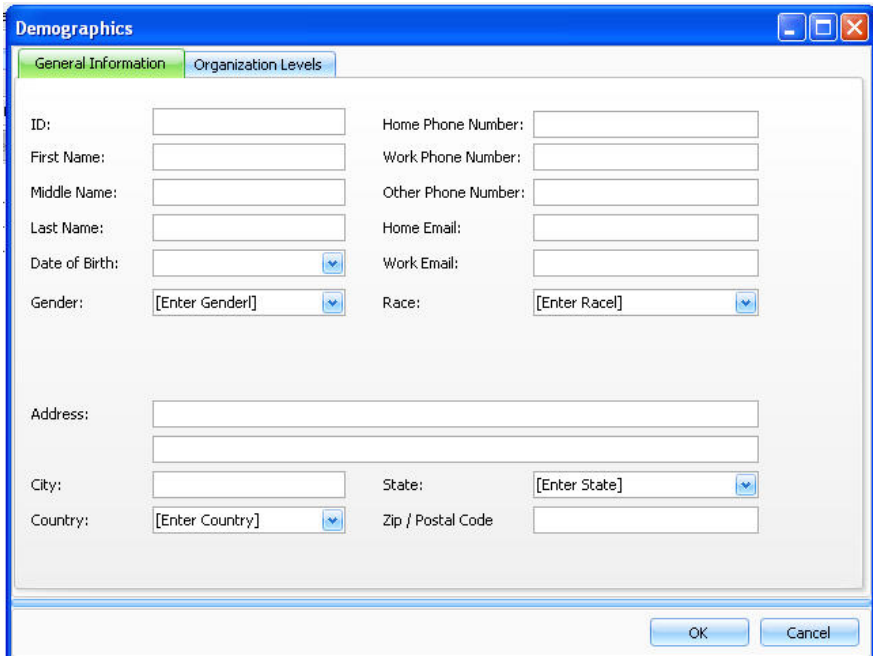
After double clicking on the OwnTest™ Icon, the following screen will appear:



Click on the '**New**' button in the upper left corner

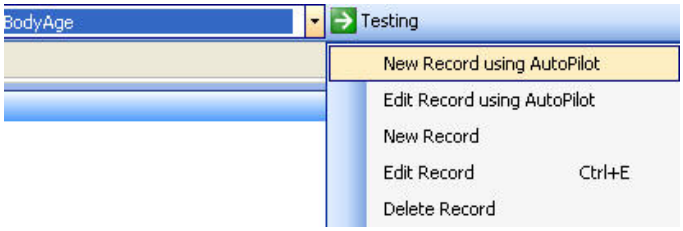


A Demographics screen will appear:



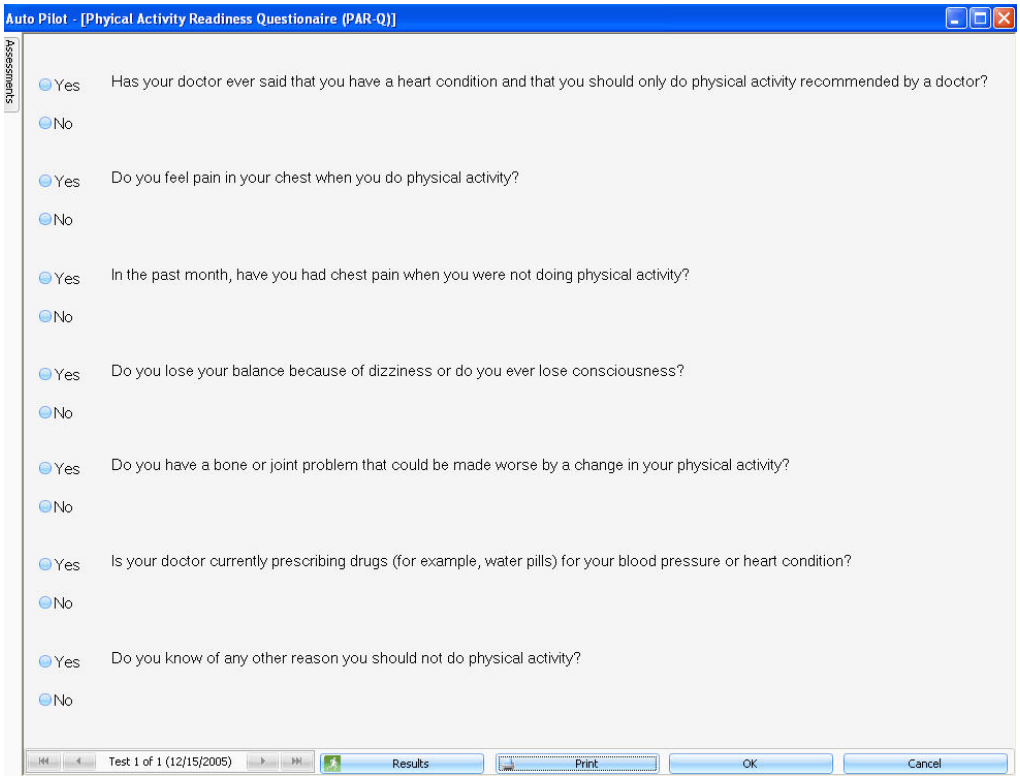
Fill out the fields accordingly. **First Name, Last Name, Date of Birth** and **Gender** are required fields. Date of Birth and Gender have drop down options.

4.4 Running a Test in AutoPilot



To begin an assessment with AutoPilot (see **Running with AutoPilot** for more information), go to the **'Testing'** drop down box and select **'New Record Using AutoPilot'** by clicking on it:

A new screen will appear:



This is the first assessment to complete when you use the default **Body Age Assessment Group** in order to run a complete assessment (see the **OwnTest™ SystemTests** section for more detailed information about each test). When you are finished answering the questions click '**OK**' in the lower right corner and you will be automatically forwarded to the next assessment.

To close AutoPilot and return to the main screen click on the '**Close**' button.

***NOTE: For more detailed information on AutoPilot, see the **AutoPilot** section.*

5. Polar *OwnTest*™ System Tests & Programs

In this section:

- Pre-Test Recommendations
- Biometrics
- Body Composition
- Cardiovascular
- Strength and Flexibility
- Programs

5.1 Pre-Test Recommendations

Before any exercise testing is done, the following is recommended by Polar/HealthFirst:

- **PAR-Q** (Physical Activity Readiness Questionnaire) should be completed by the individual. If "Yes" is answered to ANY of the seven (7) questions, it is recommended that the individual sees a doctor before performing any physical activity or exercise testing.

- **MEDICAL HISTORY** questionnaire must also be completed, printed out and kept in the client's file in hard copy.

GENERAL GUIDELINES TO BE GIVEN TO CLIENT BEFORE ANY TESTING

- Wear comfortable, loose-fitting clothing.
- Drink plenty of fluids over the 24-hour period preceding the test.
- Avoid food, tobacco, alcohol and caffeine for 3 hours prior to taking the test.
- Avoid exercise or strenuous physical activity the day of the test.
- Get an adequate amount of sleep (6 to 8 hours) the night before the test.

Test Environment

The test environment is important for test validity and reliability. Anxiety, emotional problems, food in the stomach, bladder distention, climate variation, and pain should be controlled as much as possible. To minimize anxiety, the test environment should be quiet and private and the temperature of the room maintained at about 72°F/22°C. The room should be equipped with a comfortable seat and/or examination table to be used for resting blood pressure. The demeanor of personnel should be one of relaxed confidence so as to immediately put the subject at ease. Testing procedures should not be rushed, and all procedures must be clearly explained prior to initiating the process. These seemingly minor tasks are easily accomplished and will assist in achieving valid test results.

Importance of Test Order

When exercise testing a client or student you must consider the testing battery order. For example: if a cardiovascular test is given first, then a blood pressure measurement is taken, the blood pressure measurement will be affected by the cardiovascular test.

Manual Entry

After any manual entry, the user should click Enter key to save data. These changes will now be seen in the reports.

5.2 Biometrics

5.2.1 PAR-Q

Using PAR-Q

Clicking on the **PAR-Q** button from the Biometrics section of the main menu brings up the complete PAR-Q questionnaire. To record the individual's answer to each of the PAR-Q questions, use the mouse to point and click on the appropriate answer (**Yes** or **No**) for each question.

Clicking on the **PRINT** button can print the completed PAR-Q. The printed version of the PAR-Q has the name, date and a line for the client to sign.

To exit, click '**OK**' and the data will be saved.

After clicking '**OK**', a check mark will appear in the box next to PAR-Q on the main screen. It will be green if the client answered '**No**' to all the questions and red if they answered '**Yes**' to any of the questions.

The Importance of PAR-Q

The PAR-Q (*Physical Activity Readiness Questionnaire*) was developed by the British Columbia Department of Health. Its purpose is to identify the small number of individuals for whom physical activity might be inappropriate. All individuals should answer the questions on the PAR-Q prior to testing. Follow the Physical Activity Plan (below) accordingly.

PHYSICAL ACTIVITY PLAN

If the participant answers **YES** to one or more questions the '**Results**' button will be red. Advise them to talk with their doctor by phone or in person **BEFORE** they start becoming more physically active or **BEFORE** they have a fitness appraisal. Have them tell their doctor about the PAR-Q and which questions they answered **YES** to.

If the participant answered **NO** honestly to all **PAR-Q** questions the '**Results**' button will be green and you can be reasonably sure that they can:

- Start becoming much more physically active - begin slowly and build up gradually. This is the safest and easiest way to go.

• Take part in a fitness appraisal - this is an excellent way to determine your basic fitness so that the participant can plan the best way for them to live actively.

DELAY BECOMING MUCH MORE ACTIVE:

• If the participant is not feeling well because of a temporary illness such as a cold or a fever - wait until they feel better; or

• If the participant is or may be pregnant – have them talk to their doctor before they start becoming more active.

***Please note**: If their health changes so that they then answer **YES** to any of the questions, have them tell their health professional.*

5.2.2 Medical History

Using Medical History

Clicking on the **Medical History** button from the main screen will bring up the Medical History questionnaire. Entering Medical History information is easy! When the Medical History screen appears, the cursor will be positioned on the response line for Question 1. Begin typing the client's response to this question. To move to the response line for Question 2 and so on, either press the **ENTER** key, the **TAB** key or **use the mouse** to position where you want the cursor and click!

Clicking on the **PRINT** button will print the Medical History. The printed version of the Medical History has the name, date and a line for the client to sign.

To exit, click '**OK**' and the data will be saved.

Importance of Medical History

The Medical History questionnaire is designed to identify if an individual has any pre-existing injuries or ailments that should be brought to the attention of the tester. It is also used to identify if an individual is taking medications such as beta-blockers, vasodilators or diuretics that may affect the normal physiologic responses during exercise. It is recommended that the dosage of medication is recorded along with a physician's contact number. The Medical History provides important information to assist the technician and safeguard the subject during testing.

Please follow your countries guidelines for exercising with certain diseases or conditions.

5.2.3 Height/Weight

How to Measure Height

Clicking on the **HEIGHT/WEIGHT** button from the Main menu brings up the screen for entering an individual's height and weight. The cursor will be blinking within the blank **HEIGHT** field initially. You can enter height one of two ways:

1. You can enter the exact height (in centimeters) using the number keys on your keyboard, or

2. Use the mouse to point to the Height scale's *slider needle* and while holding down the mouse button, drag the slider up or down to the individual's height.

How to Measure Weight

To ensure accuracy of measuring the weight of someone, you should make sure that their shoes are off and they are in light clothing. If they are being retested for weight, then have them wear similar clothing as they did last time they got measured.

To Measure Weight On-Line

Click on the **Measure** button, step up to the scale, and wait until the green progress bar is complete. After weight has been measured, the results are automatically displayed on the weight dial and within the weight text box.

To Manually Enter an Individual's Weight

Use the mouse to point and click within the **WEIGHT** input box and use the number keys on your keyboard to enter the individual's known weight.

To exit Height/Weight, use the mouse to point and click on the **OK** button in the lower right of the screen. Your data will be saved.

***NOTE: If you are using Bioimpedance to measure weight, the **Bioimpedance** Section for more information.*

Body Mass Index Information

Upon entering the height and weight for an individual, you will notice that there is a check box that allows you to show the results for Body Mass Index in the lower half of the Height/Weight Screen. The results are broken down in the following manner:

Less than 18.5	Underweight
18.5 - 24.9	Normal
25.0 - 29.9	Overweight
30.0 or Greater	Obese

BMI is calculated as:
Individual's weight divided by height squared: **kg/m^2**

Choosing not to display BMI Results in the Reports
If you do not want the BMI results to show up on the reports go to **Defaults** on the tool bar, select **Environments**, and then uncheck the box that says "**Include BMI in reports**".

About Obesity (Related to BMI)
Obesity-related health risks include high blood pressure, increased blood fats and cholesterol, heart disease, stroke, diabetes and certain cancers. Obesity can reduce life expectancy and threaten quality of life. Health risks may multiply or become more severe as your BMI increases.

Overweight, but not Over Fat
Athletes with a large mass of muscle (bodybuilders, weight lifters, heavier wrestlers, football players, etc.) may be classified as overweight according to the BMI classifications, but they could still be in the healthy range of body composition. This is the drawback of the BMI classification scale. It is recommend that you use a means of measuring body composition when assessing athletes with large amounts of muscle mass.

5.2.4 Blood Pressure

How to Accurately Measure Blood Pressure

Follow these suggestions to obtain a correct measurement:

- Instruct the client to rest and relax for at least five (5) minutes before the blood pressure is taken.
- Take the Blood Pressure Measurement on the Right Arm.
- When repeating measurements, release the cuff pressure completely to remove its constriction to the arm. Elevate the arm to make certain of normal blood circulation before making another measurement.
- Repeated deep breaths, talking, coughing or sneezing may affect the reading. Relax and remain still and quiet during each blood pressure measurement.
- A rolled-up sleeve may constrict blood flow through the arm. Also, putting all or part of the cuff on top of a sleeve may affect the accuracy of the reading.
- Do not measure blood pressure after exercise.
- Instruct the client to urinate prior to measuring blood pressure. Blood pressure may be higher when a person has to urinate.
- Instruct the client to refrain from drinking caffeinated drinks prior to measuring blood pressure (coffee, tea, coke, etc.).
- Instruct the client to refrain from smoking prior to measuring blood pressure.
- The arm cuff must be the correct length and width for the individual's arm. Use the appropriate cuff size based on circumference of bicep; Small 18-26cm, Regular 26-35cm or Large 32-42cm.

➢*NOTE: Some people claim that they can "feel" when their blood pressure is high. These estimates of blood pressure are probably unreliable. Only by performing actual measurements of the blood pressure can one know if it is normal or high.*

About your Blood Pressure Unit

Your 700iu Blood Pressure unit uses a state of the art technology in measuring blood pressure - a variation of the oscillometric procedure for measuring blood pressure. The unit does not listen for sounds, but instead detects the blood pressure through a sensor that responds to changes in the pressure in the arm cuff. This method is *very sensitive and accurate*. Since this unit does not depend on sound waves, it is not affected by false noises, but is sensitive to movement and the flexing of the biceps.

Using Blood Pressure

Clicking on the **BLOOD PRESSURE** button from main OwnTest™ screen brings up the Blood Pressure Protocol screen. Blood pressure can be entered either on-line or manually.

On-Line Blood Pressure Measurement

To measure blood pressure on-line using the 700IU blood pressure unit, follow the EXACT instructions displayed on the screen and click on the **MEASURE** button. After blood pressure has been measured, the results will be automatically displayed in the lower portion of the screen.

Manual Entry of Blood Pressure

To enter an individual's blood pressure results manually, use the mouse to point and click on the **SYSTOLIC** input box in the lower section of your screen. The blinking cursor will appear. Use the keyboard to manually enter the systolic measurement and then press **ENTER**. The cursor will now be blinking within the **DIASTOLIC** input field. Once you have entered the diastolic measurement and have pressed the **ENTER** key, the cursor will be placed in the **PULSE** input field.

Click on the **OK** button and you result will be saved and you will be returned to the main screen.

Fluctuations in Blood Pressure

Unlike body temperature, a person's blood pressure is **not** constant. Acute regulation of blood pressure is achieved by the sympathetic nervous system, while long-term regulation of blood pressure is primarily a function of the kidneys. The kidneys regulate blood pressure by their control of blood volume. Because blood pressure can be influenced by several systemic factors, it does not remain constant. In general, any circumstance leading to an increase of pulse rate tends to cause blood pressure to rise. The following can influence blood pressure measurements:

Decisions should be based on the average of two or more blood pressure readings measured during each of two or more visits following an initial screening.

Exercise -- Exercise will elevate blood pressure and heart rate. Always measure blood pressure and resting heart rate *before* you do the fitness assessment. Make sure to ask the client if he/she has walked briskly or exerted themselves in any way prior to their fitness assessment.

Medications -- There are various medications that will elevate blood pressure including some cold medicines. Many medications are used to decrease blood pressure in those individuals that have been diagnosed with high blood pressure.

Smoking -- Nicotine elevates blood pressure. Ask your clients not to smoke prior to the assessment if possible.

Caffeine -- Caffeine elevates blood pressure. Ask your clients to refrain from ingesting caffeine until after the assessment.

5.2.5 Blood Chemistries

Using Blood Chemistries

The Blood Chemistries is in the Biometrics section of the main screen. You may have to look under the bar that says "**Other Biometric Protocols**" if it is not part of your selected assessment group (see the **Assessment Group** section for help).

To enter **BLOOD CHEMISTRIES,** you just enter the values directly from the main screen. Use the mouse to place the cursor on the **Total Cholesterol** text box and type in the value.

To advance to the next text box, simply press the **ENTER** or **TAB** key.

Viewing the Blood Chemistries Results

There are 2 ways to view the classification of your Blood Chemistry values:

1. When you include Blood Chemistries on your assessment group and then you create a new record using AutoPilot. As you enter the values for Blood Chemistries, a red line will run across the bar graph on the right of the text box and your classification will be highlighted in yellow.

2. Preview or print a Graphical Summary or Personal Profile Report.

How to Get Blood Cholesterol Measured

Healthy adults should have their blood cholesterol and triglyceride levels measured at least once every three years. Ideally, an individual should have their blood chemistries measured annually. If an individual does not know their blood chemistry levels, contact a health care provider. Make an appointment to have blood samples analyzed and document the results for total cholesterol, LDL cholesterol, HDL cholesterol, triglycerides, and glucose.

5.2.6 Cardiovascular-Own Zone®

About Own Zone®

An OwnZone Test is able to determine the individual training heart rate zone. This exercise zone is called your OwnZone. It guides you through an appropriate warm-up routine and automatically determines a safe and effective exercise heart rate zone - your OwnZone - while taking into account your current physical condition.

For most adults, OwnZone corresponds to 65-85% of the maximum heart rate. OwnZone is suitable for cardiovascular training either for health-related or fitness improvement purposes.

OwnZone works well for those whose goal is weight control via physical activity and exercise, because the OwnZone corresponds to intensity from "light to moderate" to "moderate". Exercise of this intensity level can be conducted even for extended periods safely and often yields the best results for weight loss.

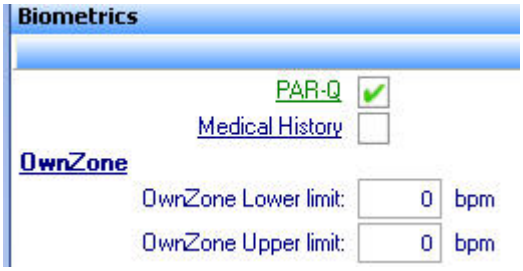
The OwnZone Protocol uses your estimated VO2max to calculate the watts for each minute of the test. If the client already has a VO2max score from one of the Cardiovascular Tests in the OwnTest System, then that VO2max score is used. If the client does not have VO2max estimated, a Physical Activity Questionnaire will appear and the a non-exercise VO2max score will be estimated based on Age, Gender, Weight and Activity Level. Following is the workloads based on percentage of estimated VO2max. The percentage of VO2max is converted to a workload in Watts:

Minute 1	42% VO_{2MAX}
Minute 2	50% VO_{2MAX}
Minute 3	58% VO_{2MAX}
Minute 4	66% VO_{2MAX}
Minute 5	74% VO_{2MAX}
Minute 6	82% VO_{2MAX}

How to use OwnZone®

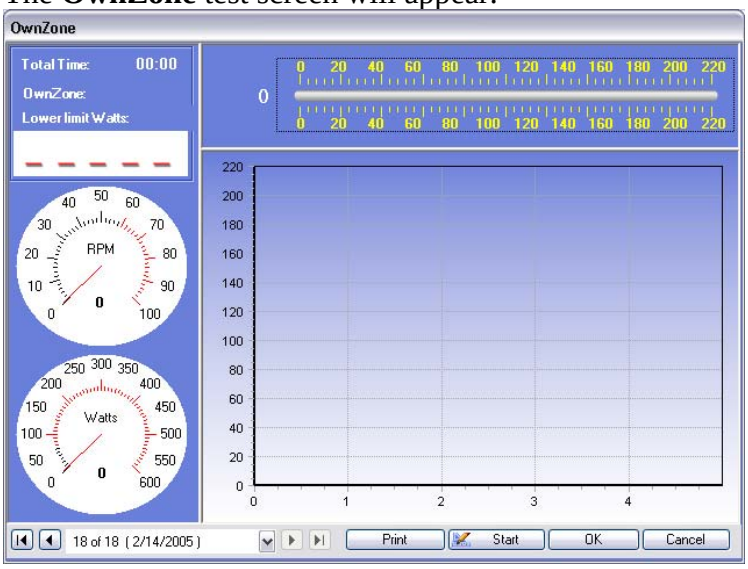
If you have connected a compatible Ergometer to the OwnTest system you will want to go to **Defaults/Environment/Cardiovascular**, and select the **Cardio Device** that you are using for this test as well as the **Serial Port** that it is connected to (see **'Defaults'** for more information). If you are taking an OwnZone test without having a cardio device, you will want to select **'None'** under **'Cardio Device'**. The **Heart Rate Device** should be set to **Use Polar Interface Box.** Your Polar Interface Box (Heart Rate Receiver) will need to be plugged into the 700iu box and mounted to the bike with Velcro or tape.

After creating a new record or opening an existing record for a client, their **height and weight** must be recorded before the **OwnZone** test can be performed.



After entering the clients Height/Weight, click on **OwnZone** from the Biometrics box on the main screen.

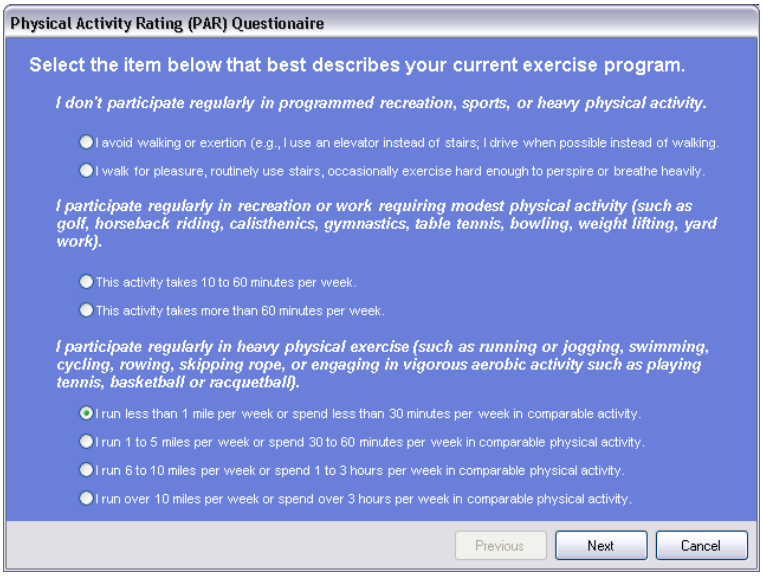
The **OwnZone** test screen will appear.



Verify that the heart rate is being transmitted correctly by looking at value next to the line graph on the top.

Click **Cancel** to cancel the test and return to the main screen.

Click on **Start** to activate the test.



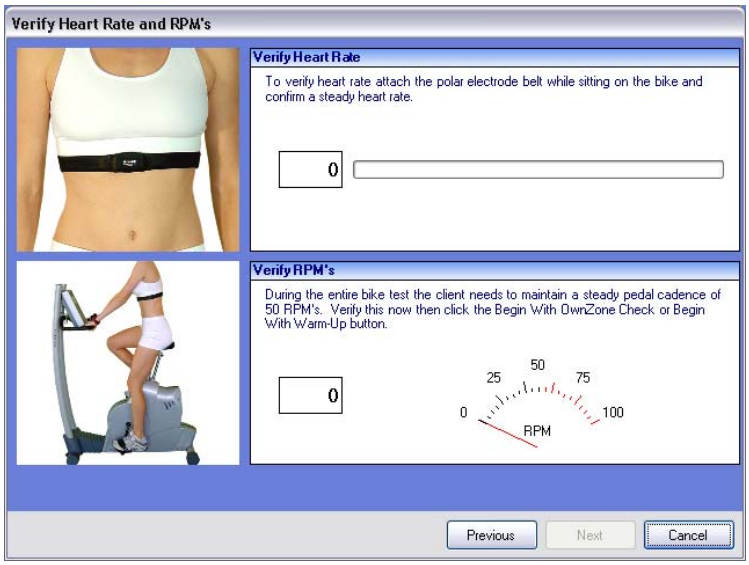
If you have not previously taken a VO2max test on the OwnTest System, then clicking on **Start** will bring up the Physical Activity Rating Questionnaire box.

Select the choice that best represents the person taking the test.

Click **Next.**

***NOTE: If you have already taken a VO2max test on the OwnTest System, then this screen will not appear (see **About OwnZone** for more info).*

You will then Verify Heart Rate and RPM



The Heart rate of the person that is taking the test should appear in the top box.

Instruct the client to begin pedaling. The RPM's will show up in the lower box. (they will only appear if the bike is connected to the OwnTest system)

'**Next**' will become activated when a Heart Rate is transmitted.

Click '**Next**' to begin Test.

The test will begin. Instruct your client to maintain the RPM's between 60 and 80.

The test follows a protocol where the watts are set to a percentage of the client's estimated VO2max, but the watts can be adjusted. If you are using a Cardio Device that is not connected to the OwnTest System, you will have to manually set the watts on the Cardio Device that you are using to match the Test Screen in order to get accurate results.

When the test is complete (~1-6 minutes), the data will be displayed.

Select **Print** if you want the data and graph to be printed.

Select **OK** to save the data and return to the main screen.

OTS uses the Basic OwnZone calculation. Slight variations in results may be noticed depending on what training computer the client is using if validating with wrist unit.

5.3 Body Composition

5.3.1 Importance of Body Composition

Body composition refers to the lean body weight plus the fat weight, which together make up total body weight. The measurement of body composition is important, as obesity is a known health hazard.

Obesity is related to a higher incidence of numerous diseases, including coronary heart disease, diabetes, cirrhosis of the liver, hernia, and intestinal obstruction. Obesity is also of considerable concern from an aesthetic standpoint and may be one of the primary reasons an individual decides to begin an exercise program. Therefore, it is important to be able to identify an individual's initial body composition before training and also to quantify any change that may occur with training and/or diet. A desirable weight should be determined for the individual, but reducing weight alone should not be the only goal.

Extremely low body fat can have a negative affect on the body also, which can impair health status or alter normal physiological functions. The body requires an essential percentage of body fat to function properly. The lower limit of essential body fat for males is approximately 3% and for females it is approximately 12%. Encroachment into this essential body fat reserve may impair optimal health and capacity for vigorous exercise. In addition, it is recommended that some females (those that have low body fat induced irregular menstrual cycles) maintain a critical body fat level of at least 17% to maintain normal menstrual cycles.

5.3.2 Body Composition 3-Site Skinfold

Guidelines for Skinfold Measurements

➢*NOTE: With all body composition measurement techniques, the technician must be well-trained, routinely practice the technique, and demonstrate reliability in his/her measurements before collecting actual data.*

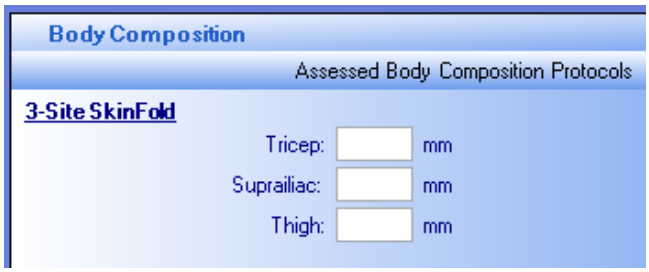
- All measurements should be made on the RIGHT side of the body.
- Caliper should be placed 1 cm away from the thumb and finger, perpendicular to the skinfold and halfway between the crest and the base of the fold.
- Wait one to two seconds before taking the measurement.
- The actual fold measurement will be displayed on the screen after each measurement.
- When all sites have been measured, a pie chart with percentage of the fat and lean body mass will appear.

3-Site Skinfold Sites

Men	Women
Chest Diagonal fold; one-half the distance between the anterior axillary line and the nipple.	***Triceps*** Vertical fold; on the posterior midline of the upper arm, halfway between the acromion and olecranon processes, with the arm held freely to the side of the body.
Abdomen Vertical fold; two cm to the right side of the umbilicus.	***Suprailiac*** Diagonal fold; in line with the natural angle of the iliac crest taken in the anterior axillary line immediately superior to the iliac crest.
Thigh Vertical fold; on the anterior midline of the thigh, midway between the proximal border of the patella and the inguinal crease (hip).	***Thigh*** Vertical fold; on the anterior midline of the thigh, midway between the proximal border of the patella and the inguinal crease (hip).

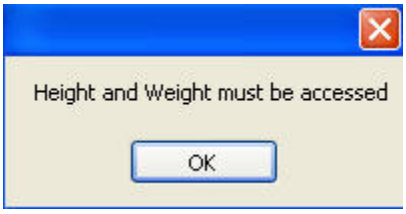
Using 3 Site Skinfold

Clicking on the **3-Site Skinfold** button from the main Body Composition screen brings up the 3-Site Skinfold protocol screen.



➢*NOTE: Prior to selecting a Body Composition protocol, please note that weight is required. If you have NOT previously entered a weight for the individual being assessed, you will get a message saying:*

Clicking on the **OK** button brings up the Biometrics Height/Weight screen making it easy for you to measure the individual's height and weight and proceed with Body Composition



The testing screen will appear:

Use the calipers to measure the skinfolds according to the guidelines and sites (see above sections).

When the caliper is pinching the skin in the proper position, click the switch on the back of the calipers and the value will appear in the text field.

It will automatically advance to the next text field to do the next measurement.

When you complete all skinfold measurement, a pie chart will be generated showing the client's body composition.

To save the data and return to the main screen click '**OK**'

5.3.3 Body Composition Bioimpedance

About Bioimpedance

Bioelectrical Impedance Analysis technique (**BIA**) is based on the fact that lean tissues have a high water and electrolyte content, and thus provide a good electrical pathway. Fat mass contains a lower percentage of body water, and thus is a poor conductor of the electrical signal. By inducing a low energy, high frequency, electrical signal (Tanita BF-350 and BC-418 use 50 kHz, 500 microamp), a measurement of the baseline resistance to the flow of electrical current can be made. This current is passed though the anterior electrode on the scale platform, and the voltage drop is then measured on the posterior electrode. The resistance measurement relates directly to the volume of the conductor, which is used to determine total body water, lean body mass, and finally, fat mass. Percent body fat is calculated using a formula combining impedance and weight measurements with height, gender, and age information.

In order to obtain the most accurate results from your Bioimpedance device, please ensure the following conditions are met:

- No alcohol 48 hours before the test
- Avoid intense exercise 12 hours before the test
- Avoid eating or drinking(especially caffeinated products) 4 hrs before the test
- Empty bladder 30 minutes before test
- Avoid all diuretics for 7 days before test (only if possible)
- Measure in bare feet. Individuals wearing thin nylons will receive accurate results if a drop of liquid (saline solution, water) is placed in the center of each electrode.

Athlete Mode

There are physiological differences between standard adults and very athletic individuals. The actual impedance reading will be the same in both the standard and athletic modes, however, a different algorithm validated in athletic populations, must be used when interpreting this data. Thus, the percent body fat reported for an athletic individual measured in the standard mode (or vice versa) is incorrect.

When you go into the testing screen for Bioimpedance (see **Using Bioimpedance**) you will have the option to select ‘Athlete’ if the person being measured is an athlete. The guidelines for selecting ‘Athlete’ are as follows:

- Individuals over the age of 16 who exercise at least 10 hours a week consistently for a period of at least 6 months.
- Individuals who have a resting heart rate of approximately 60 beats per minute or less.
- This mode includes people who have been very fit for years, but currently exercise less than 10 hours per week.

Using Bioimpedance

Before using Bioimpedance, you will want to make sure your **Body Composition Defaults** are set up correctly. To do this, go to **Defaults\Environment\Body Composition Tab** and select **Tanita BF-350A / BF-418MA** as your **Bioimpedance Device**. Next select the serial port or Device Port that you have the null modem cable plugged into. If you want to use the Tanita scale to measure the client's weight, you will select the box that says: "**Use Bioimpedance Device for weight measurement**"

Click '**OK**'.

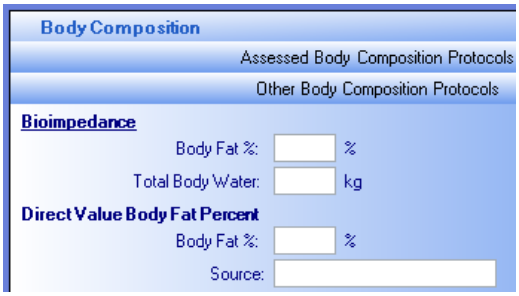
Use the following instructions to set the format of the Tanita to be read online with the OwnTest™ System:

Step 1: When the unit is switched off, press the [ZERO/RESET] and [ON/OFF] keys simultaneously. NOTE: The default setting is off.

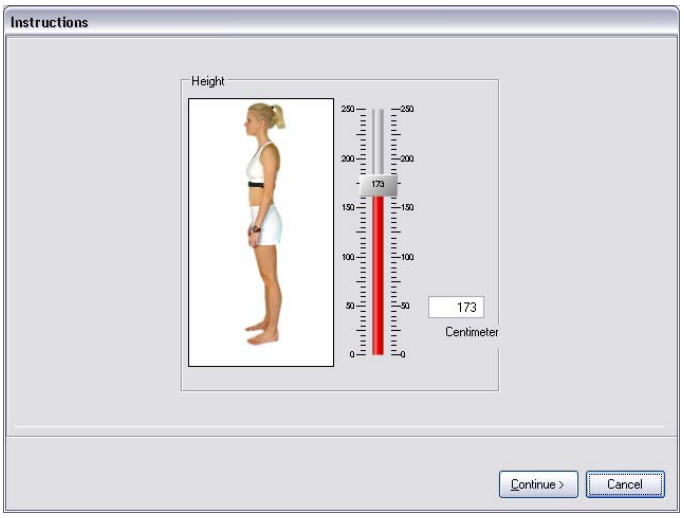
Step 2: Switch Remote mode on and off by pressing the up or down arrows. ON: Enables the Remote mode, OFF : Disables Remote mode.

Press [SET] to confirm. Only 'rS' will appear (standby screen). NOTE: To switch off Remote mode, start from the beginning again and select 'OFF' as Step 2

Clicking on the **Bioimpedance** button from the main Body Composition screen brings up the Bioimpedance protocol screen.

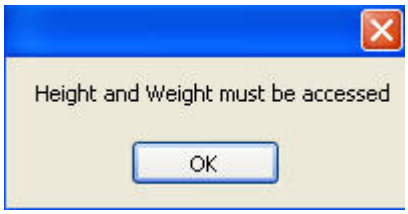


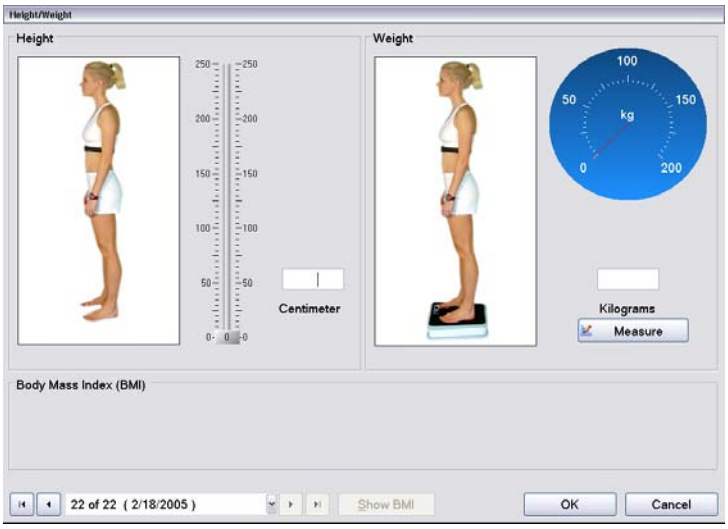
If you have **selected** the default to use the bioimpedance device for weight measurement and you have not taken the height of your client, you will be prompted with a screen to enter height. Type it in and select '**Continue**'



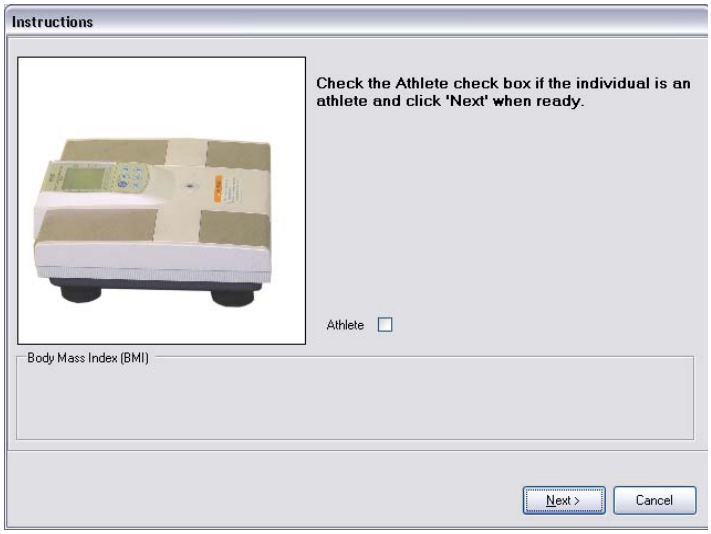
If you have **not selected** the default to use the bioimpedance device for weight measurement and you have not taken the client's height and weight, you will be prompted with the following message:

Clicking on the **OK** button brings up the Height/Weight screen making it easy for you to measure the individual's height and weight:



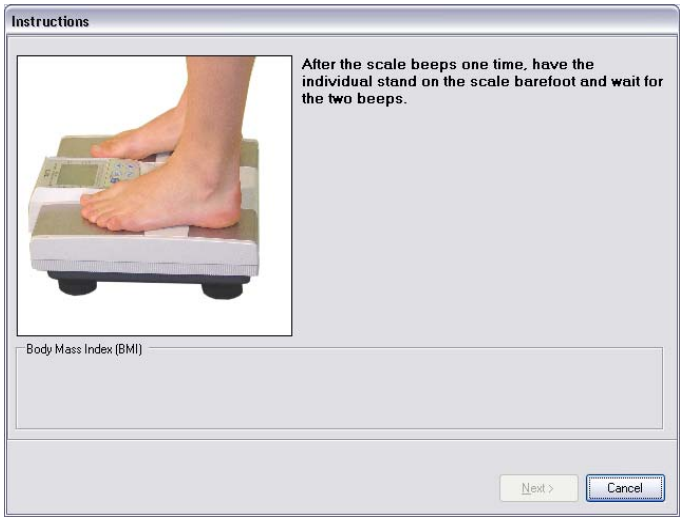


Click '**OK**' after entering the HT/WT of the Client.



The test screen will appear.

Follow the directions shown and click '**Next** >'

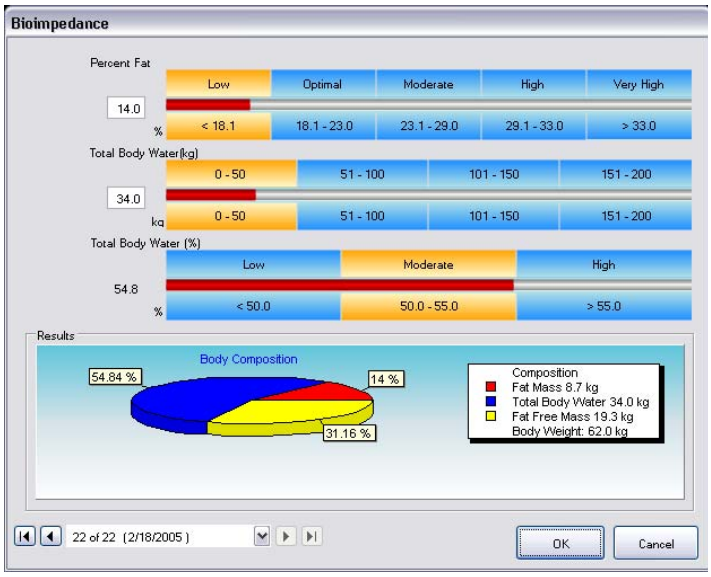


The Tanita Scale will gather the data and from the computer and then beep once.

After the first beep the client stands on the scale bare foot until it beeps 2 more times.

The Tanita will collect the data and then the screen will show the results.

Click '**Next**' to continue



Line graphs and a pie chart will analyze the data collected.

Click '**OK**' to save the data and return to the main screen.

5.3.4 Body Composition Direct Value

Direct Value can be used to enter a percent body fat measurement obtained by another method such as hydrostatic weighing or Dual X-Ray Absorption. To enter a Direct Value, just enter the value in text field across from '**Direct Value Body Fat Percent**' on the Main Body Composition Protocol Screen.

5.4 Cardiovascular

5.4.1 General Cardiovascular Information

About Cardiovascular Fitness

Cardiovascular or aerobic fitness relates to how well your cardiovascular system works to transport oxygen to your body. The better the cardiovascular fitness, the stronger and more efficient your heart is.

Having good cardiovascular fitness has many health benefits. For example, it decreases your risk of cardiovascular diseases, stroke and high blood pressure.

If you want to improve your cardiovascular fitness, it takes a minimum of 6 weeks of regular training to see a noticeable change. Less fit individuals tend to see improvements quicker. More active individuals typically need more time to see progress.

Cardiovascular fitness is best improved by exercise types, which use large muscle groups. Such activities include walking, jogging, swimming, rowing, skating, cross-country skiing and cycling.

Using Cardiovascular

The Cardiovascular Testing Protocols are in the Cardiovascular section of the main screen. You will have to click on the bar that says **Other Cardiovascular Protocols** to view the protocols that are not in your Assessment Group (see the **Assessment group** section for more information). The following Protocols will bring up a new screen if you click on them:

OwnIndex
WHO VO2max

> *Follow the directions listed on new screen to carry out the test or see the sections on how to carry out the preceding tests.*

If you are using a previously collected VO2max value, you will type the **Direct Value VO2max** directly from the main screen.

About The Polar Heart Rate Receiver

The OwnTest™ System comes with a Polar heart rate receiver. The receiver is used with the cardiovascular protocols. If the client is wearing a Polar chest transmitter, an electrocardiogram signal will be sent directly to the computer via the receiver. The computer uses a sophisticated averaging algorithm to ensure an accurate and stable heart rate reading.

APPLYING THE POLAR HEART RATE MONITOR

Thoroughly clean the subject's skin so that oil and dirt are removed. Wipe with alcohol if necessary. Moisten the inside of the heart monitor belt (preferably with electrode jelly) and securely fasten the belt below the pectoral muscles. The logo on the middle or the belt must be centered on the lower sternum. Instruct the subject to keep the upper body erect without shoulders slouching.

NOTE: Transmitter belt must COMPLETELY contact the skin below the pectoral muscles. Chest hair or underwire bras may interfere with this.

INTERFERENCE

It is important to control environmental conditions that may interfere with the Polar monitor heart rate reading. You may experience interference in small crowded areas, **especially with a lot of electronic equipment**. Also, be sure that there are no additional Polar belts or cell phones being utilized near (within 10-15 feet) of the receiver. Sometimes florescent lights and movement of the receiver can cause significant interference. It is important to have the receiver mounted to prevent movement during the tests.

Guidelines for Cardiovascular Testing

It is the tester's responsibility to administer a safe test.

****CAUTION: An exercise test should be immediately TERMINATED if any of the following indications occur:*

- Onset of angina or angina-like symptoms
- Significant drop (20mm Hg) in systolic blood pressure
- Failure of systolic blood pressure to rise with increasing intensity
- Excessive rise in blood pressure: Systolic >260 or Diastolic >115
- Signs of poor perfusion: Dizziness, cyanosis, nausea, cold skin
- Failure of heart rate to increase with increasing intensity
- Noticeable change in heart rhythm
- Subject requests to stop
- Physical or verbal manifestations of severe fatigue
- Failure of the testing equipment

Major Symptoms or Signs of Heart Disease

- Pain, discomfort (or other anginal equivalent) in the chest, neck, jaw, arms, or other areas that may be ischemic in nature.
- Shortness of breath at rest or with mild exercise
- Dizziness or syncope
- Orthopnea or paroxysmal nocturnal dyspnea
- Ankle edema
- Palpitation or tachycardia
- Intermittent claudication
- Known heart murmur
- Unusual fatigue or shortness of breath with usual activities

Heart Disease Risk Factors

Age
Men > 45 years; women > 55 or premature menopause without estrogen replacement therapy.

Family History
MI or sudden death before 55 years of age in father or other male first-degree relative, or before 65 years of age in mother or other female first-degree relative.

Cigarette Smoking
Currently a smoker

Hypertension
Blood Pressure > or = 140/90 mm Hg, confirmed by measurements on at least 2 separate occasions, or on antihypertensive medication.

Cholesterol
Total serum cholesterol > 200 mg/dL or HDL <35 mg/dL

Diabetes Mellitus
Persons with insulin dependent diabetes mellitus (IDDM) who are > 30 years of age, or have had IDDM for more than 15 years, and persons with non-insulin dependent diabetes mellitus (NIDDM) who are > 35 years of age should be classified as patients with disease.

Sedentary Lifestyle/Physical Inactivity
Persons comprising the least active 25% of the physical inactivity population as defined by the combination of sedentary jobs involving sitting for a large part of the day and no regular exercise or active recreational pursuits. Obesity is not listed as an independent positive risk factor because its effects are exerted through other risk factors.

5.4.2 Cardiovascular-Own Index®

About Own Index®

OwnIndex is a score that is comparable to V02max, a commonly used descriptor of aerobic fitness. OwnIndex is a result of the Polar Fitness Test, which is an easy, safe and quick way to estimate maximal aerobic power. The OwnIndex is based on heart rate, heart rate variability at rest, body structure and self-assessed physical activity.

To follow your fitness progress with OwnIndex, start with an initial reading and recheck no sooner than once a month after that. It takes a minimum of 6 weeks of regular training to see a noticeable change. Less fit individuals see progress more rapidly than more active individuals.

OwnIndex Activity Classifications

Assess your long-term physical activity level. Do not change your activity level description if your regular exercise habits have changed less than six months ago.

Low	Exercise is not a regular part of your life. You walk only for pleasure or occasionally exercise sufficiently to cause heavy breathing or perspiration.
Moderate	You participate regularly in recreational sports. For example, you run 5 miles/ 8km a week or spend 30-60 minutes a week in comparable physical activity. Or, your work requires modest physical activity.
High	Exercise is an inseparable part of your life. You exercise regularly at least 3 times a week with heavy paced intensity. Exercise causes clear breathlessness and sweating. For example, you run regularly more than 5 miles/ 8 km a week or spend more than 1.5-2 hours in comparable physical activity.
Top	You participate regularly in heavy physical exercise at least 5 times a week. (i.e. you exercise to improve performance for competitive proposes.)

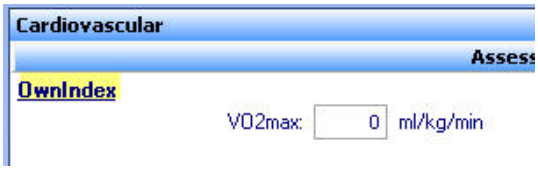
Carrying out the OwnIndex® Test

To get reliable test results, there are the following basic requirements:

- Client should be relaxed and calm
- The testing environment should be peaceful. No disturbing noises (e.g. television, radio or telephone), no other people talking to the client.
- Keep the testing place, time of day and environment the same very time the test is repeated.
- Tell your client to avoid eating a heavy meal or smoking 2-3 hours prior to testing.
- Tell your client to avoid heavy physical effort, alcoholic beverages or pharmacological stimulants on the test day and the day before.
- Allow the client to sit/lay down for 1-3 minutes prior to test, so they can relax their muscles and mind.

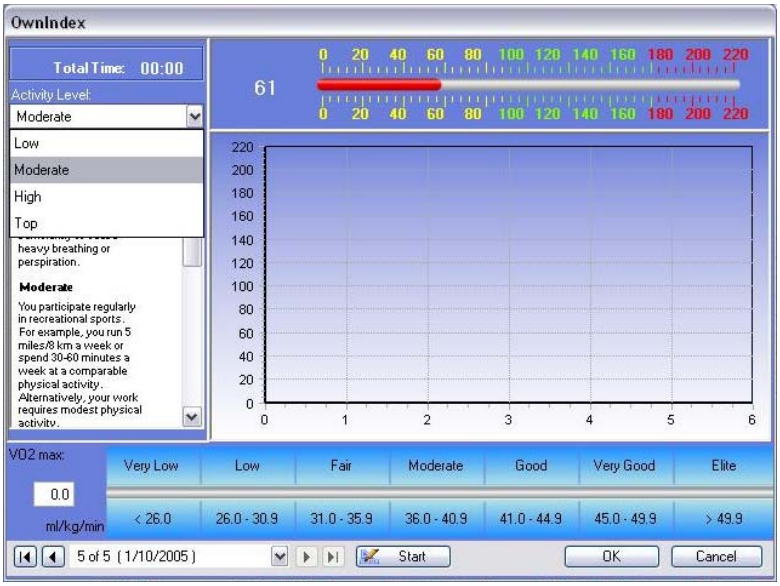
***NOTE: Under **Defaults/Environment/Cardiovascular**, your **Heart Rate Device** should be set to **Use Polar Interface Box.** Your Polar Interface Box (Heart Rate Receiver) will need to be plugged into the 700iu box.*

After creating a new record or opening an existing record for a client, their **height and weight** must be recorded before the OwnIndex test can be performed.



After entering the clients Height/Weight, click on **OwnIndex** from the Cardiovascular box on the main screen.

A new screen will appear.



Select **Activity Level** from the drop down box on the upper left.

Verify that the heart rate is being transmitted correctly by looking at value next to the line graph on the top.

Click **Start** to activate the test. When it is finished (~1-5 min.), a VO2max value will be displayed in the lower left corner.

Click **OK** to save the value and return to the main screen.

Click **Cancel** to cancel the test and return to the main screen.

Technical Notes for the OwnIndex® Test

- The test lasts for 5 minutes
- The test is based on R-R values that are collected via the Heart Rate Receiver
- The ticks on the progress bar indicate real time collection of R-R values
- If a minimum amount of R-R values are not collected within the first 2 minutes, then the test will end with a message telling the user to check HR cable and try again

5.4.3 Cardiovascular-WHO Sub-Max V02

About the WHO Submax Test

Protocol Overview:

- Test includes 3 to 4, 4 minute stages.
- Starts with 4 min warm up (included as stage 1).
- Target to reach 80% VO2MAX (about 85-88% HRmax)
- Selection of workloads is made based on a percentage of estimated VO2MAX prediction by Jackson et al. 1990 Non-Exercise equation.
- VO2max and Max Workload (WATTS) is based on a regression equation that uses age-predicted HRmax (220-age) and the stage Watts and steady state HR.

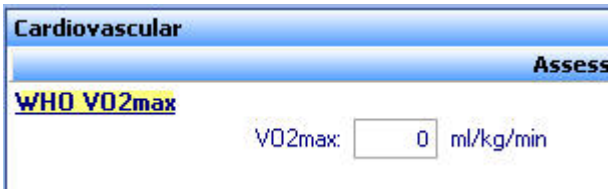
Protocol Stage Progression:

Stage 1: 38% VO2MAX (based on Non-Exercise Prediction)
Stage 2: 52% VO2MAX (based on Non-Exercise Prediction)
Stage 3: 65% VO2MAX (based on Non-Exercise Prediction)
Stage 4: 78% VO2MAX (based on Non-Exercise Prediction)

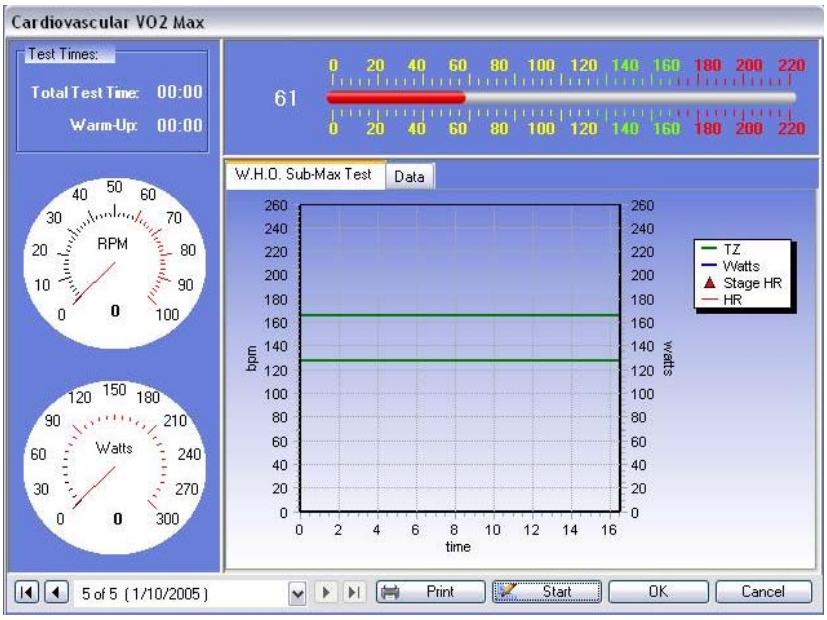
How to Take a WHO Submax VO2 test

If you have connected a compatible Ergometer to the OwnTest system you will want to go to **Defaults/Environment/Cardiovascular**, and select the **Cardio Device** that you are using for this test as well as the **Serial Port** that it is connected to (see **'Defaults'** for more information). If you are taking a WHO test without having a cardio device, you will want to select **'None'** under **'Cardio Device'**. The **Heart Rate Device** should be set to **Use Polar Interface Box.** Your Polar Interface Box (Heart Rate Receiver) will need to be plugged into the 700iu box and mounted to the bike with Velcro or tape.

After creating a new record or opening an existing record for a client, their **height and weight** must be recorded before the **WHO VO2max** test can be performed.



After entering the clients Height/Weight, click on **WHO VO2max** from the Cardiovascular box on the main screen.

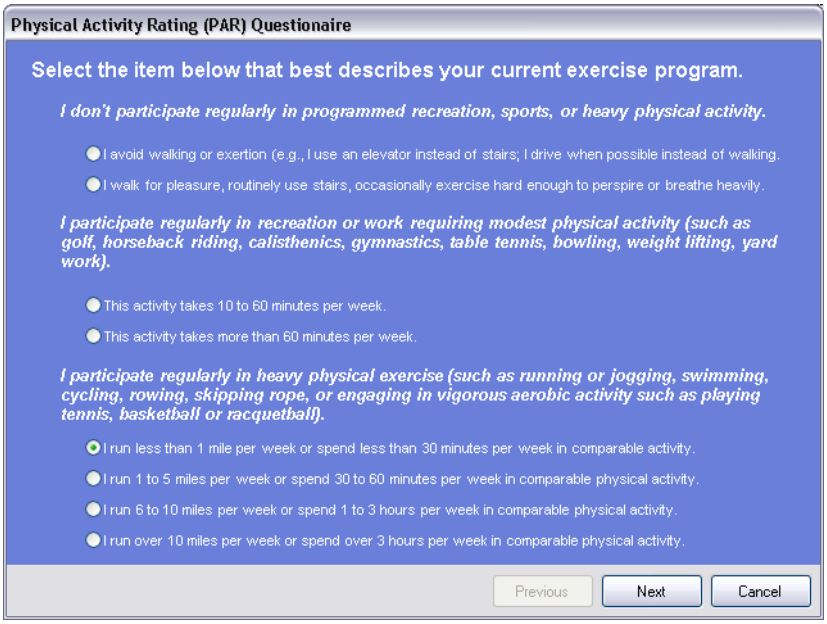


The **WHO VO2max** test screen will appear.

Verify that the heart rate is being transmitted correctly by looking at value next to the line graph on the top.

Click **Cancel** to cancel the test and return to the main screen.

Click on **Start** to activate the test.

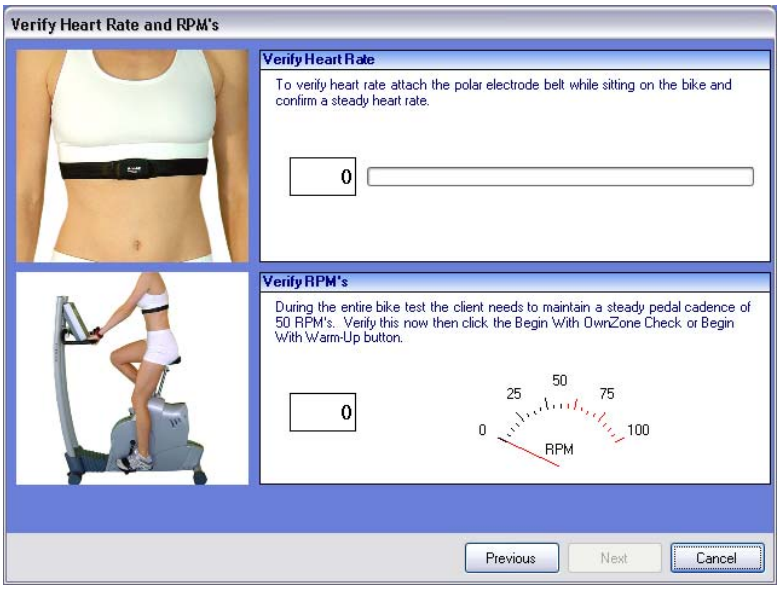


After clicking on Start, a Physical Activity Rating Questionnaire box will pop up.

Select the choice that best represents the person taking the test.

Click **Next.**

You will then Verify Heart Rate and RPM



The Heart rate of the person that is taking the test should appear in the top box.

Instruct the client to begin pedaling. The RPM's will show up in the lower box. (they will only appear if the bike is connected to the OwnTest system)

'**Next**' will become activated when a Heart Rate is transmitted.

Click '**Next**' to begin Test.

Instruct your client to maintain RPM at 60-80.

When the test is complete (after 16 minutes), the data will be displayed.

Select **Print** if you want the data and graph to be printed.

Select **OK** to save the data and return to the main screen.

5.4.4 Cardiovascular-Direct Value V02max

If your client has had their VO2max tested directly in a lab setting, you can enter that value in OwnTest™ System. To enter it, simply type in the value in the under Direct Value VO2max and press **Enter**.

5.5 Strength & Flexibility

5.5.1 Crunch Test

About the Crunch Test

All sit-ups, including the bent-knee type, utilize the hip flexor muscles to raise the trunk. The hip flexors can be eliminated, and abdominal muscle endurance can be evaluated through the use of the **Crunch Test.**

1. Have the client lay on their back, on a mat, with the knees bent to 90 degrees.

2. Extend the arms, palms down and by the sides, so that the finger tips of both hands touch a strip of tape perpendicular to the body at just below hip level.

3. Two additional strips of tape are placed parallel to the first two, 3.5 inches (8.9cm) further toward the feet.

4. Curl up, sliding the fingertips along the mat until they touch the second set of tape strips. Return to the starting position. The client's head does not need to come back to touch the mat as long as the shoulders touch.

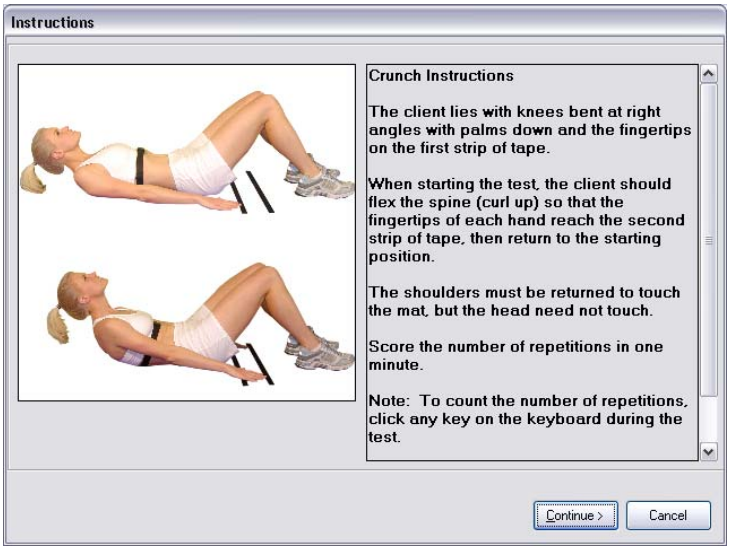
5. The crunch is slow, controlled and continuous. Only the head and shoulder blades leave the floor. The upper body moves through only 30 degrees.

6. The client performs as many crunches as possible in **one minute.**

How to Use the Crunch Test

From the **Strength & Flexibility** section of the Main Screen, Click on '**Crunch'**

You will be given a set of instructions (see **About the Crunch Test** for more detailed instructions).



After reading the instructions, click '**Continue**'

A new Screen will appear. When the client is ready to begin the test, click '**Start**'and the timer will count down from 1 min.

To count the number of full repetitions, click an alphanumeric key on the keyboard each time a repetition is completed.

When the minute is up, the timer will automatically stop and beep to indicate that the test is over.

Click '**OK**' to save the data and return to the main screen.

5.5.2 Bicep Strength

About Bicep Strength

Bicep Strength is measured from an isometric contraction against the unique 'four load cell' platform. Strength is calculated by the average resistance over the last three seconds of a five second lift.

Using Bicep Strength

Clicking on **Bicep Strength** from the Strength/Flexibility Protocol screen brings up the on-line Bicep Strength protocol screen.

You will be prompted initialize the scale.

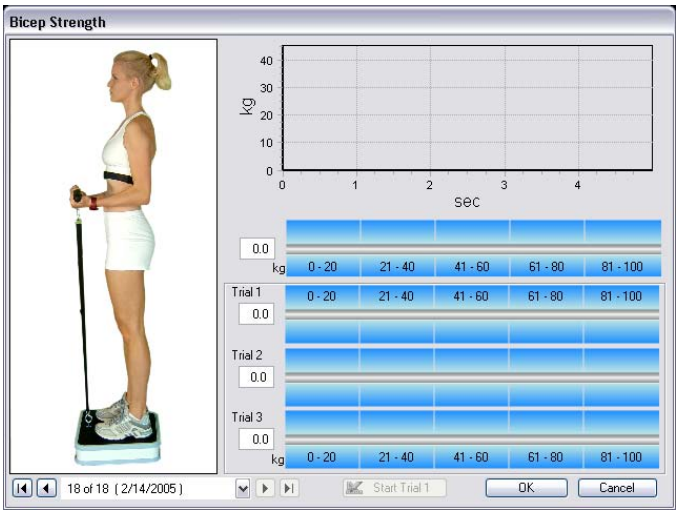
Instruct the client to stand on the platform with his/her feet shoulder-width apart holding the bar at their side. (i.e., DO NOT PULL ON BAR).

Adjust the strap so that the client's forearms are 90 degrees to the torso.

Click '**Continue**'

The Bicep Strength Test screen will now appear.

Once the individual is ready, click on the **Start Trial 1** button in the lower part of your screen.



The test will immediately begin a countdown from 0 :03 to 0 :01. This prepares the individual for the start of the test. At this point, the individual should be instructed to start the 5 sec. lift. ***DO NOT JERK****.*

At the end of the lift, the value lifted will appear in the lower portion of your screen.

A 30 sec timer will begin after the first 2 Trials to give the client a rest in between.

The final result will reflect the best lift.

Click '**OK**' to save the data and return to the main screen.

5.5.3 Wall Sit

About the Wall Sit Test

The Wall Sit test, measures the isometric muscle contractions of the Lower Body. It presents a strength measurement of the lower body.

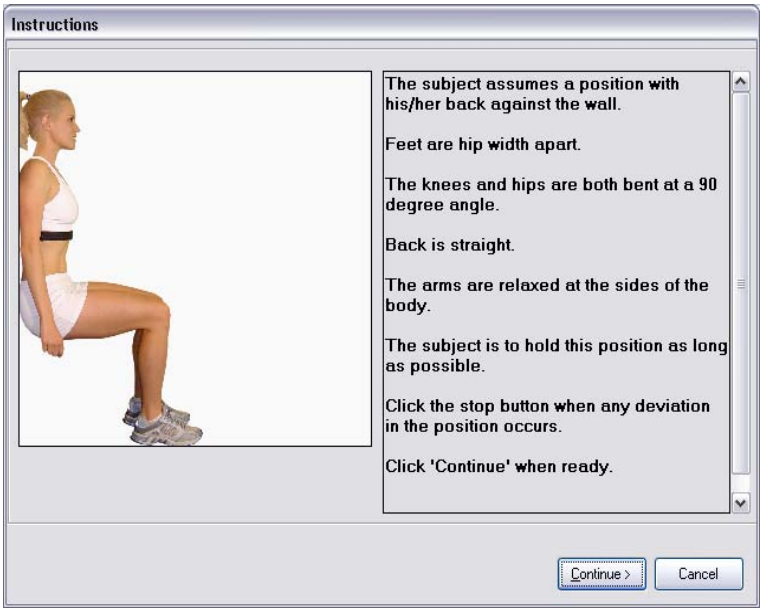
Wall Sit Protocol

- The subjects assumes a position with his/her back up against the wall
- Feet are 12 inches (30.48cm) apart
- The knees and hips are both bent at a 90 degree angle
- Back is straight
- The arms are relaxed at the sides of the body
- The subject is asked to hold this position as long as possible and time is measured in seconds
- Timing should be stopped and minutes:seconds should be recorded when any deviation in above position occurs during the test

Using the Wall Sit Test

From the **Strength & Flexibility** section of the Main Screen, Click on '**Wall Sit**'

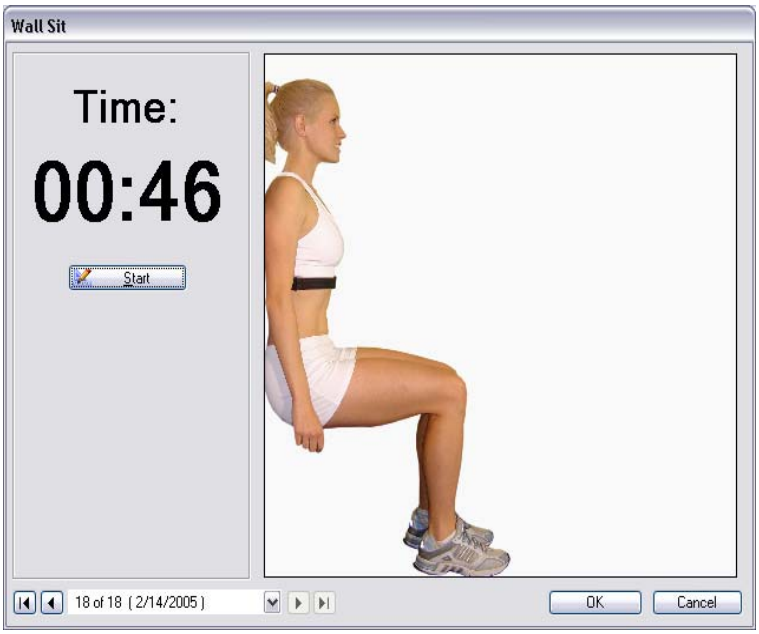
A set of instructions will be presented (see **About the Wall Sit** for more detailed instructions):



After reading the instructions, click '**Continue**'

A new Screen will appear.

When the client is ready to begin the test, click '**Start**'and the timer will start to count the time.



When the client is performing the Wall Sit test encourage them to sit as long as they can.

When they move from the correct position, click '**Stop**'

Click '**OK**' to save the data and return to the main screen.

5.5.4 Sit & Reach

About the Sit & Reach Test

The OwnTest™ system provides the unique On-Line Modified Sit & Reach testing unit. The handle is attached to a measuring gauge that will record the distance moved and will be automatically saved by the computer.

The tester can chose to record the results of the Sit & Reach manually (where the technician manually measures the modified sit & reach and then enters the results into the text field on the main screen) or on-line (which means the sit & reach results are read directly into the computer).

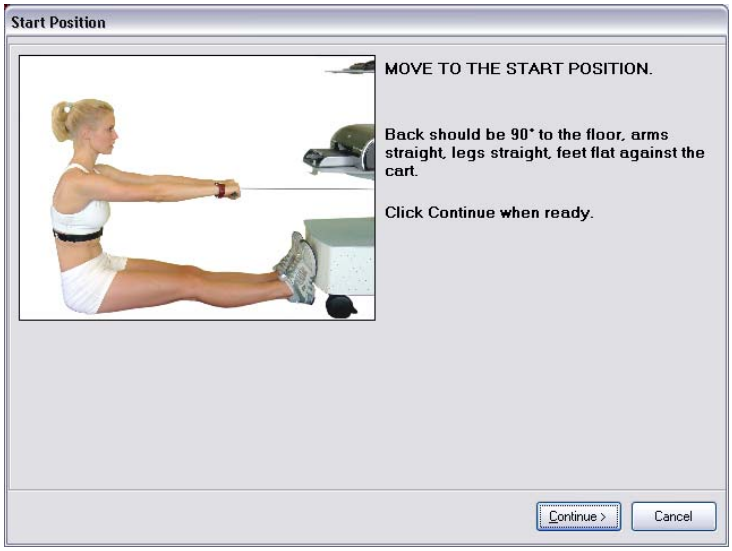
Before starting this test, be sure the individual has stretched and is properly warmed up prior to the first trial.

➢*NOTE: Have the individual pull and release the cable slowly. Fast motion can damage the measuring gauge.*

Using the Sit & Reach Test

Clicking on **Sit & Reach** from the Strength/Flexibility section of the Main Screen brings up the on-line Sit and Reach protocol screen.

Your client will be prompted to move to the start position: "Back should be 90 degrees to the floor, arms straight, legs straight, feet flat against the cart."



Once the individual is ready and sitting correctly with the handle held snugly, click on the '**Continue**' button.

The testing screen will appear. Click '**Start Trial 1**' to begin the test.

Instruct the individual to move forward slowly. The blue line graph, in the lower portion of the protocol screen, will graph the individual's Sit & Reach movement. The client needs to hold the final position for two seconds.

➢*NOTE: Ensure that the individual's grip on the handle is not changed through the course of the extension.*

After the test is completed, the results will be automatically displayed as a blue bar graph at the bottom of the screen.

Re-Measure

After reviewing the result, you can chose to re-measure the individual on the Sit & Reach, point and click on the **Start Trial 2** button and follow the EXACT instructions as above.

➢*NOTE: If you re-measure, the result of the furthest Sit & Reach measurement will be recorded.*

Clicking on the **OK** button saves your data and returns you the Main Screen

5.6 Programs

5.6.1 About the **Polar Keeps U Fit™** Cardiovascular Program

Keeps U Fit -program is an exercise prescription tool, which allows the user to create a personal exercise program for aerobic fitness maintenance or improvement. The improvement has two alternatives: improve and maximize. The personalized program takes into account current fitness level and how many times per week the user wants to exercise. Based on these values, daily and weekly exercise targets are created. The program provides weekly calories and the number and duration of weekly exercises. In addition, calories, duration and intensity are provided for individual exercise sessions.

To get the individual exercise program, start by measuring your fitness level (VO2max or Polar OwnIndex). Select the program target: maintain, improve or maximize your fitness. Target selection affects the recommended weekly exercise number, intensity and duration. Program alternates easy and hard exercise sessions so that the risk of fatigue and overtraining is minimized.

Goals:

Program goals are **M*aintain*** (about 1.5hr/week), ***Improve*** (about 3hr/week) and ***Maximize*** (about 4.5hr/week) fitness. These all are related to the user's current fitness level (VO2max or OwnIndex).

Maintain
Select ***Maintain*** if the target is to maintain the user's current fitness level. If they have not exercised recently, maintain is a good start for them and may even improve their fitness. The program recommends that the user exercises approximately fore one and a half hours per week with light to moderate intensity, divided into two to three exercise sessions. The average duration of one exercise session is 30-45min.

Improve
Select ***Improve*** if the target is to improve the user's current fitness level and if they are able to exercise regularly. The program recommends that the user exercises for approximately three hours a week divided into three to five exercise sessions and by varying light, moderate and hard intensity. The average duration of one exercise session is 40-60min.

Maximize
Select ***Maximize*** if the target is to maximize the user's current fitness level, if they have been exercising regularly for at least 10-12 weeks and exercising nearly every day is not a problem for them. The program recommends that the user exercises for approximately five hours a week, divided into four to six exercise sessions varying light, moderate and hard intensity. This Goal will include the highest amount of high intensity sessions. The average duration of one exercise session is 45-70min.

Frequency, duration and intensity

In order to understand the default program and adjust the program the user needs to understand the meaning and interactions between the frequency, duration and intensity in exercise training. Regularity is a key. More often is better than less often, however, too often may lead to exhaustion and increase the risk of injuries. It is generally known that 1-2 times weekly is not enough to improve, 3 or more times weekly is needed for this target. It is advised to start with a warm-up and close with a cool-down in every exercise session. More energy is expended during a longer session, when compared to a shorter session with the same intensity. This is key in the structure of exercise sessions and their naming. The higher the intensity, the more energy is expended. The high intensity sessions are shorter in duration than others due aiming to avoid overstrain and to ensure maximal adherence to the program.

***HR Zones*:**

In the Keeps U Fit Own Workout program there are 3 different heart rate zone targets for the weekly exercises. Displays the time targeted in each of the zones. Most exercises are in the moderate zone. The more you exercise, the wider the variation in HR zones.

Light 60-70% HRmax	Aerobic endurance
Moderate 70-80% HRmax	Aerobic power
Hard 80-90% HRmax	Aerobic stamina, anaerobic power

Exercise sessions:

The program gives suggestions: e.g. "***Short1, Normal2, Long1***", which depends on the amount of exercise session selected. The order of exercises is decided by the program to optimize results

The length of each session is defined according the target for the program (maintain, improve, maximize) and the amount of exercise sessions per week (range from 1-6 sessions). ***Short*** exercise session is shorter than ***Normal***, which is shorter than ***Long***.

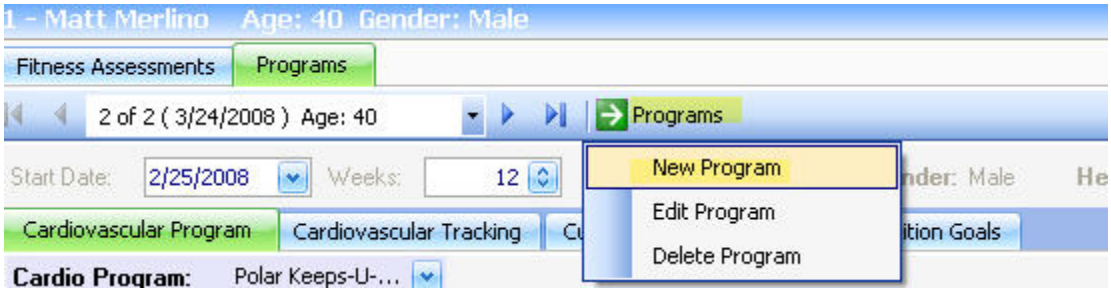
Polar Keeps U Fit -program includes weekly exercise volume in terms of frequency (number of sessions), total duration (hours:minutes) and energy expenditure. The harder the intensity, the shorter the duration. Short sessions are typically "hard" (80-90 % HRmax) in intensity, Normal sessions "moderate" (70-80 % HRmax) and Long sessions "light" (60-70 % HRmax).

Exercise sessions in the program are arranged so that there are not similar sessions (hard or light ones) after each other and that there are several days between the hard sessions. This helps to carry out the program, ensure needed recovery time and avoid overreaching and becoming tired.

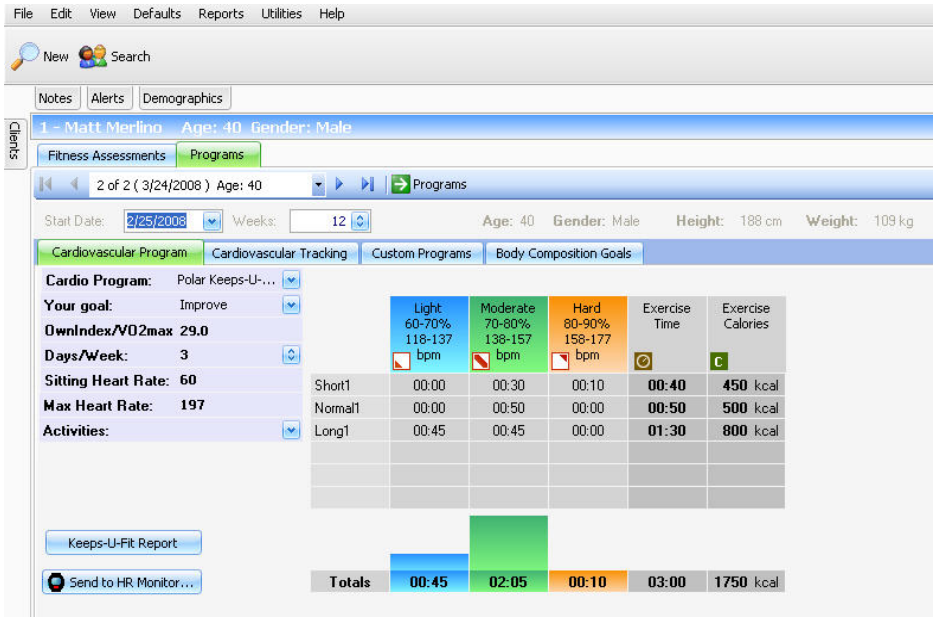
5.6.2 How to Use the Cardiovascular Program

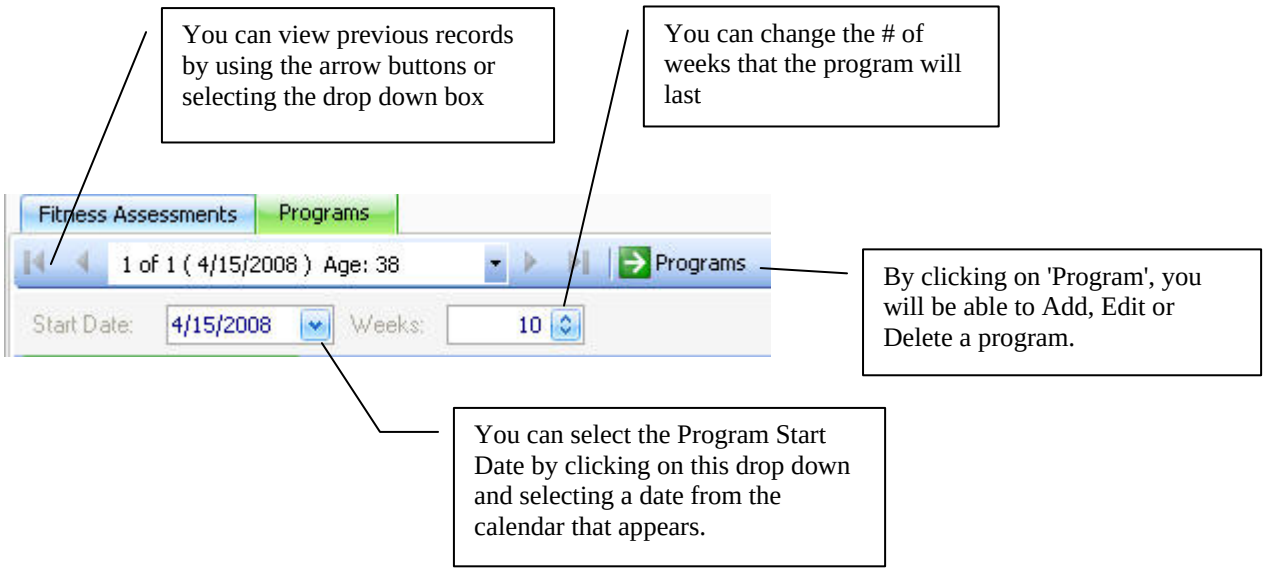
To design a customized Program for your client click on the '**Program**' icon and select '**New Program**'

The following screen appears:

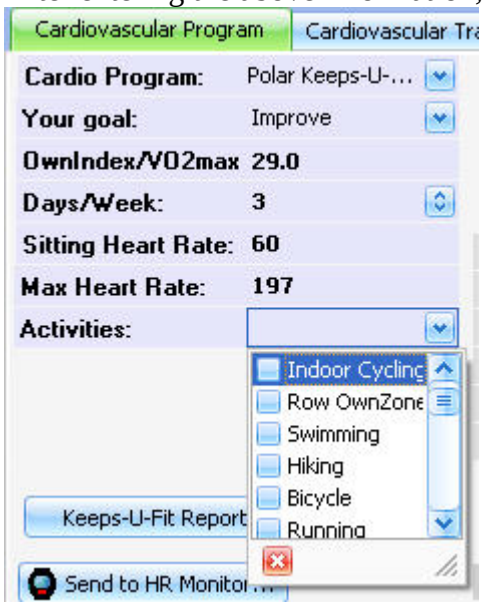


Clicking on the **Cardiovascular Program** file tab brings up the Custom Cardiovascular Program screen:





After entering the above information, you are ready to create a program:

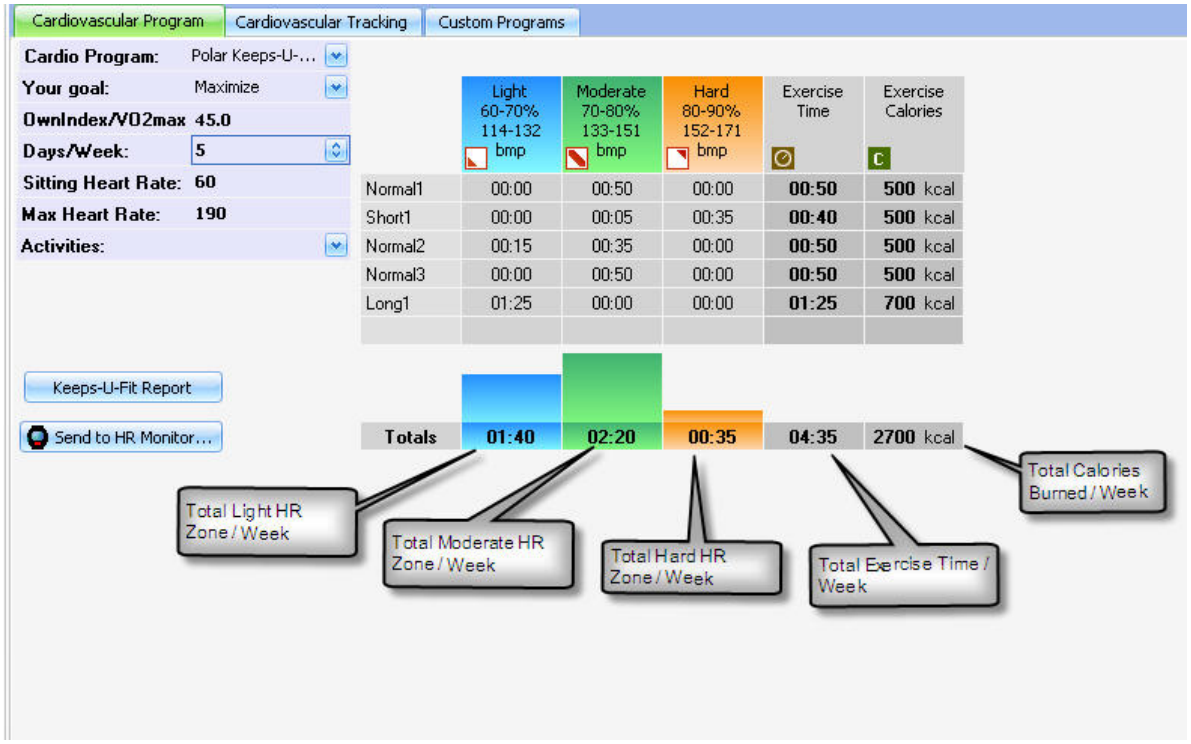


1. If you have a VO2max score imputed into the OwnTest System, it will automatically insert that value into the Keeps You Fit Cardiovascular Program or you can select '**Enter OwnIndex or VO2max**' if you have obtained the VO2max score from a different source (i.e. watch).

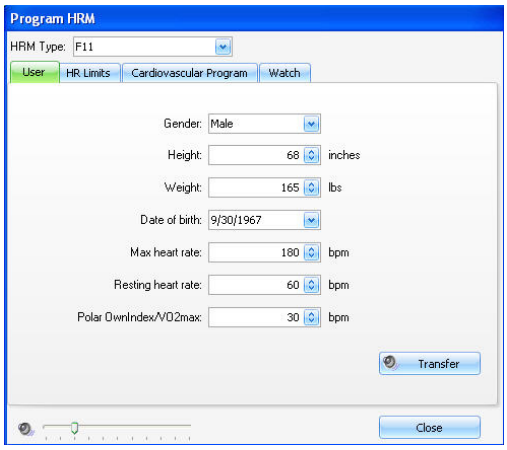
2. Select the goal of the Cardiovascular Program (Maintain, Improve, or Optimize).

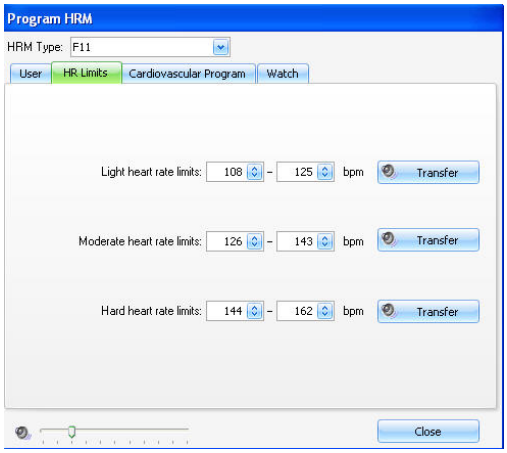
3. Select the number of Days per Week that the client will be exercising (the default is that is given based on the VO2max score and the Goal is the recommend amount of Days).

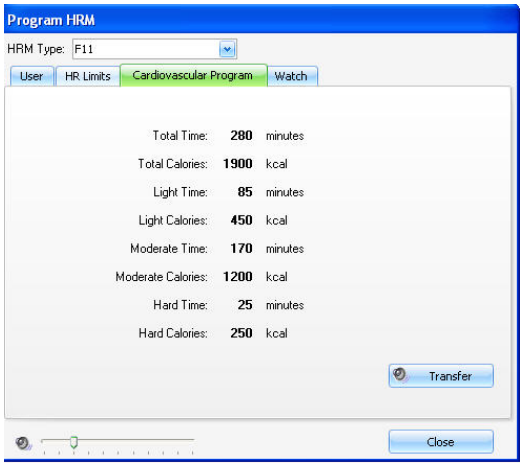
4. Select the Activities that the client will be doing while exercising.



You can print the Keeps U Fit Program by printing a Personal Profile (see the **Reports** section for more information).

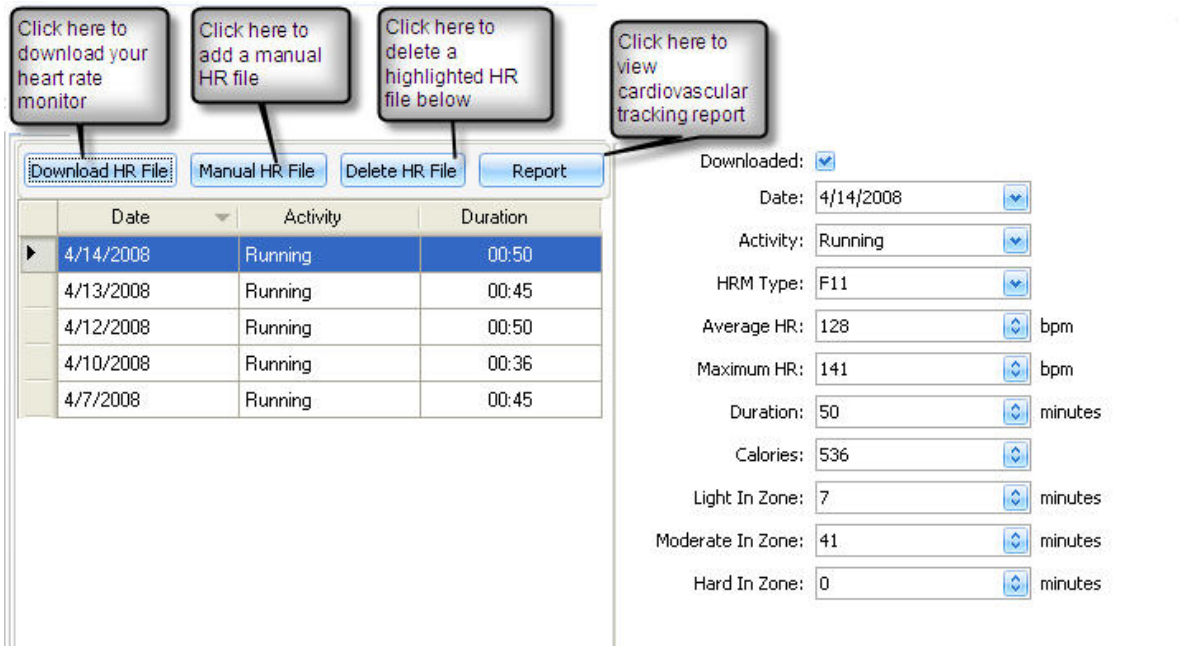




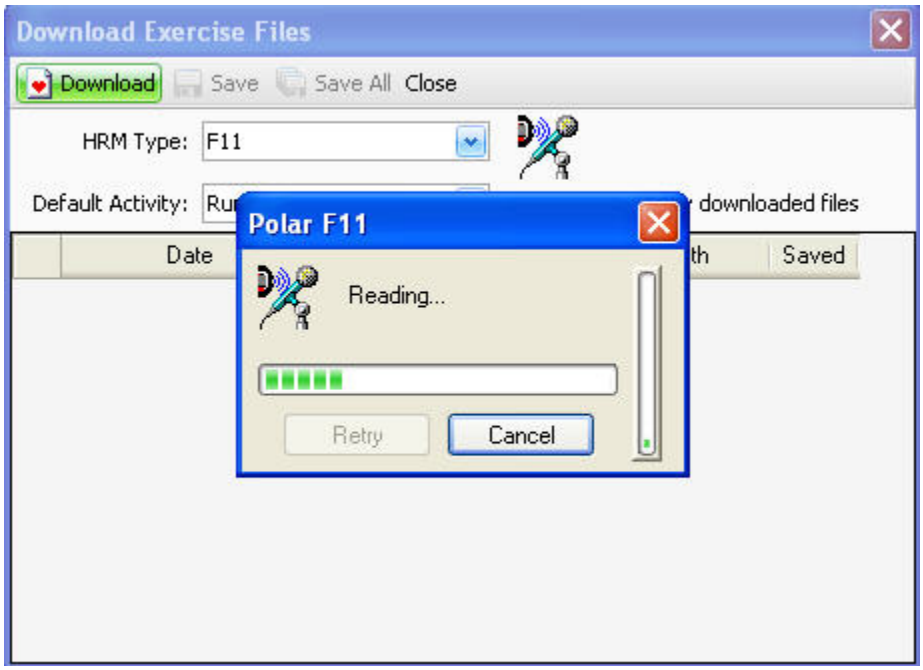


UPLOAD:
Click on the **Send to HR Monitor** tab from the Cardiovascular Program main screen to upload the following information to your watch: User Settings, HR Limits, Cardiovascular Program, and Time/Date.

Clicking on the **Cardiovascular Tracking** tab brings you to the cardiovascular tracking main screen. Here you have the option to view your exercise files.

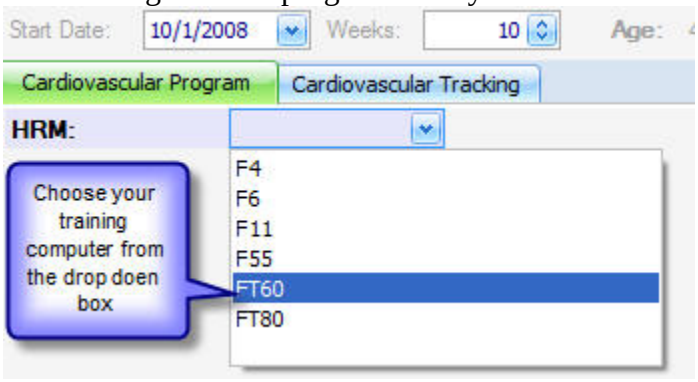


Clicking on the **Download HR File** in the Cardiovascular Tracking menu will bring up the following screen to download the heart rate monitor.

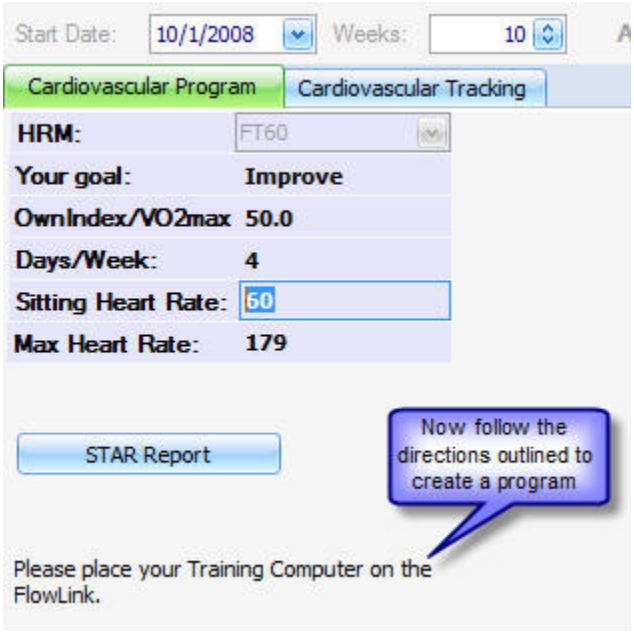


5.6.3 Creating a program with FT60 and FT80

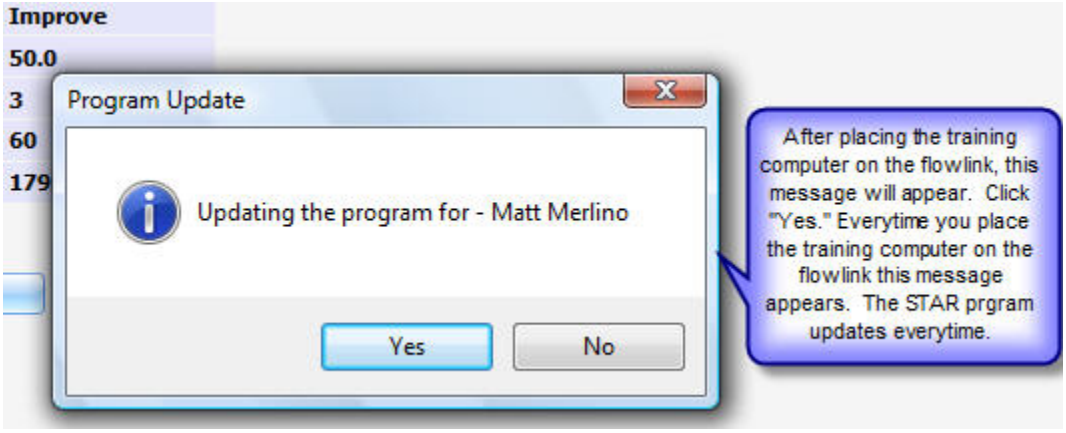
1. Creating a STAR program from your FT60 or FT80 training computer.



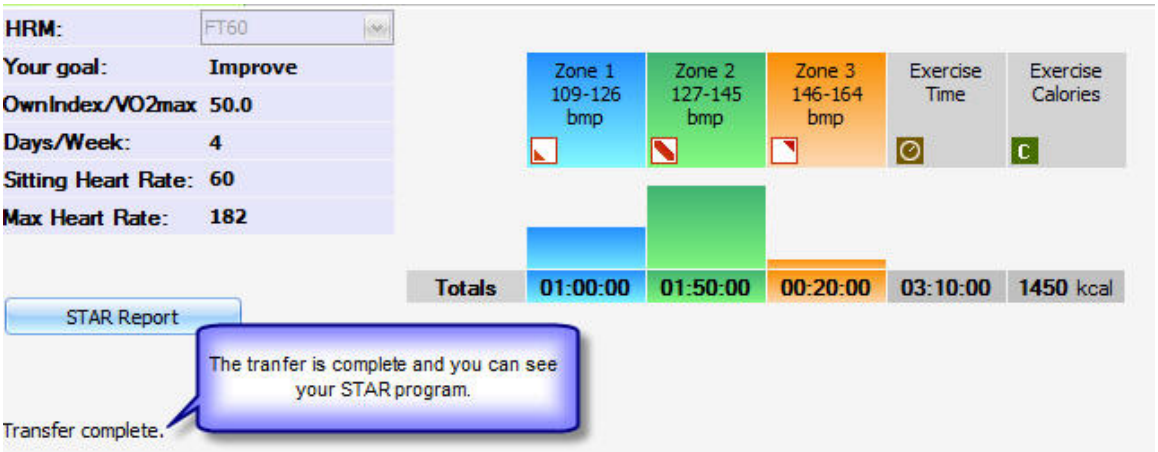
2.



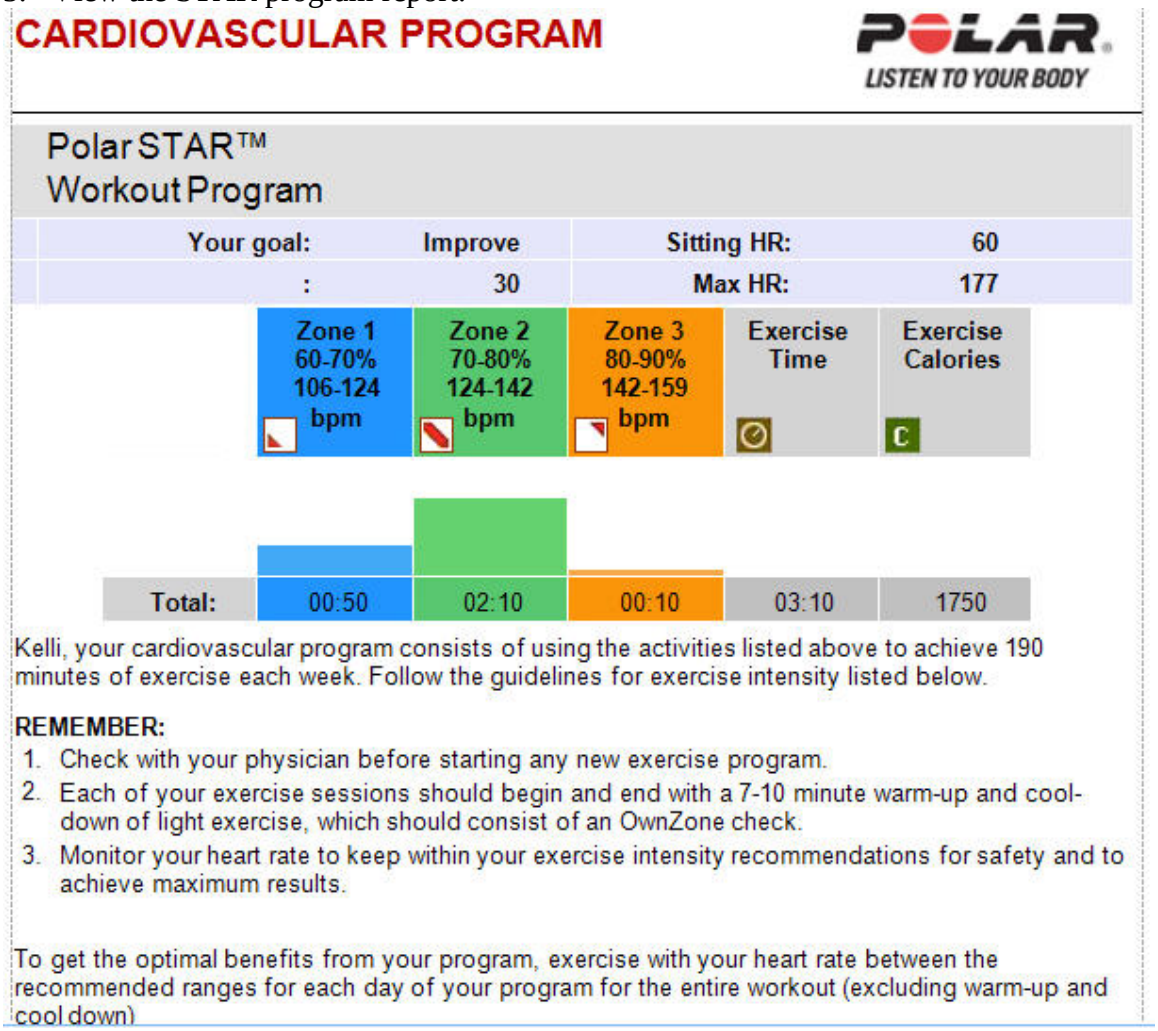
3.



4.



5. View the STAR program report.



CARDIOVASCULAR PROGRAM

POLAR
LISTEN TO YOUR BODY

Polar STAR™
Workout Program

Your goal:	Improve	Sitting HR:	60
:	30	Max HR:	177

	Zone 1 60-70% 106-124 bpm	Zone 2 70-80% 124-142 bpm	Zone 3 80-90% 142-159 bpm	Exercise Time	Exercise Calories
Total:	00:50	02:10	00:10	03:10	1750

Kelli, your cardiovascular program consists of using the activities listed above to achieve 190 minutes of exercise each week. Follow the guidelines for exercise intensity listed below.

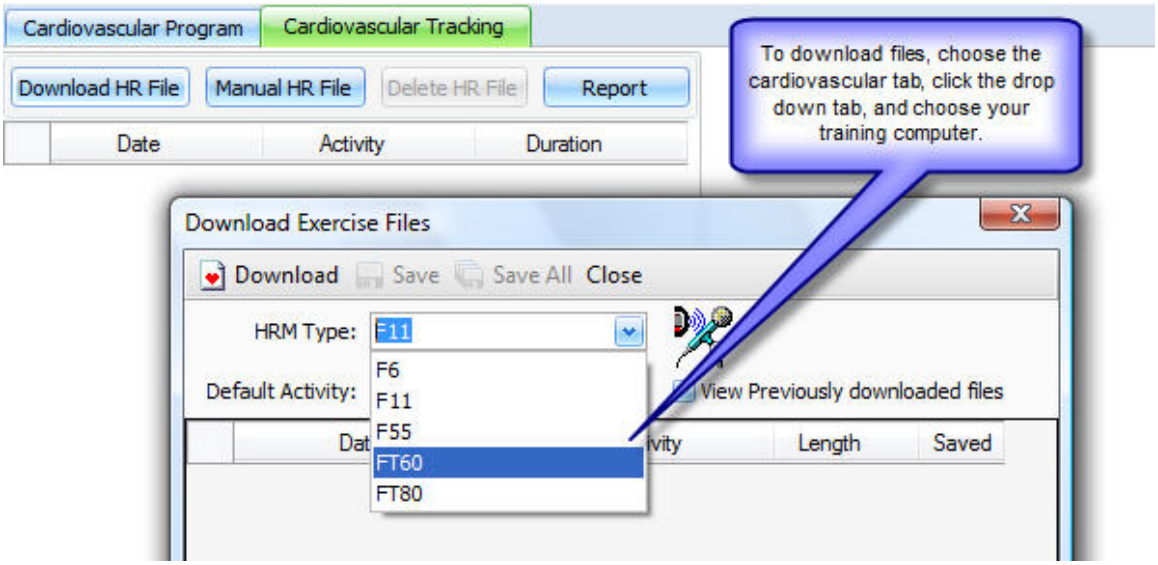
REMEMBER:

1. Check with your physician before starting any new exercise program.
2. Each of your exercise sessions should begin and end with a 7-10 minute warm-up and cool-down of light exercise, which should consist of an OwnZone check.
3. Monitor your heart rate to keep within your exercise intensity recommendations for safety and to achieve maximum results.

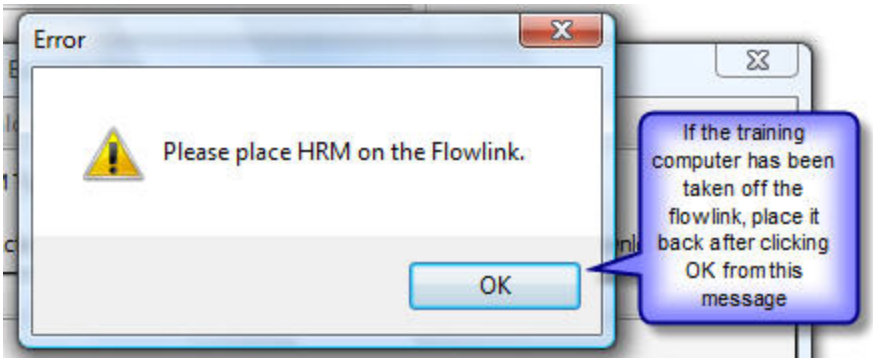
To get the optimal benefits from your program, exercise with your heart rate between the recommended ranges for each day of your program for the entire workout (excluding warm-up and cool down)

Downloading training files from FT60 or FT80

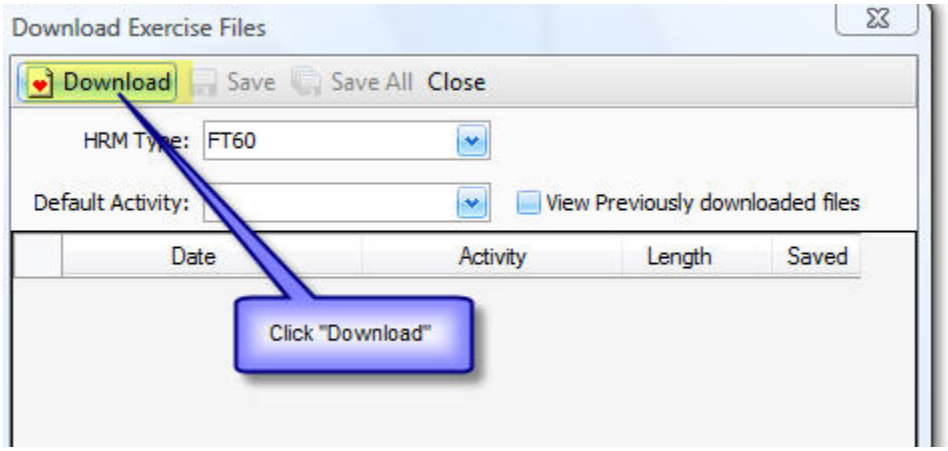
1. Make sure you have created a program first. Downloading training files from your FT60 or FT80.



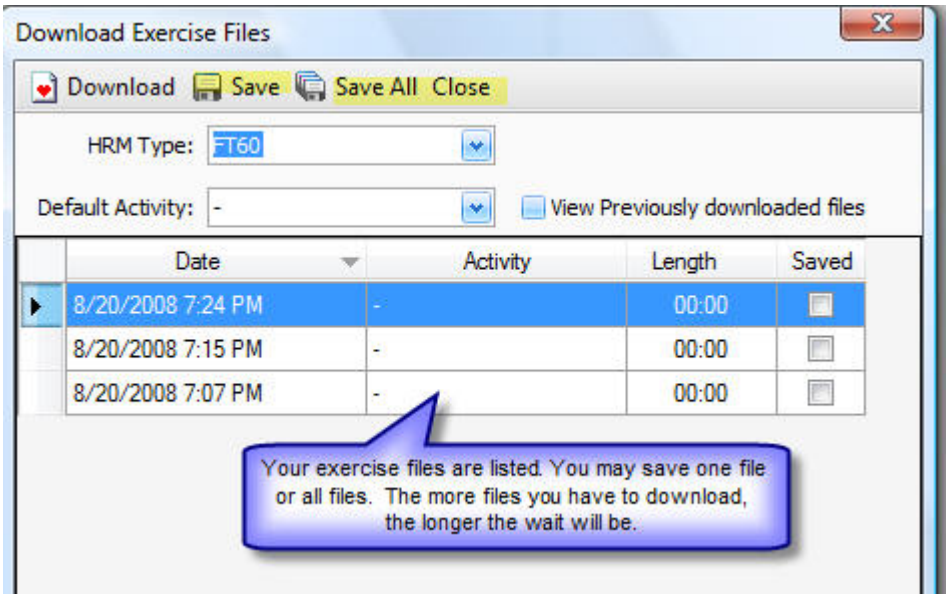
2.



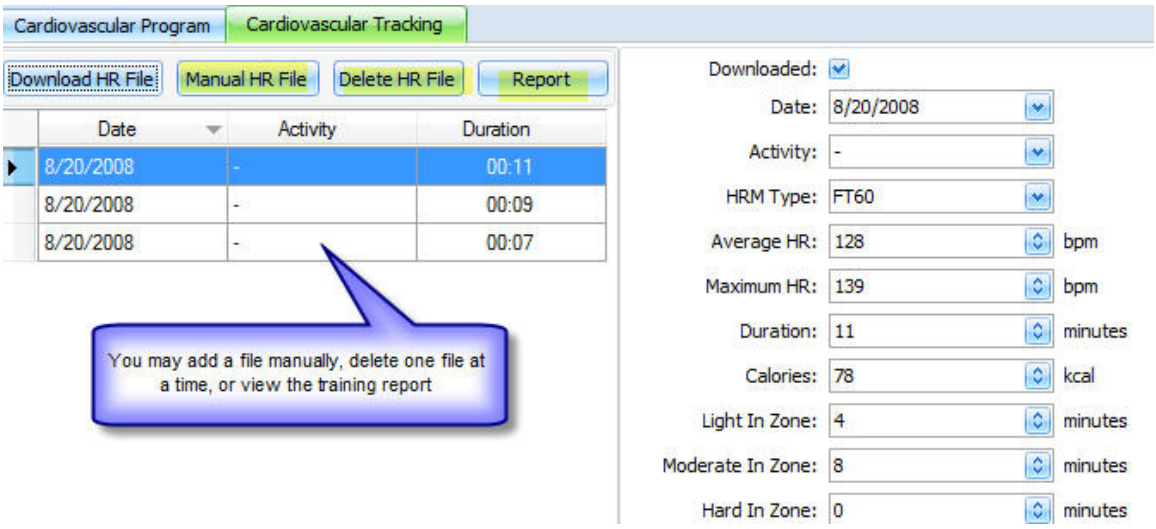
3.



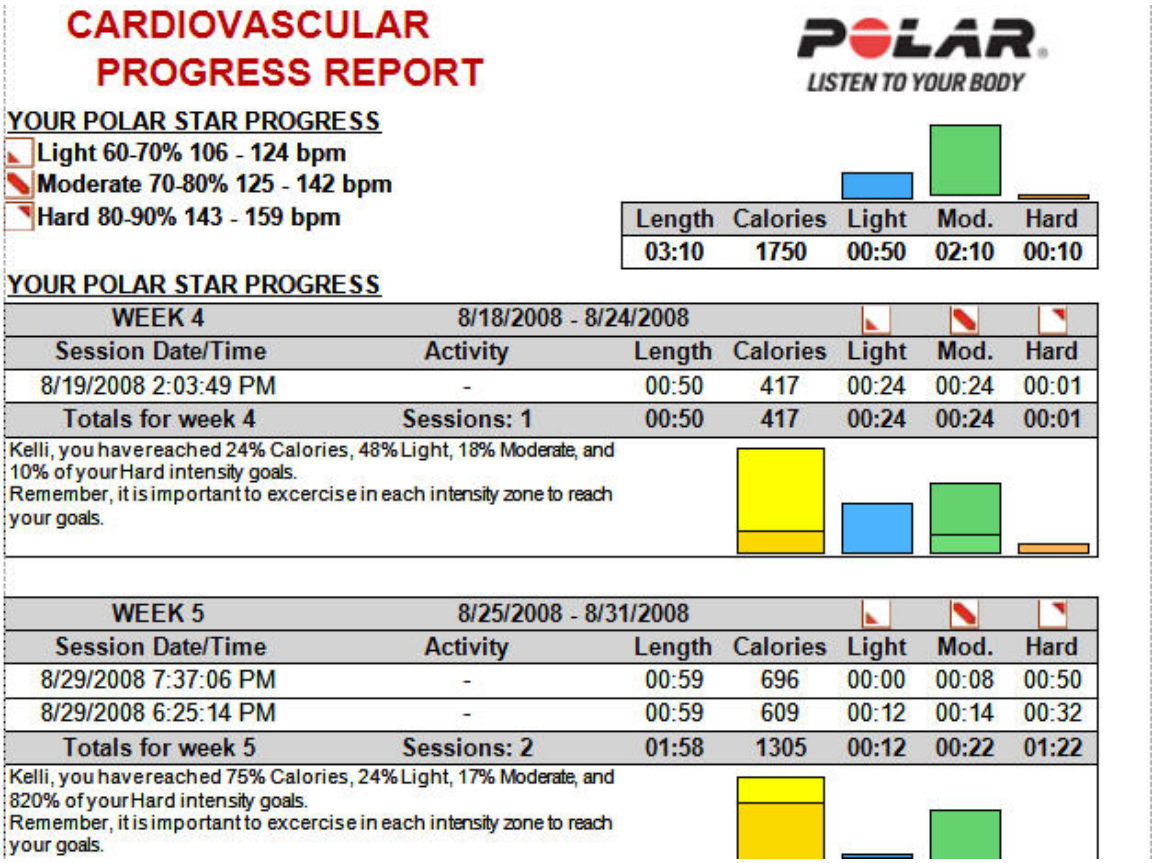
4.


Download Exercise Files
Download
Save
Save All
Close
HRM Type:
FT60
Default Activity:
-
View Previously downloaded files
Date
Activity
Length
Saved
8/20/2008 7:24 PM
-
00:00
8/20/2008 7:15 PM
-
00:00
8/20/2008 7:07 PM
-
00:00
Your exercise files are listed. You may save one file or all files. The more files you have to download, the longer the wait will be.

5.


Cardiovascular Program
Cardiovascular Tracking
Download HR File
Manual HR File
Delete HR File
Report
Date
Activity
Duration
8/20/2008
-
00:11
8/20/2008
-
00:09
8/20/2008
-
00:07
You may add a file manually, delete one file at a time, or view the training report
Downloaded:
Date:
8/20/2008
Activity:
-
HRM Type:
FT60
Average HR:
128
bpm
Maximum HR:
139
bpm
Duration:
11
minutes
Calories:
78
kcal
Light In Zone:
4
minutes
Moderate In Zone:
8
minutes
Hard In Zone:
0
minutes

6.



CARDIOVASCULAR PROGRESS REPORT

POLAR
LISTEN TO YOUR BODY

YOUR POLAR STAR PROGRESS

Light 60-70% 106 - 124 bpm
Moderate 70-80% 125 - 142 bpm
Hard 80-90% 143 - 159 bpm

Length	Calories	Light	Mod.	Hard
03:10	1750	00:50	02:10	00:10

YOUR POLAR STAR PROGRESS

WEEK 4	8/18/2008 - 8/24/2008					
Session Date/Time	Activity	Length	Calories	Light	Mod.	Hard
8/19/2008 2:03:49 PM	-	00:50	417	00:24	00:24	00:01
Totals for week 4	Sessions: 1	00:50	417	00:24	00:24	00:01

Kelli, you have reached 24% Calories, 48% Light, 18% Moderate, and 10% of your Hard intensity goals.
Remember, it is important to excercise in each intensity zone to reach your goals.

WEEK 5	8/25/2008 - 8/31/2008					
Session Date/Time	Activity	Length	Calories	Light	Mod.	Hard
8/29/2008 7:37:06 PM	-	00:59	696	00:00	00:08	00:50
8/29/2008 6:25:14 PM	-	00:59	609	00:12	00:14	00:32
Totals for week 5	Sessions: 2	01:58	1305	00:12	00:22	01:22

Kelli, you have reached 75% Calories, 24% Light, 17% Moderate, and 820% of your Hard intensity goals.
Remember, it is important to excercise in each intensity zone to reach your goals.

***** WARNING: removing the training computer from the flowlink during the download process will interrupt the connection and may cause the program to error. Place the training computer on the flowlink when creating a program and leave it there until after you have completed downloading exercise files.**

5.7 Health Risk Appraisals

Using Heart Disease HRA
Clicking on the Heart Disease button from the OwnTest HRA main screen will bring up the Heart Disease HRA questionnaire. The Heart Disease HRA questionnaire consists of (9) questions. The Heart Disease questionnaire requires a weight to correctly assess the heart disease risk for an individual.

Coronary heart disease is the most common form of heart disease and the leading cause of death globally. Estimates are that almost 7.6 million deaths a year are due to coronary heart disease. Many of these deaths could be avoided by simply understanding the risk factors associated with coronary heart disease and what steps you can take to reduce your risk.

The heart disease HRA uses assessment data as part of the scoring. Blood pressure and blood chemistry values are needed to get the most accurate score for this HRA.

Using the Nutrition HRA
Clicking on the Nutrition button from the OwnTest HRA main screen will bring up the Nutrition HRA questionnaire. The Nutrition HRA questionnaire consists of (12) questions.

Good nutrition is essential for maintaining health and providing the energy necessary for optimal physical and mental performance. Poor nutrition is a significant risk factor in many of the leading causes of death globally, including coronary heart disease, cancer, stroke, and diabetes.

Using the Stress HRA
Clicking on the Stress button from the OwnTest HRA main screen will bring up the Stress HRA questionnaire. The Stress HRA questionnaire consists of (19) questions.

Stress may be thought of as a reaction to real or imagined threats in the present or future and to feelings of vulnerability or weakness. Even the most psychologically stable persons will have occasional periods of stress. Relatively mild episodes of stress are universal and require no special treatment. But, in some people these emotions can gather momentum and have a negative effect on the quality of life and health. In most cases individuals can mange and control stress on their own. The trick is to recognize these problems for what they are and to take appropriate corrective action.

Using the Depression HRA
Clicking on the Depression button from the OwnTest HRA main screen will bring up the Depression HRA questionnaire. The Depression HRA questionnaire consists of (20) questions.

Depression may be thought of as a reaction to past events combined with feelings of helplessness and hopelessness. Even the most psychologically stable persons will have periods of depression. Relatively mild episodes of depression are universal and require no special treatment. But, in some people, these emotions can gather momentum and have a negative effect on the quality of life and health. The trick is to recognize these problems for what they are and to take appropriate corrective action.

6. Polar *OwnTest*™ System Features and Settings

In this section:

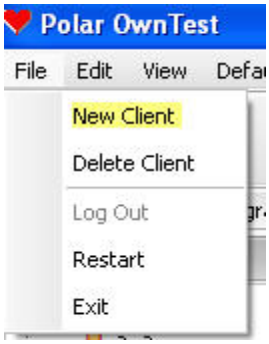
- Client
- Demographics
- Custom Fields
- Views
- Notes & Alerts
- Defaults
- Reports
- AutoPilot
- Assessment Groups
- Testing
- Records
- Web Updater

6.1 Client

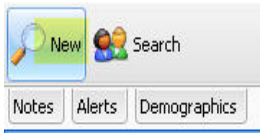
New Client

There are 2 ways to enter a new client:

Go to the '**File**' button on the tool bar and select '**New Client'**



…or Click on the '**New**' button in the upper left corner

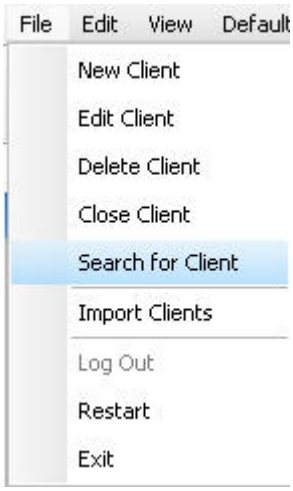


The Demographics box will appear that will allow you to enter the information of your new client (see **Demographics** for more information).

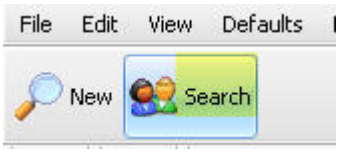
Search for Client

The search button allows to you find a client based on Last Name, First Name, or ID.
To run a search:

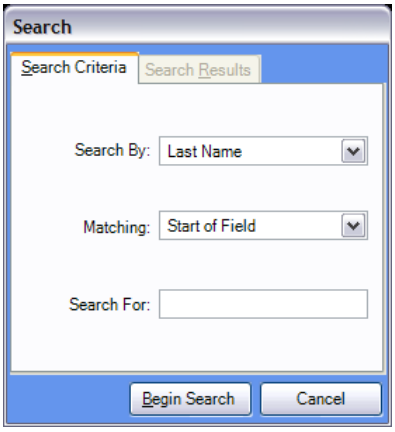
Put your cursor on the **'File'** button (upper left corner) and select **'Search for Client'**



…or Click on the button that says **'Search'**



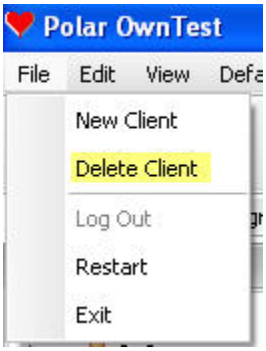
When the Search box appears, you can select the criteria of your search and/or enter a keyword/letter like a last name or first letter of last name.



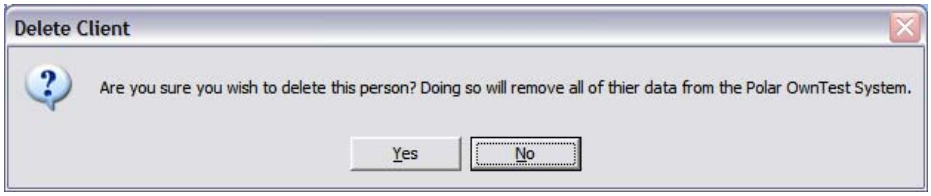
Then click '**Begin Search**' and all the clients that meet the criteria will be displayed.

Delete Client

To delete a client, go to the '**File**' button on the tool bar and select '**Delete Client**':



You will be prompted with the following message:

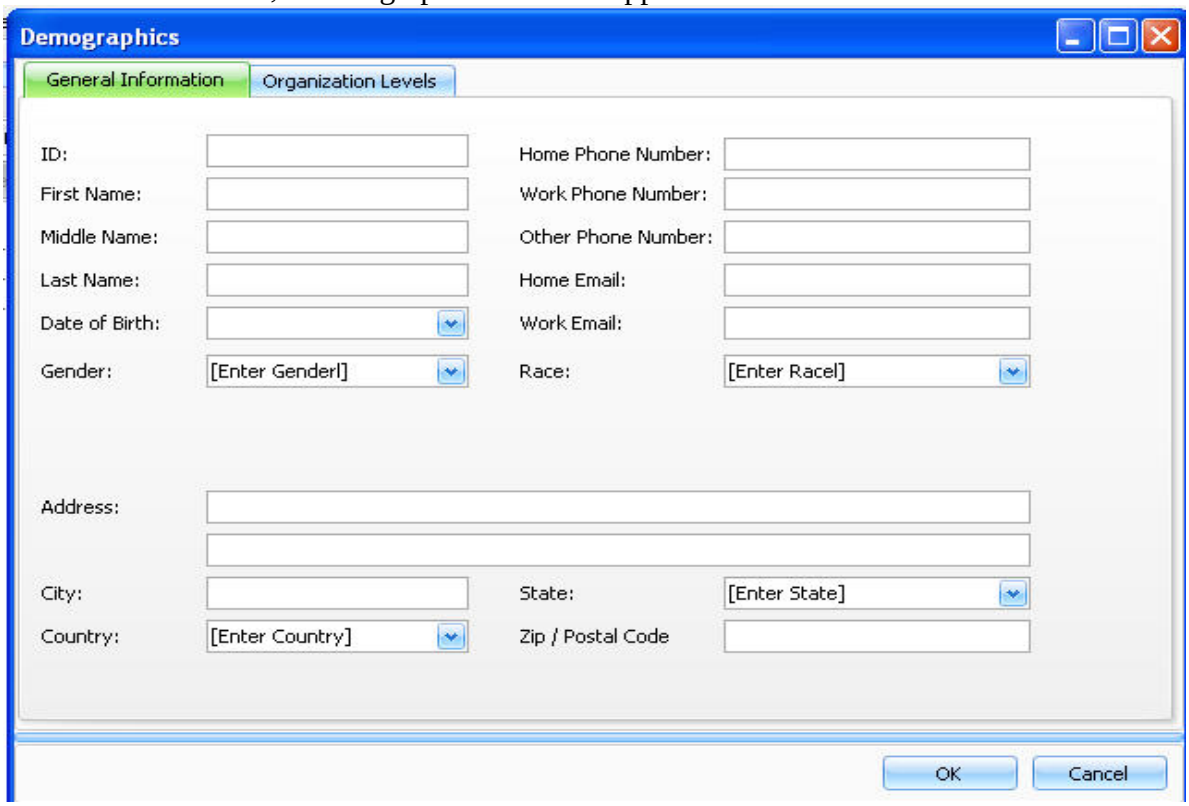


Clicking '**Yes**' will permanently remove a client's data. Clicking '**No**' will cancel the operation.

6.2 Demographics

Using Demographics

The Demographics screen allows you to edit or add new information for a client. It is strongly suggested that you enter a unique identification code (up to 50 characters) for each client as that is a great way to organize your data. Each time you add a new client to the OwnTest™ database, a demographics box will appear:



Fill out the fields accordingly. **First Name, Last Name, Date of Birth** and **Gender** are required fields. Date of Birth and Gender have drop down options.

By clicking '**Print'**, you can print the demographic information.

By clicking '**New Client**', you can add a new Client

By clicking '**OK**', your new client will be saved and you will return to the main OwnTest™ screen.

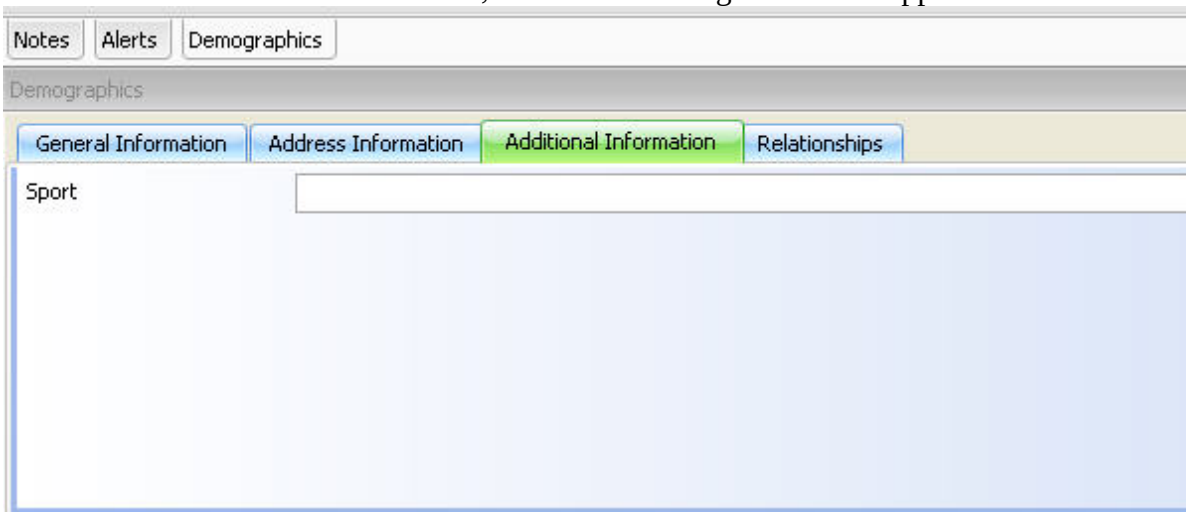
By clicking '**Cancel**', the new client will not be added or the changes you make to an existing client's demographics will not be reflected.

If you click on the tab that says '**Additional Information**', you will be able to enter customized questions (fields) for your client (see **Custom Fields**).

6.3 Custom Fields

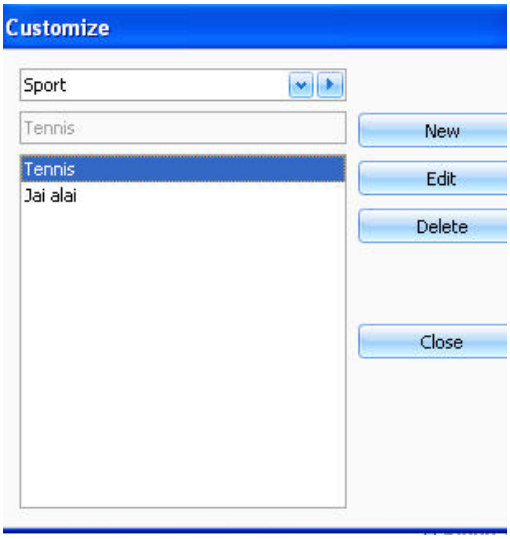
The '**Additional Information**' tab allows you to add custom fields within the **Demographic** input block. For example if you wanted to know what sport your client plays or if they follow a specific diet (i.e. vegetarian), then you can make fields with a drop down box of selections.

To do this you will select the '**Additional Information**' tab within the Demographics box. If no custom fields have been created, then the following screen will appear:

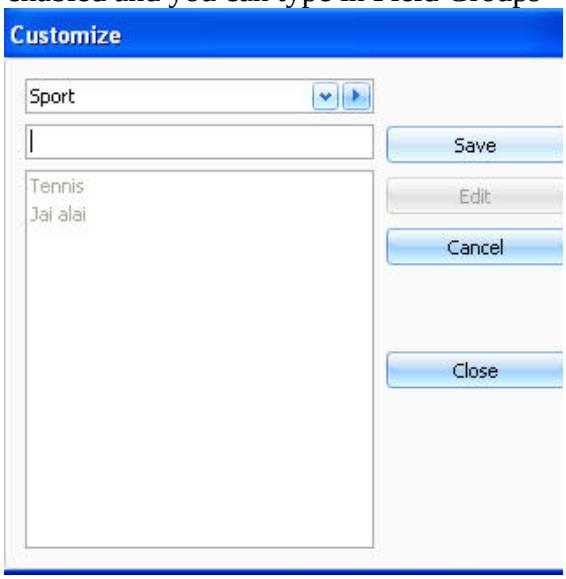


To add basic multi-answer questions to this box for your clients to answer click on the '>' button on the upper right corner.

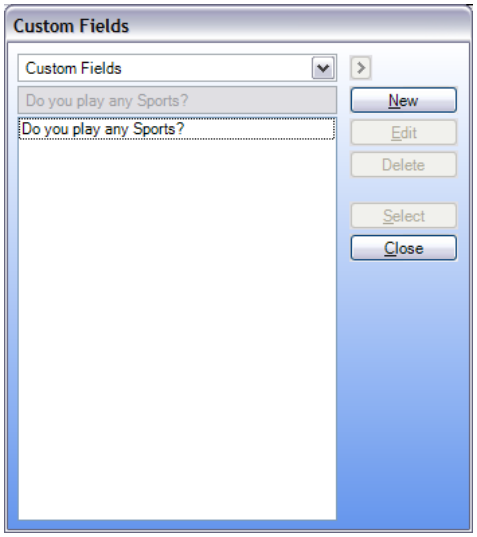
This is the box that will appear:



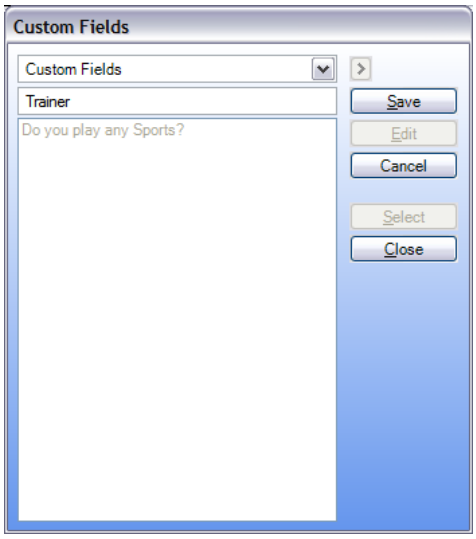
Click '**New**', and the text field will be enabled and you can type in Field Groups



If you Select '**Save**', the question or Field Group will appear in the larger box field:

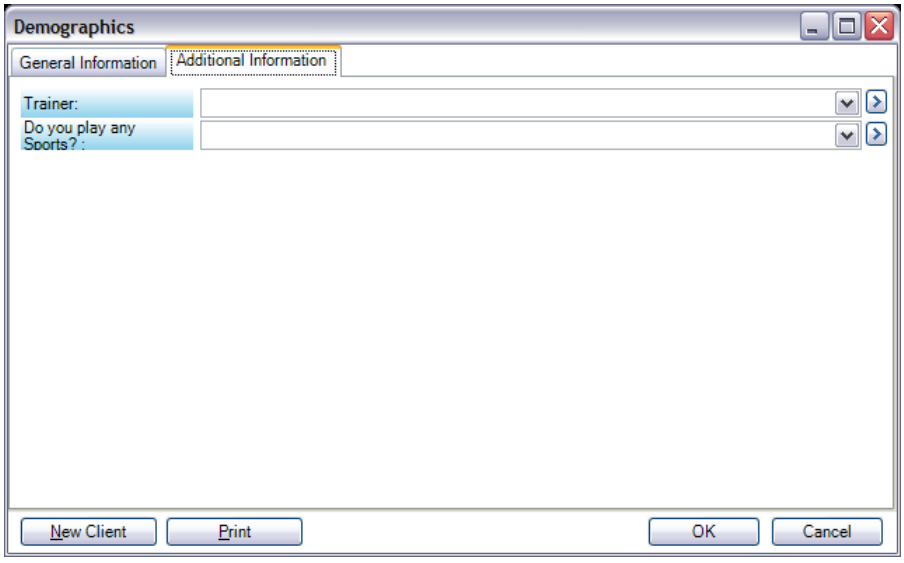


By clicking on '**New**' you start the process over again:



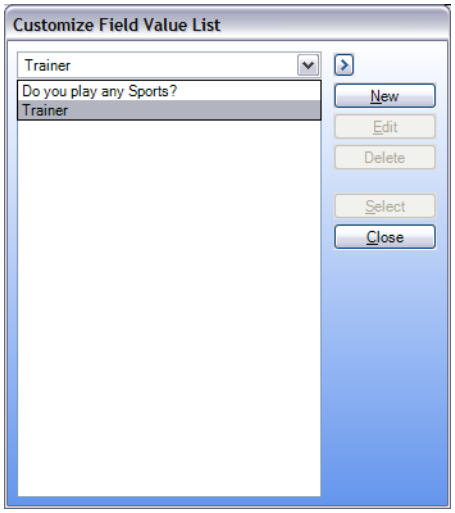
By highlighting the question, and selecting '**Edit**', you can change the question.

By clicking '**Close**', your Custom Fields will appear on the '**Additional Information**' tab of '**Demographics**':

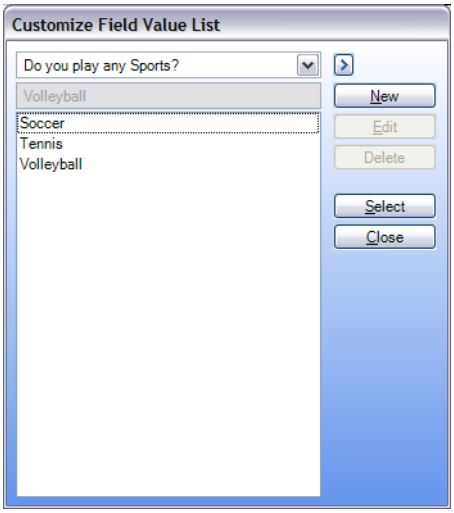


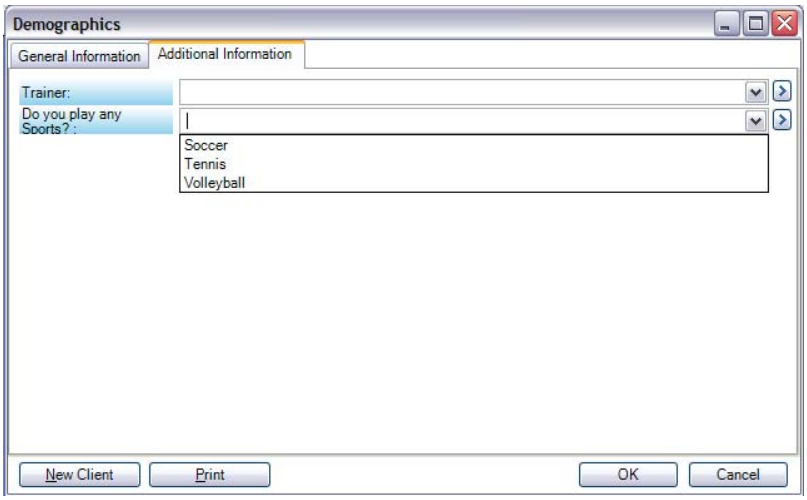
Click on the '>' button at the end of any of the custom field questions, to be able to add selections to your questions.

Use the drop down box to select which question you would like to add selections to:



Then select '**New**' and enter the first selection. Click '**Save**', and then '**New**' to enter your next selection. When you are done entering all your selections, click '**Close**' or select a different question from the drop down to enter selections:

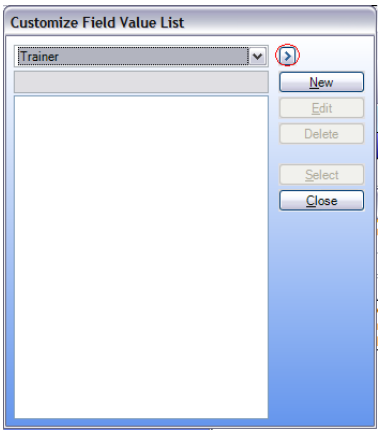




Your selections will now appear in the drop down box:

To edit the Selections you click on the '>' button and start the process over again.

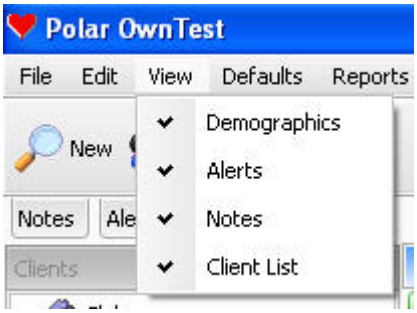
To edit or add custom fields, click on the '>' button next to the custom field drop down box and follow the above process:



6.4 View

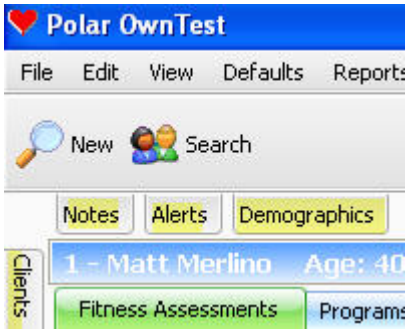
Main Screen Views

Under the Tool bar item ‘View’, you are given 4 selections:

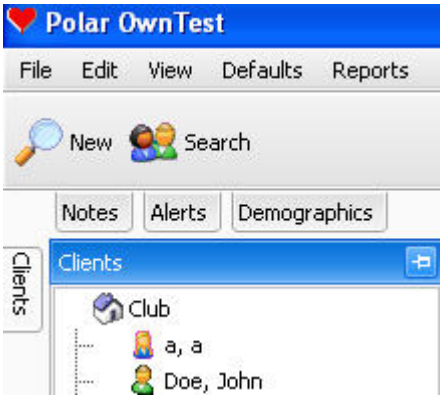


The default is shown with **Demographics, Alerts,** and **Notes** selected. The items with a check mark will have a short cut shown on the main page for easy access to those features.

If all the selections from ‘View’ are all selected, then they will appear on the main screen as follows:



If you run the mouse over any of the items above, then a roll out screen will appear showing additional information:



If you move your mouse off of the roll out screen then it will roll back in.

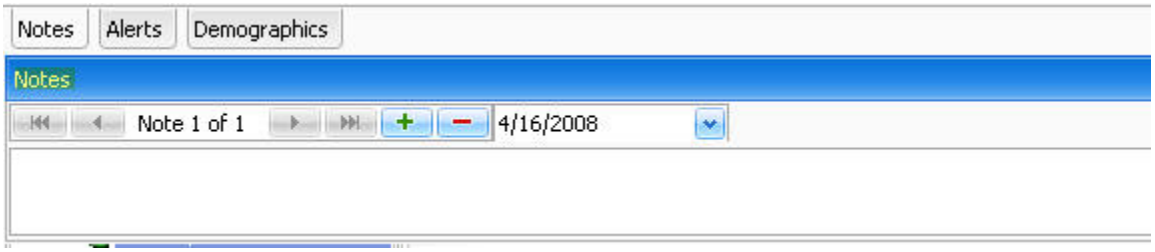
If you click on the pushpin in the upper right corner then the roll out screen will stay until you re-click on the pushpin again.

6.5 Notes & Alerts

Notes

Notes is a feature that allows you to add a comment about a particular day or session. For example if you were training a client and they happened to be sick that day, you could note it under that client's name with a date stamp.

To do this, you will roll your mouse over the icon that says '**Notes**' (see **Main Screen View** if you do not see it on your main screen). The following roll down screen will appear:



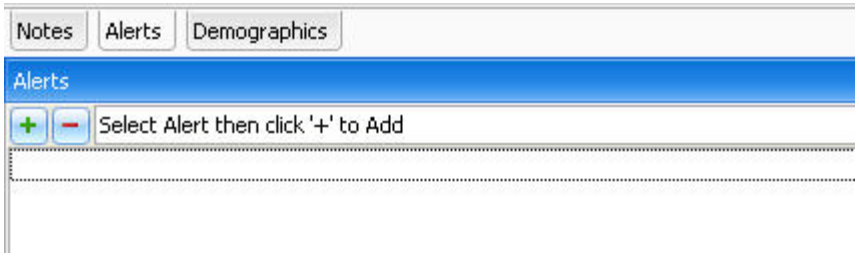
When you are finished typing your note, move the mouse curser to a different part of main screen and the notes screen will roll back and the note will be saved.

To delete a note, just use the mouse to highlight the text and hit '**Backspace**' on the keyboard.

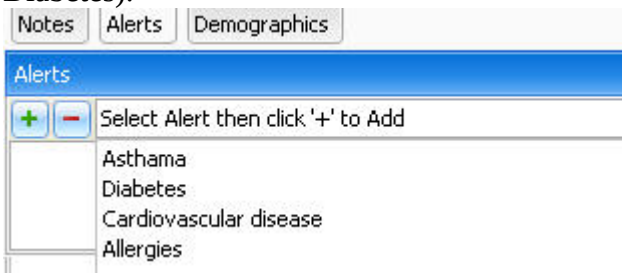
Alerts

Alerts is a feature that allows you to know any urgent medical information about a client. For example if your client has Cardiovascular disease or is allergic to bee stings, you can note it in Alerts so that in an emergency you can act accordingly.

To add an Alert, you will roll your mouse over the icon that says '**Alerts**' (see **Main Screen View** if you do not see it on your main screen). The following roll down screen will appear:



If you click on the drop down arrow you will see the two defaulted alerts (Asthma and Diabetes).

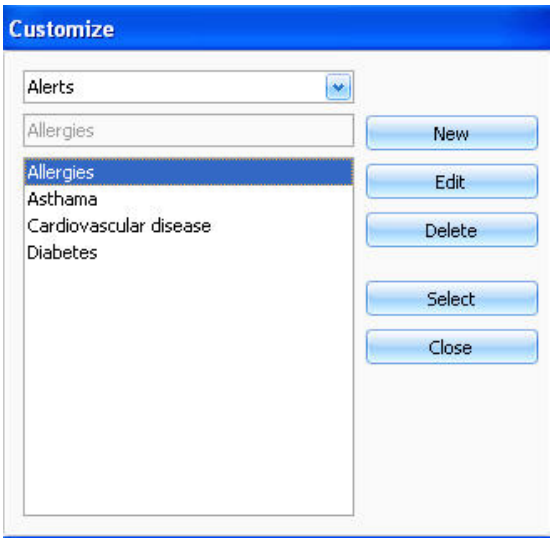


To add one of the selections already shown, highlight it and click on the green plus (+) sign. To erase an alert that you have added, highlight it (it will now appear in the large white text field) and click on the red minus(-) sign.

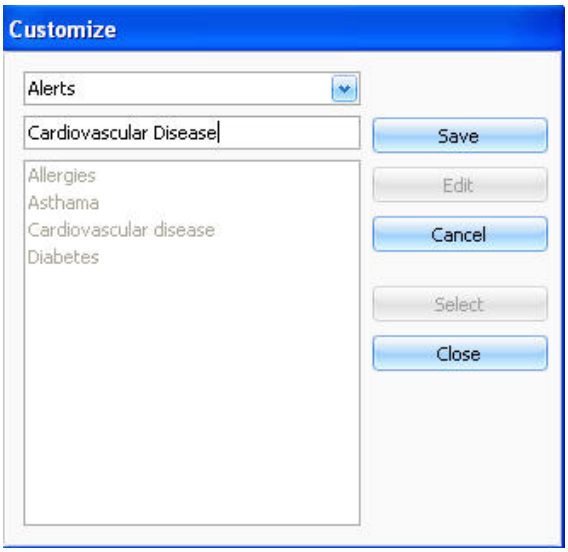
To add a new selection click on the '>' button to the right of the drop down box.

The following box will appear:

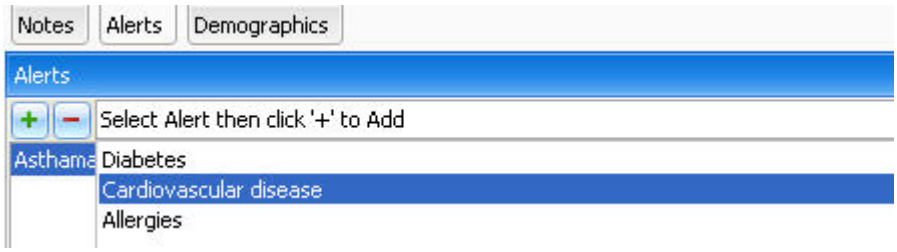
Click '**New**' and the text field will be activated



Type in your new Alert and click '**Save**'



Click on '**Close**' and the newly added alert will appear in the drop down selection of the roll down Alert box:

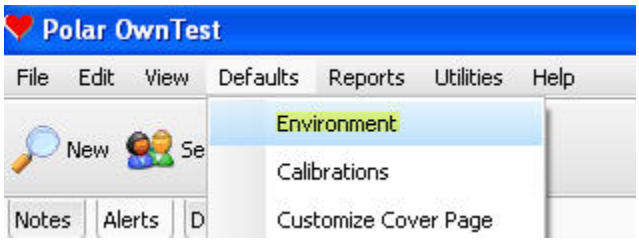


6.6 Defaults

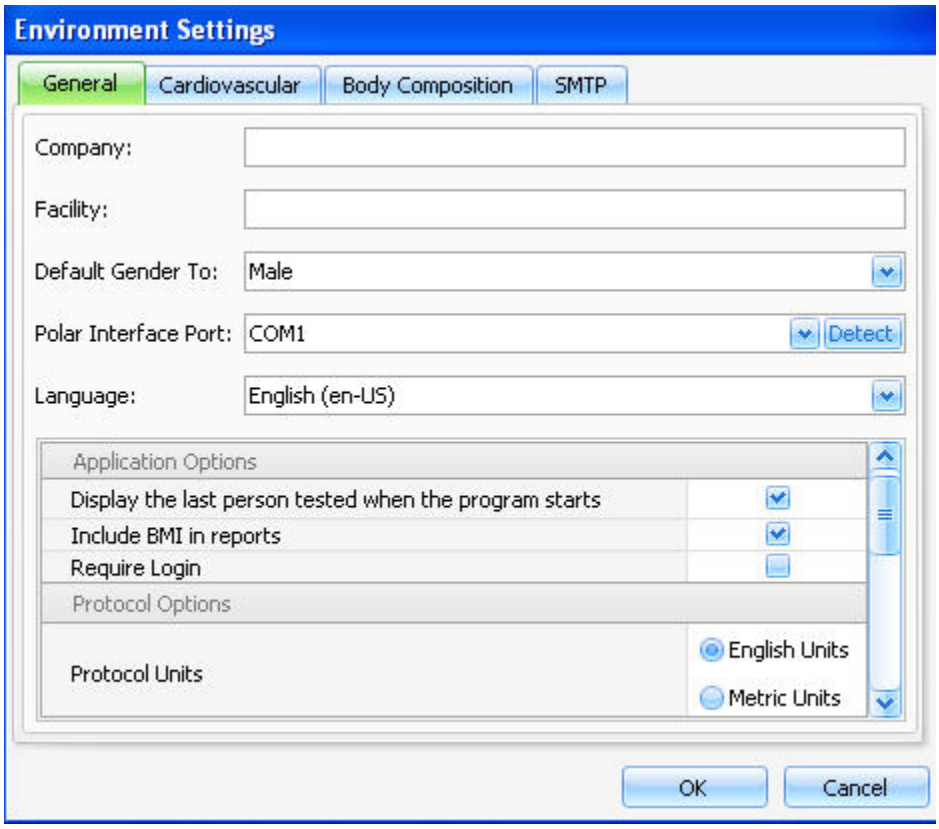
Environment

SELECTING ENVIRONMENT DEFAULTS

To view and/or change the environment settings for the OwnTest™ Software select '**Defaults**' from the tool bar and click on '**Environment**':



GENERAL DEFAULTS



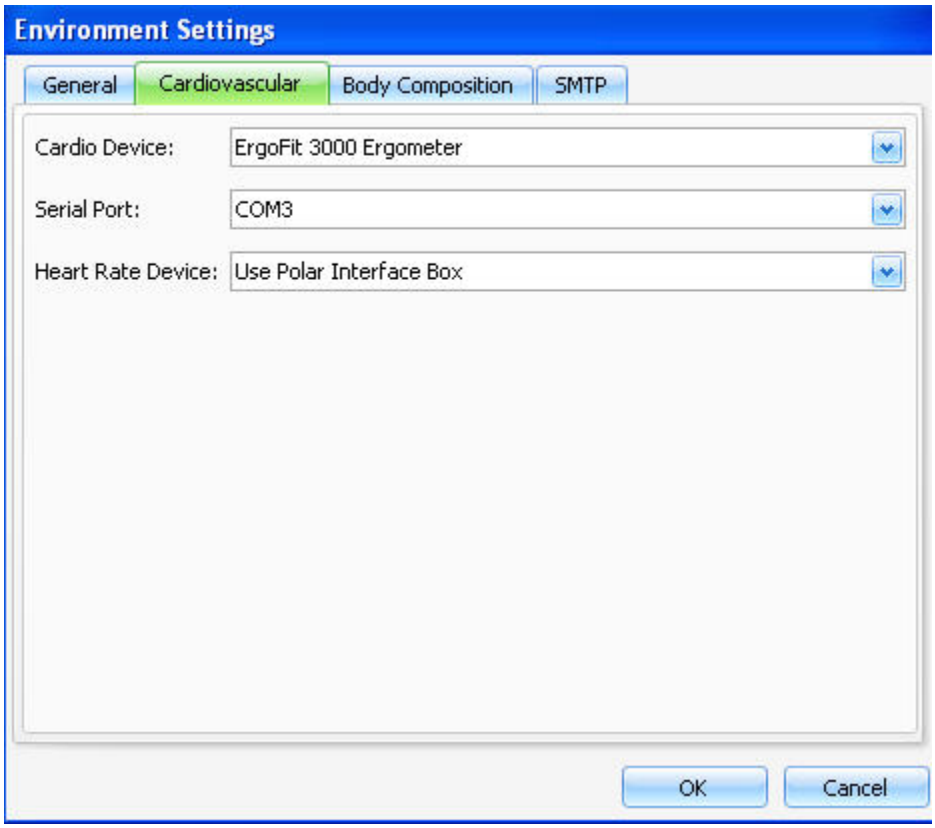
In this tab you will enter the **Company** Name and **Facility** Name. The Facility name will appear on the lower right hand corner of the Reports.

The **Polar Interface Port** is the serial port that you have the 700iu box plugged into. It will automatically detect which port if you click on 'Detect'.

You can include or exclude the **Body Mass Index** (BMI) from the reports if you check the box or leave it unchecked.

The next check box allows you to protect the privacy of your clients by displaying a blank screen (rather than the last record visited) each time you open the program. Uncheck that box to activate the privacy feature.

CARDIOVASCULAR DEFAULTS



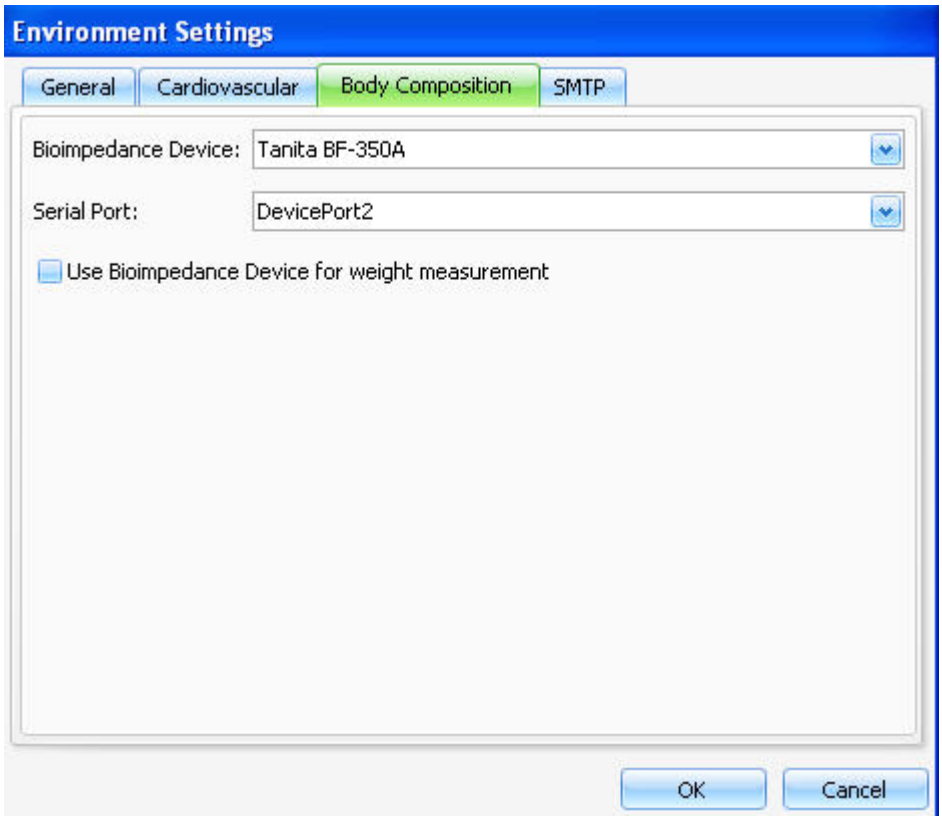
If you are doing cardiovascular testing with a Cardio Device (i.e. Ergometer or Treadmill), select the correct device from the drop down box below '**Cardio Device'**.

The cardio device will need to be attached directly to the computer and you will have to select the serial port that it is connected to from the drop down box below '**Serial Port'**.

Also select the '**Heart Rate Device**' that you will be using for the Cardiovascular Testing, the Polar Interface Box is the black receiver that came with your system.

******NOTE: If you are taking a cardio test without a cardio device attached to the OwnTest System, you must select none in the 'Cardio Device' drop down, or the test will not work properly.***

BODY COMPOSITION DEFAULTS



This tab allows you to set a Bioimpedance Device to be interactive with the OwnTest™ System.

You will select your device from the drop down box below '**Bioimpedance Device**' and then you select the Serial Port that it is attached to (it can either attach to an additional serial port in your computer or it can be connected to '**Device Port 1**' or '**Device Port 2**' on the 700iu box).

If you want use the Bioimpedance Device to calculate your weight when you do a Bioimpedance body composition test, then you will need to check the check box next to "**Use Bioimpedance Device for weight measurement**".

******NOTE: If you are using Bioimpedance without a Bioimpedance device attached to the OwnTest System, you must select none in the 'Bioimpedance Device' drop down, or the correct screen will not appear when you click on 'Bioimpedance' from the main screen.***

CLOSING ENVIRONMENTS

When you are finished setting the environments for the OwnTest™ System, click 'OK'

Calibrations

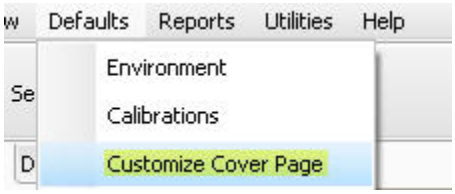
Each time the Polar OwnTest™ System is transported or every 2 months, it is recommended that the Load Platform, Skinfold Calipers and Range of Motion unit be calibrated to ensure accurate results. The **Calibration** feature allows the calibration of these on-line peripherals.

Pointing and clicking on **Calibration** from the **Defaults** pull down menu, brings up the calibration pop-up window. Within this window you can point and click on the down arrow button next to the **Calibration Type** window to pull down and highlight your choice of Load Platform, Skinfold Calipers or Range of Motion. You will be prompted with instructions regarding how to calibrate this equipment (or see the section on **Skinfold Calibration, Platform Calibration, or Range of Motion Calibration)**.

Customize Cover Page

SELECTING ENVIROMENT DEFAULTS

To view and/or change the Cover Page for the '**Personal Profile Report**', select '**Defaults**' from the tool bar and click on '**Customized Cover Page**':



You will be taken to a new screen that will show the cover page for the Personal Profile. You can change the formatting, wording, colors and even add your own images.

To change the text, simply place the cursor on the part that you want to change and delete and type what you want. The tags listed (i.e. {Client FullName}) indicate that the personalized tag (i.e. John Doe) will show up on the Cover Page.

To change the format, font, and/or text features, use the tool bar.

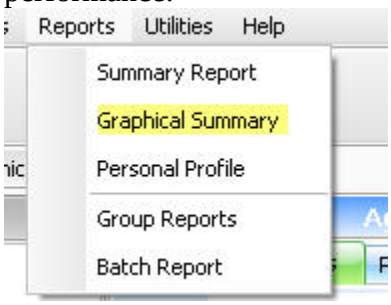
To insert and image or logo, Go to '**Insert**' and select '**image…**' and then open it from where you have it stored on your computer.

When your Customized Cover Page is complete, go to '**File**' and select '**Save**', then select '**Close**' (also in the File toolbar).

6.7 Reports

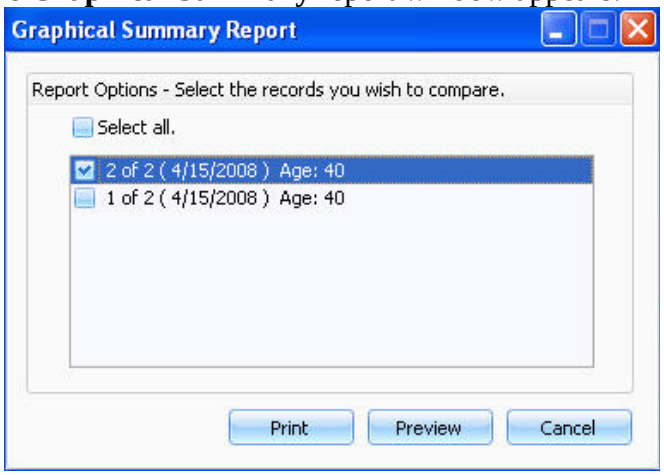
Graphical Summary

A Graphical Summary will give the client a graphical view of how they did on the fitness assessment. It will present norms and fit them into categories based on their health or performance.



To build a graphical summary report click on '**Graphical Summary**' from the '**Reports**' drop down menu:

The **Graphical Summary** report window appears:



Check the box next to records you wish to compare. You may compare all records or choose individual records to compare.

Clicking on '**Preview**' allows you to view the report prior to printing. Once the Graphical Summary report comes up on your screen and you have reviewed the information, click on the '**Print**' button to print the report, or the '**Close**' button to exit out of the Graphical Summary preview and return to the OwnTest™ main screen.

Clicking on '**Print**' will print out the report.

Below is a an Example of a Graphical Summary Report after comparing 2 separate records:

GRAPHICAL SUMMARY REPORT

Name: Sarah Barker
ID: 1234
Test Dates: 2/23/2005;

Report Date: Wednesday, February 23, 2005

BODYAGE

		18 - 22	23 - 40	41 - 60	61 - 80	81 - 100
2/23/2005	18	18 - 22	23 - 40	41 - 60	61 - 80	81 - 100

HEIGHT/WEIGHT - Body Mass Index

		Underweight	Normal	Overweight	Obesity I	Obesity II	Obesity III
2/23/2005	18.7 kg/m²	< 18.5	18.5 - 24.9	25.0 - 29.9	30.0 - 34.9	35.0 - 39.9	> 39.9

BLOOD PRESSURE - Systolic

		Optimal	Normal	High Normal	Mild	Moderate	Severe
2/23/2005	116 mmHg	< 120	120 - 129	130 - 139	140 - 159	160 - 179	> 179

BLOOD PRESSURE - Diastolic

		Optimal	Normal	High Normal	Mild	Moderate	Severe
2/23/2005	68 mmHg	< 80	80 - 84	85 - 89	90 - 99	100 - 109	> 109

CARDIOVASCULAR - OwnIndex

		Very Low	Low	Fair	Moderate	Good	Very Good	Elite
2/23/2005	58 ml/kg/min	< 26.0	26.0 - 30.9	31.0 - 35.9	36.0 - 40.9	41.0 - 44.9	45.0 - 49.9	> 49.9

STRENGTH - Crunch

		Very Low	Low	Below Ave...	Moderate	Above Ave...	Good	Elite
2/23/2005	72 reps	< 26	26 - 33	34 - 38	39 - 48	49 - 57	58 - 64	> 64

STRENGTH - Wall Sit

		Low	Fair	Moderate	Good	Elite
2/23/2005	87 sec	< 31	31 - 60	61 - 90	91 - 120	> 120

STRENGTH - Bicep Strength

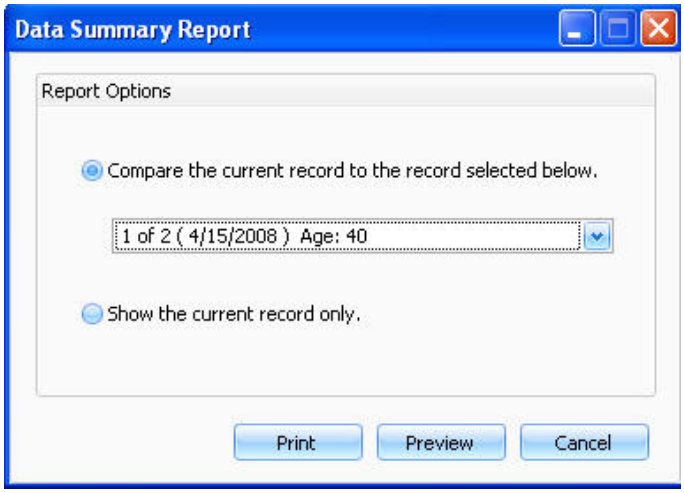
		Low	Fair	Moderate	Good	Elite
2/23/2005	38 kg	< 11.8	11.8 - 17.6	17.7 - 26.7	26.8 - 34.4	> 34.4

Summary Report

A Data Summary Report will present the client's raw data from the fitness assessment. It will also reflect the changes made if more than one record is compared.

To build a summary report click on '**Summary Report**' from the '**Reports**' drop down menu:

The '**Data Summary**' report window appears:



This option allows you to compare the results of the current test to one of the client's other tests. You can compare it by selecting it from the drop down menu.

Clicking on '**Preview**' allows you to see the report on the screen prior to printing.

Clicking on the '**PRINT**' button within this window prints out the Summary Report

Below is a an Example of a Data Summary Report after comparing 2 separate records:

DATA SUMMARY REPORT

Name: Sarah Barker
ID: 1234

Report Date: Wednesday, February 23, 2005

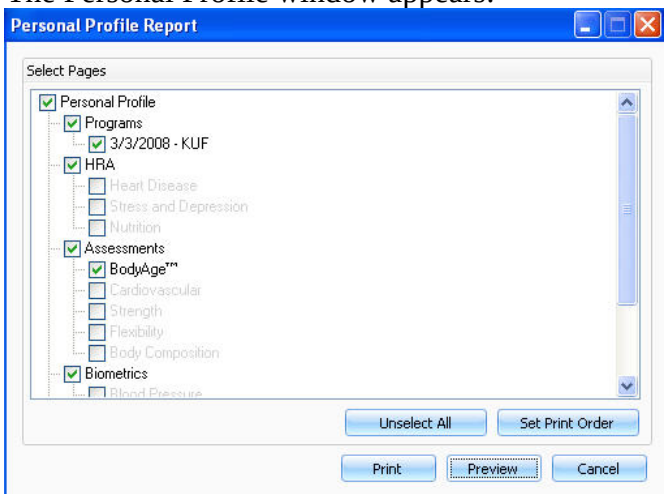
	2/23/2005	1/5/2005	Change
BODYAGE			
YourAge	25	25	0
YourBodyAge	18	22	-4
YourObtainable BodyAge	18	18	0
BIOMETRICS			
Body Mass Index (kg/m²)	18.7	19.5	-0.8
Height (cm)	173	173	0
Weight (kg)	56	58.4	-2.4
Blood Pressure (mmHg)	116/68	123/80	-7/-12
CARDIOVASCULAR			
OwnIndex (ml/kg/min)	58	56	2
Max Watts Estimated (Watts)	199.6	208.2	-8.6
STRENGTH			
Crunch (reps)	72	64	8
Wall Sit (sec)	87	75	12
Bicep Strength (kg)	38	35	3
FLEXIBILITY			
Sit & Reach (cm)	42	37	5

Personal Profile

A personal Profile presents an in depth report of the client's fitness assessment. It uses graphs, percentages, charts, norms and tips to give the client detailed, yet easy to understand feedback on their fitness status. It also prints out their Cardiovascular Program and Exercise Log if you chose and if one has been created for them.

To build a personal profile report click on '**Personal Profile**' from the '**Reports**' drop down menu:

The Personal Profile window appears:



*The menu of choices will have a check mark where there is data to report. If you do not want all of the reports checked, use your mouse to point and click on the check to remove the check or point and click on the '**Un-Select All**' button to remove all checks and click on only the ones you want to print.*

Clicking on '**Preview**' button allows you to see the report on the screen prior to printing.

Clicking on the '**PRINT**' button within this window prints out the Personal Profile

If you click on '**Set Print Order**', the following box will appear allowing you to control the order in which the Personal Profile is printed:

To change the order, highlight the item that you want to move and then use the up and down arrow buttons to move it.

***NOTE: Cover Page can not be moved, it is ALWAYS first.*

When you have it in the order that you want, click

on '**Apply**'.

If you want to set it to the default, click on '**Reset**'.

If you do not want to change the print order, click '**Close**'.

Below is an example of one of the pages in the Personal Profile:

CARDIOVASCULAR

Cardiovascular fitness is the ability of the heart, lungs and circulatory system to supply oxygen and nutrients to working muscles efficiently, and allows activities that involve large muscle groups (walking, running, swimming, biking, etc.) to be performed over long periods of time. From a health standpoint, cardiovascular or aerobic fitness is generally considered to be the most important of the fitness components.

CARDIOVASCULAR ASSESSMENT

OwnIndex: 35 ml/kg/min

Sarah, from the results of the OwnIndex assessment, your maximum oxygen consumption is calculated to be 35 ml/kg/min. Maximum oxygen consumption (abbreviated VO2max) is a measurement of the maximum rate your body can consume and process oxygen during exercise. The higher your VO2max, the better your cardiovascular fitness.

YOUR OWNINDEX RANKING

35 ml/kg/min

Very Low	Low	Fair	Moderate	Good	Very Good	Elite
< 26.0	26.0 - 30.9	31.0 - 35.9	36.0 - 40.9	41.0 - 44.9	45.0 - 49.9	> 49.9

Comparing your results with other Females between the ages 25-29, places you in the Fair cardiovascular fitness classification.

Sarah, in order to reach Moderate classification, you would need to increase your VO2max to 36.0 ml/kg/min or a 3 % improvement.

CARDIOVASCULAR TIPS

REGULAR CARDIOVASCULAR EXERCISE CAN

- Reduce your risk of heart disease
- Lower elevated blood pressure
- Reduce blood cholesterol
- Increase circulation and improve performance of your heart and lungs
- Help you look and feel better

Body Age Report

A *BodyAge*™ report is generated if it is selected when printing or previewing a Personal Profile.

WHY BodyAge™

BodyAge™ is based on health screening and fitness test scores. Fitness testing is done to serve two purposes; the first is to monitor progress of a fitness program and the second is to provide motivation to the client to change fitness levels. The problem in the past is when presenting clients with just their fitness results; they tend to be overwhelmed with the amount of information and do not understand many of the fitness concepts, such as VO2MAX. Because of this, clients tend to be less motivated to change their fitness levels and therefore exercise adherence is lower and incidence of dropout from exercise programs is higher. The *BodyAge*™ system was developed over 10 years from the information gathered and real-world testing in over 1300 health clubs in the U.S. *BodyAge*™ simplifies fitness test results into one number that the non-professional can understand. Using *BodyAge*™ has been shown to increase motivation levels of clients and increase exercise compliance.

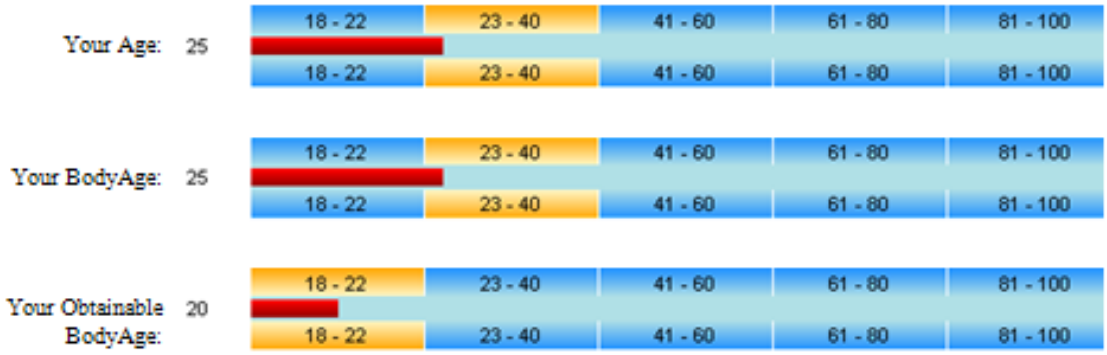
HOW *BodyAge*™ WORKS

The *BodyAge*™ score is calculated using 4 to 13 health and fitness assessments. Each assessment has a "Healthy" or "Average" percentile ranking that has been determined and validated by research (example: VO_{2MAX} values and normative rankings from Shvartz E, Reibold RC: Aerobic fitness norms for males and females aged 6 to 75 years: a review. Aviat Space Environ Med; 61:3-11, 1990. as reference by the World Health Organization). A person in the "Healthy" or "Average" percentile for all assessments will have a *BodyAge*™ score equal to their biological age. A person lower in the percentile categories for any of the assessments will have years added to their *BodyAge*™ score accordingly. The same works for the person in the Good or Excellent categories-years will be taken off of the *BodyAge*™ score. Assessments that affect life expectancy are weighted more heavily. Assessments that affect quality of life rather than lifespan are weighted slightly less.

Below is an example of a BodyAge Report:

BODYAGE

Sarah, your BodyAgeT is 25 compared to your chronological age of 25. BodyAge is calculated from the results of your assessments and how you compare with others of your same age and sex. Ideally, your BodyAge should be at least the same as your Chronological Age. Your obtainable BodyAge is what you can realistically reach with a well-rounded wellness program. Consult with your fitness trainer to set realistic goals in fitness and lifestyle changes to reach your obtainable BodyAge.



RECOMMENDATION

Sarah, the following are factors that will improve your BodyAge. By improving these factors and following a well-rounded wellness program, it is possible for you to reach a BodyAge of 20.

- Lowering your Systolic Blood Pressure from 135mmHg to a range of less than 120mmHg will improve your BodyAge by 2 years.

- Improving your Crunch from 20 reps to 39 reps will improve your BodyAge by 1 year.

- Improving your Flexibility from 42 cm to 42.5 cm will improve your BodyAge by 1 year.

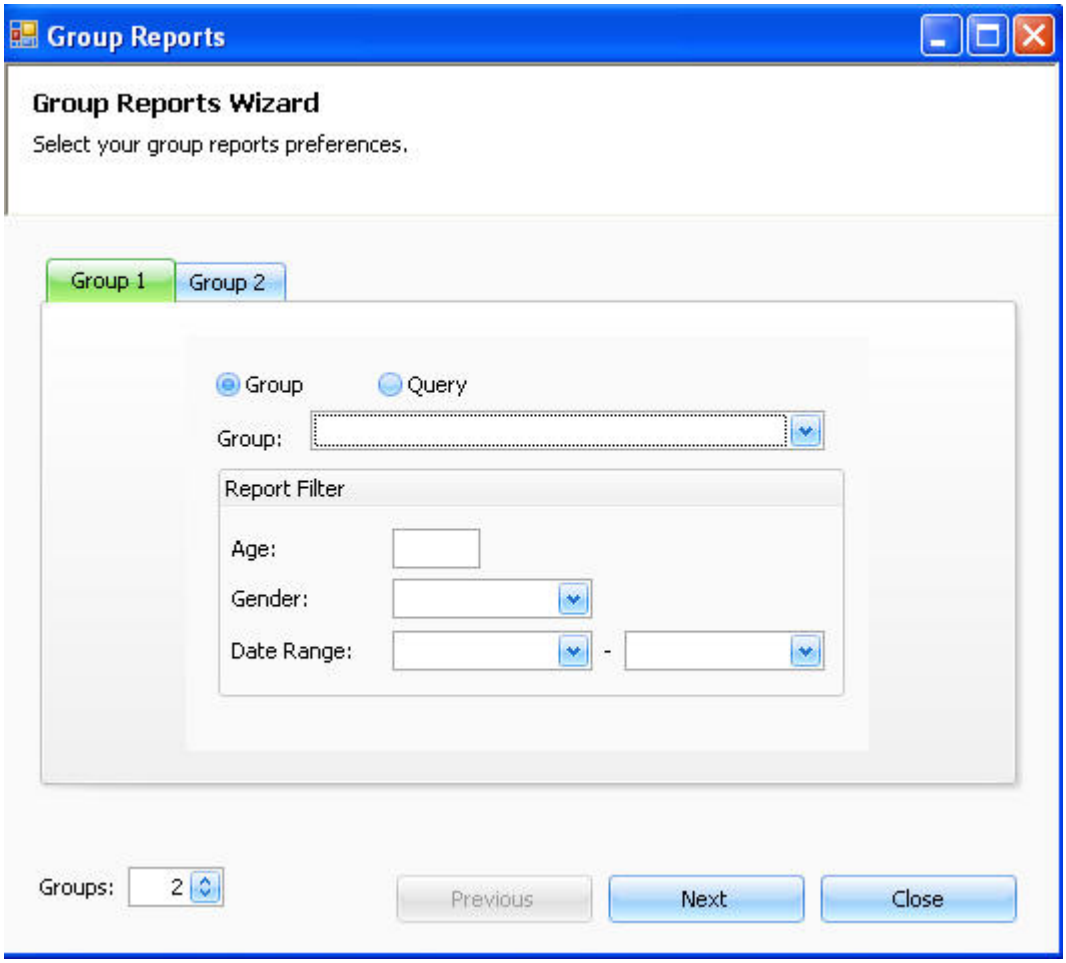
- Improving your Cardiovascular VO2max score from 35ml/kg/min to 36.0ml/kg/min will improve your BodyAge by 1 year.

Group Report

Group Reports are aggregate summaries of group populations. These reports are extremely useful in corporate settings. Selecting **Group Reports** from the **Reports** menu provides a pop-up window with a Group Reports Wizard. Within the wizard you select which group (a single group or two groups to compare with one another) within the Group 1 and Group 2 input fields. Clicking on the down arrow button to the right of group input fields provides the list of groups within your TriFIT database. Use your mouse to click and highlight the group of choice and then click again. The group name you chose will be within the Group 1 or 2 input fields.

The report filter further customizes your report. You can filter your group report on age or sex or test date or all three! For example, you can choose to include only males between the ages of 25 and 40 years of age within your group report.

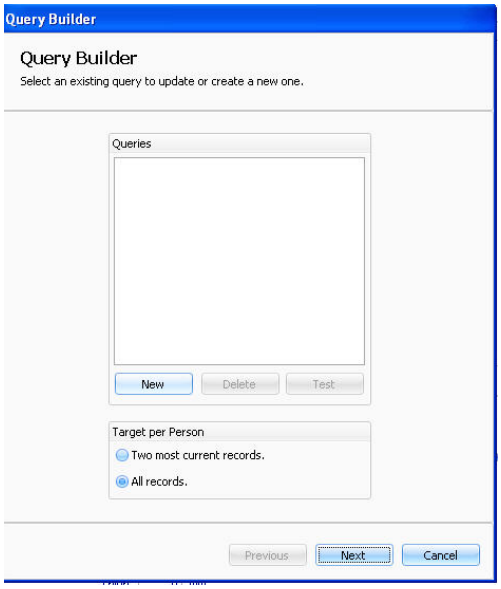
In group reports you can also export the data to an excel spreadsheet, pdf file or you can email it to someone by clicking on the one of the 3 colored icons on the top center of the preview screen.

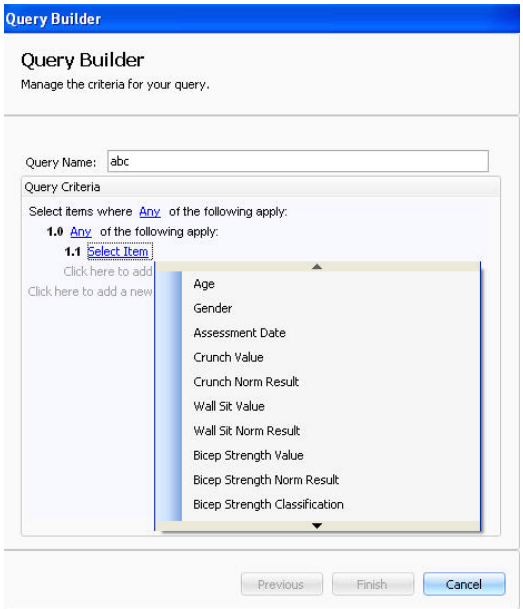


Batch Reports

Query Builder is a utility which provides you with the flexibility to print database lists of specific populations of your clients. The population can consist of nearly any combination of criteria you wish to specify. For example, you can choose all individuals whose weight is more than 250 pounds and/or whose blood pressure is less than 120/80. You must have a minimum of one filter. However, the total number of filters is unlimited.

Before you can print a list or perform a mail merge, you must define a condition. A condition is a filter or set of filters used to create a desired population of clients





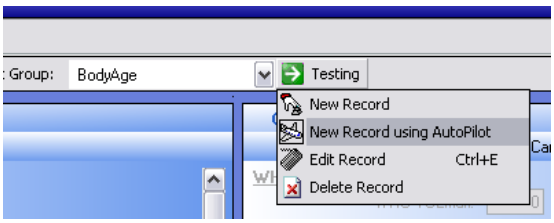
6.8 Running with Auto Pilot

What is AutoPilot?

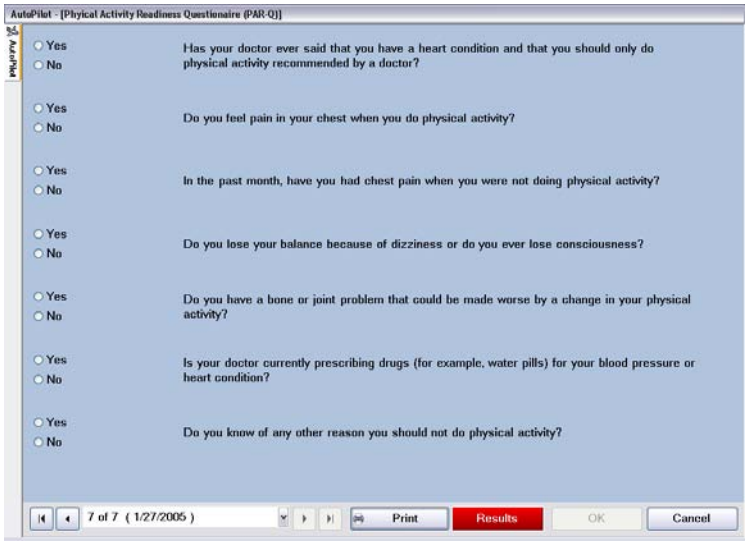
AutoPilot has been designed to streamline and standardize the sequencing of tests for your fitness assessments. By creating a new record with AutoPilot, each desired procedure comes up automatically in the order you wish! For example, running an assessment with AutoPilot means that you never have to go in and choose the protocol you want to use. As you complete one segment of the assessment, the next assessment comes up automatically ready to use. If AutoPilot is not activated, you simply bring up each segment manually.

How to start AutoPilot

AutoPilot will automatically run with the Assessment Group that you select. To change the Assessment Group settings or selection, see the Assessment Group section. To begin an assessment with AutoPilot, go to the **'Testing'** drop down box and select **'New Record Using AutoPilot'** by clicking on it



A new screen will appear:



This is the first assessment to complete in order to run a complete assessment. When you are finished answering the questions click '**OK**' in the lower right corner and you will be automatically forwarded to the next assessment.

To close AutoPilot and return to the main screen click on the '**Close**' button.

To skip an assessment or go back to an assessment roll your mouse over the '**AutoPilot'** icon and the following rollout menu will appear:

To exit AutoPilot and return to the main menu, double click on '**Exit AutoPilot'**.

6.9 Assessment Groups

What is an Assessment Group?

An assessment group is a list of protocols that you want to be displayed on the main page or in the AutoPilot. You can make your own Assessment group and name it accordingly so that each time you test a client, all you have to do is select your assessment group from a drop down menu. The default assessment group is called **'Body Age'** and includes the following protocols:

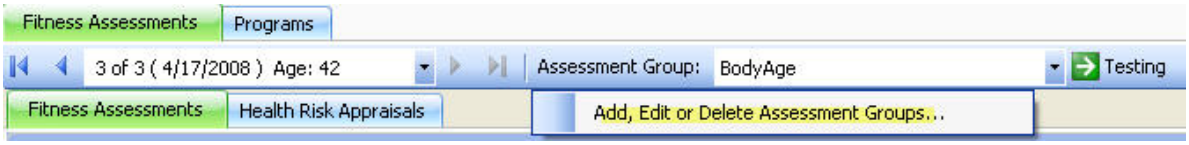
PAR-Q
Medical History
Height/Weight
Blood Pressure
BioImpedance
OwnIndex
OwnZone
Crunch
Bicep Strength
Wall Sit
Sit & Reach

All other protocols can be used from the main screen even if they are not in your assessment group they are just hidden in the roll up box. To view them just click on the bar just under each section that says '**Other ___ Protocols**' (i.e. Other Biometric Protocols). When protocols are used that are not in your assessment group, they will be indicated by red text.

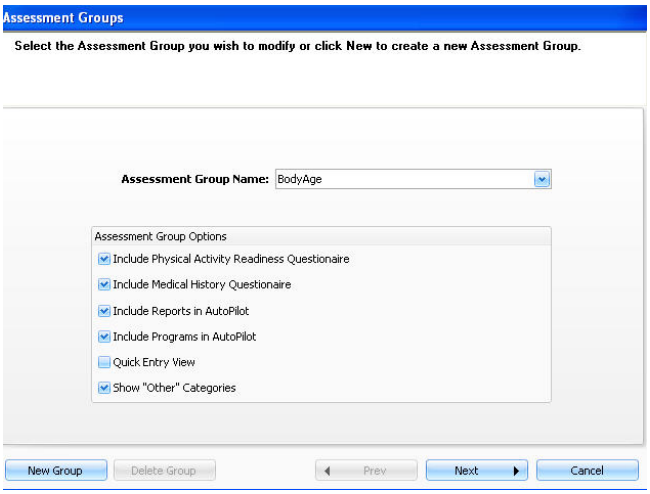
To use an assessment group in AutoPilot, first select the Assessment group from the drop down box and then select '**New Record Using AutoPilot**' from the '**Testing** ' drop down.

How to Customize or Edit an Assessment Group

To add or change an assessment group click on the '**Assessment Group**' button and select '**Add, Edit or Delete Assessment Groups…**':



A wizard will pop up:

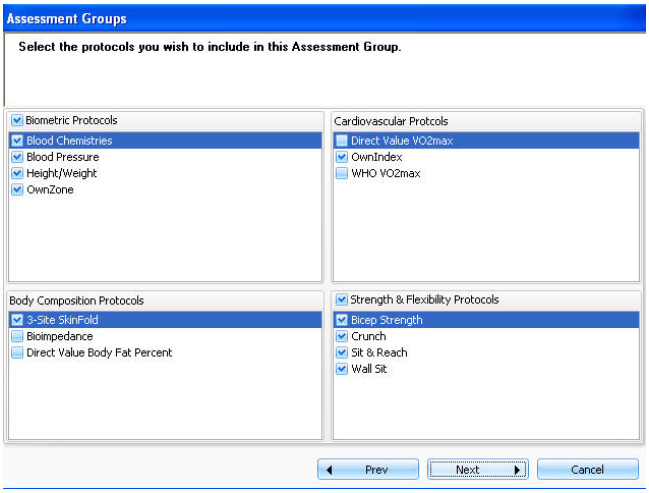


If you have already created an Assessment Group, you can click '**Next >**' to Edit it.

If you wish to create a new Assessment Group, click '**New Group**'. You will be prompted to name your group then click '**Next >**'

If you want to delete a particular Assessment Group, select the group from the drop down menu and click '**Delete Group**'

****NOTE: you cannot modify or delete the BodyAge Assessment Group.*

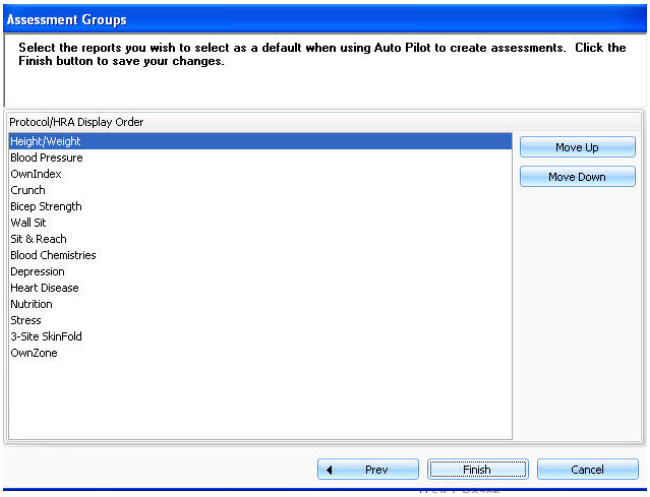


A menu will appear for you to select your protocols from.

For **Body Composition**, only one protocol is allowed to be selected per Assessment Group.

For **Cardiovascular**, only one protocol plus OwnZone is allowed to be selected per Assessment Group.

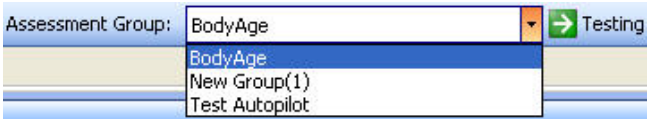
Click '**Next >**' after making you selections.



You are able to customize the order that the protocols will appear when used with Autopilot.

Click on the protocol that you would like to move to highlight it and then click on the '**Move Up**' or '**Move Down**' buttons until it is in the desired order.

Click '**Finish**' to save you assessment.

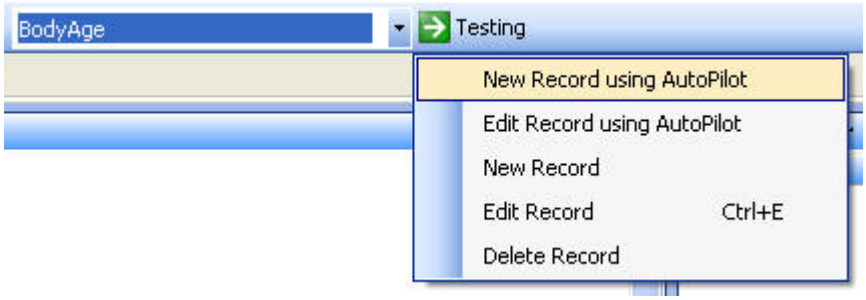


Your New Assessment Group will now appear under the '**Assessment Group**' drop down menu.

6.10 Testing (creating or editing a Record)

After you have created a new client (see **New Client**), you are ready to create a record for that client.

Every time that you first open the OwnTest™ System or change clients, your main screen will be disabled until to click on the '**Testing**' button and make your selection:



Selecting '**New Record**' creates a new record for the client.

Selecting '**New Record using AutoPilot**' creates a new record and takes you to the autopilot screen (see **Autopilot**).

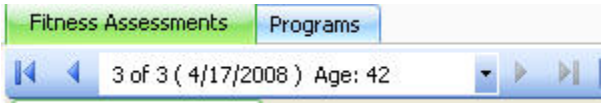
*NOTE: if you have just created a new client then the only 2 selections your can chose from are '**New Record**' and '**New Record using AutoPilot**'*

Selecting '**Edit Record**' allows you to modify an existing record.

Selecting '**Delete Record**' permanently removes the record.

6.11 Viewing an Existing Record

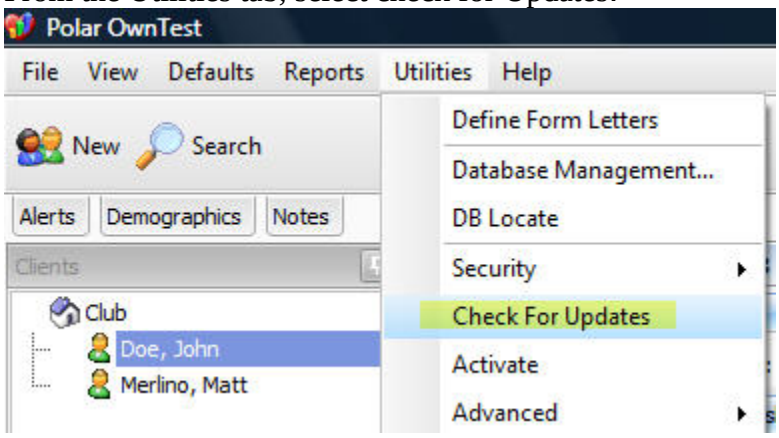
To view an existing record of a client, use the arrows or drop down menu shown below:



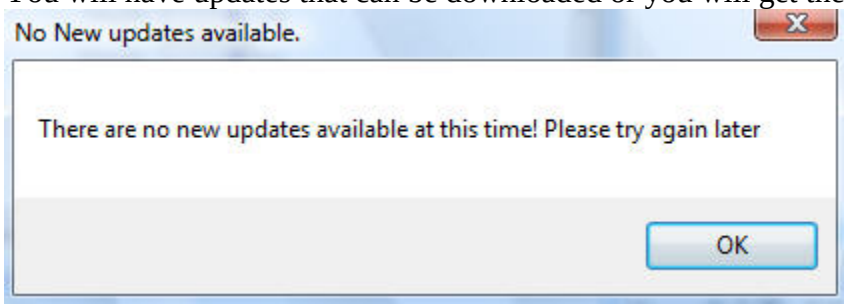
NOTE: the age of the client at the time that the record was created will also be shown.

6.12 Web Updater

From the Utilities tab, select check for Updates.



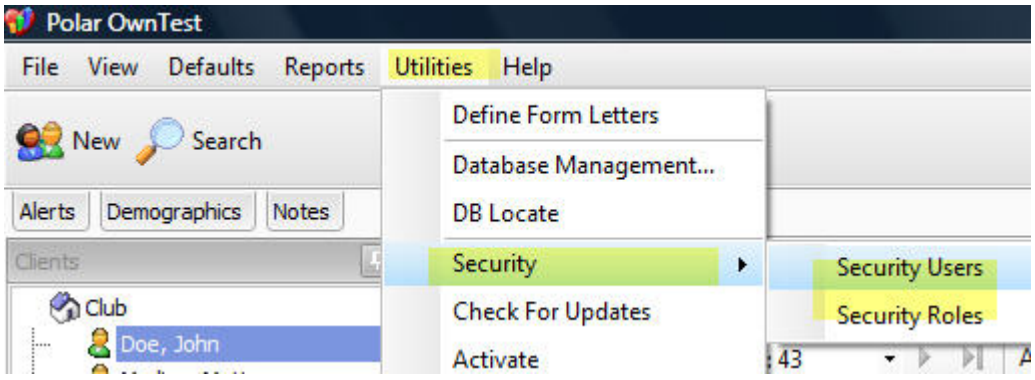
You will have updates that can be downloaded or you will get the message below:

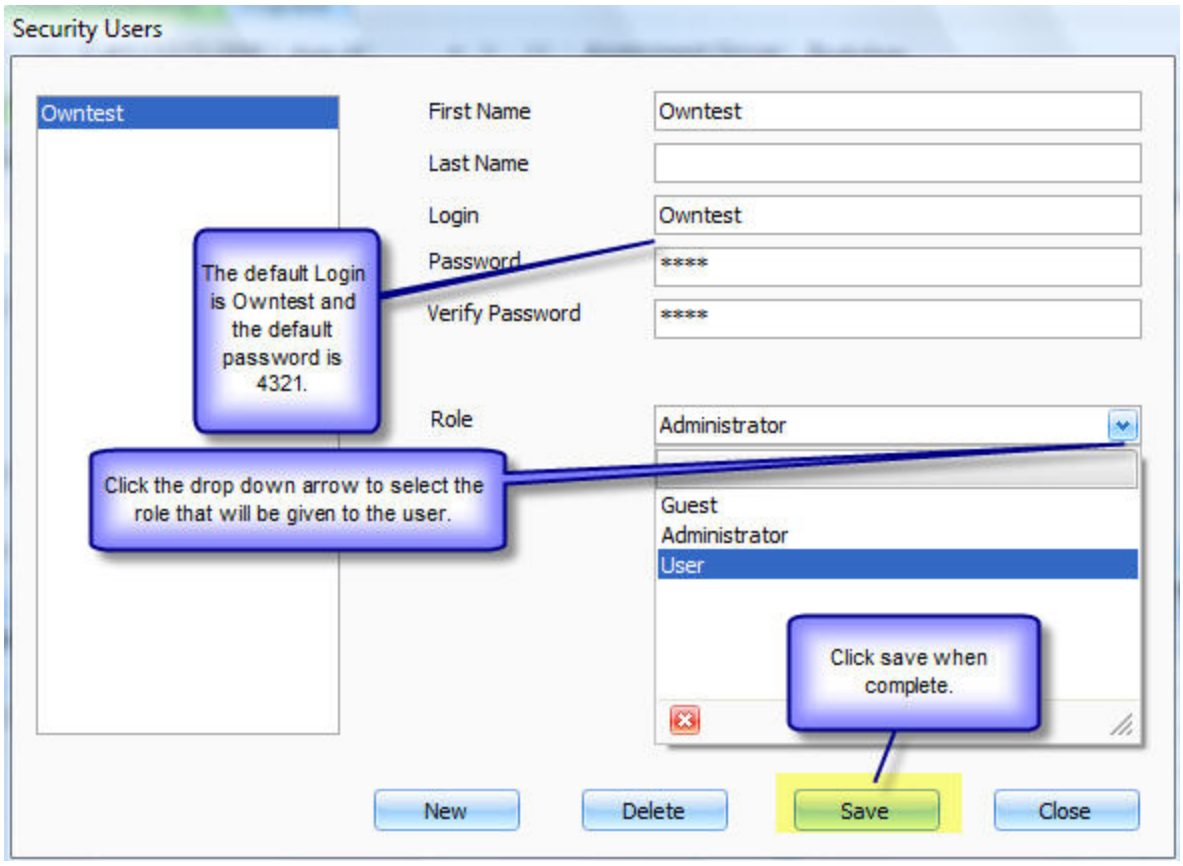


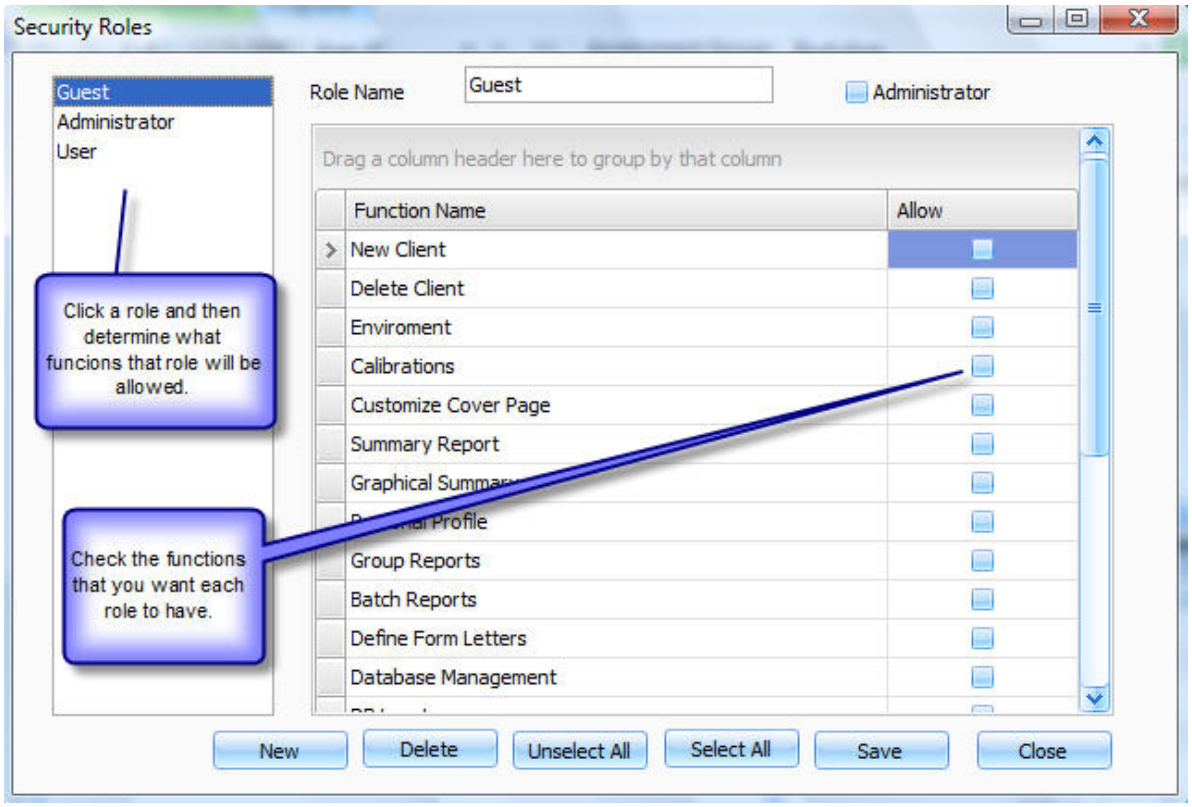
The Web Updater allows the user to keep up with the most current version available without having to re-install the newest version.

6.13 Security

From the Utilities menu, select the Security tab and you will have the choice to define users and roles.




Security Users
Owntest
First Name
Owntest
Last Name
Login
Owntest
Password
****
Verify Password
****
The default Login is Owntest and the default password is 4321.
Role
Administrator
Click the drop down arrow to select the role that will be given to the user.
Guest
Administrator
User
Click save when complete.
New
Delete
Save
Close


Security Roles
Guest
Administrator
User
Role Name
Guest
Administrator
Drag a column header here to group by that column
Function Name
Allow
New Client
Delete Client
Enviroment
Calibrations
Customize Cover Page
Summary Report
Graphical Summary
Profile
Group Reports
Batch Reports
Define Form Letters
Database Management
Click a role and then determine what funcions that role will be allowed.
Check the functions that you want each role to have.
New
Delete
Unselect All
Select All
Save
Close

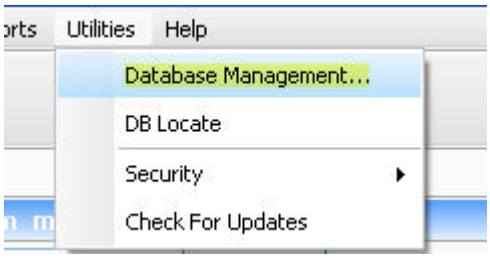
Database Management

In this section:

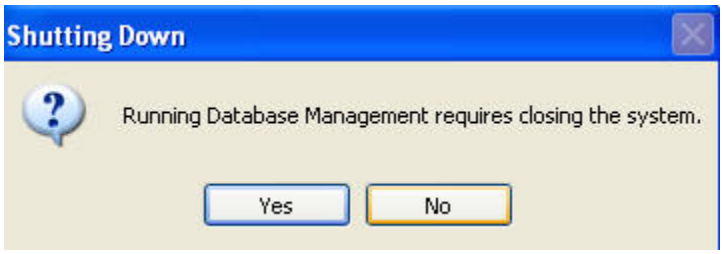
- Backup
- Restore

7.1 Backup

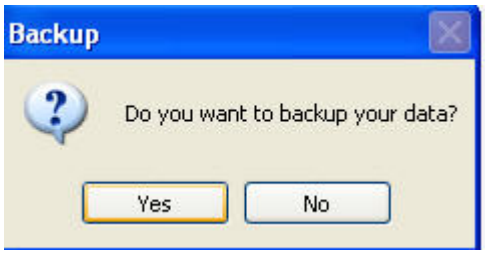
You must be out of the OwnTest program in order to backup.



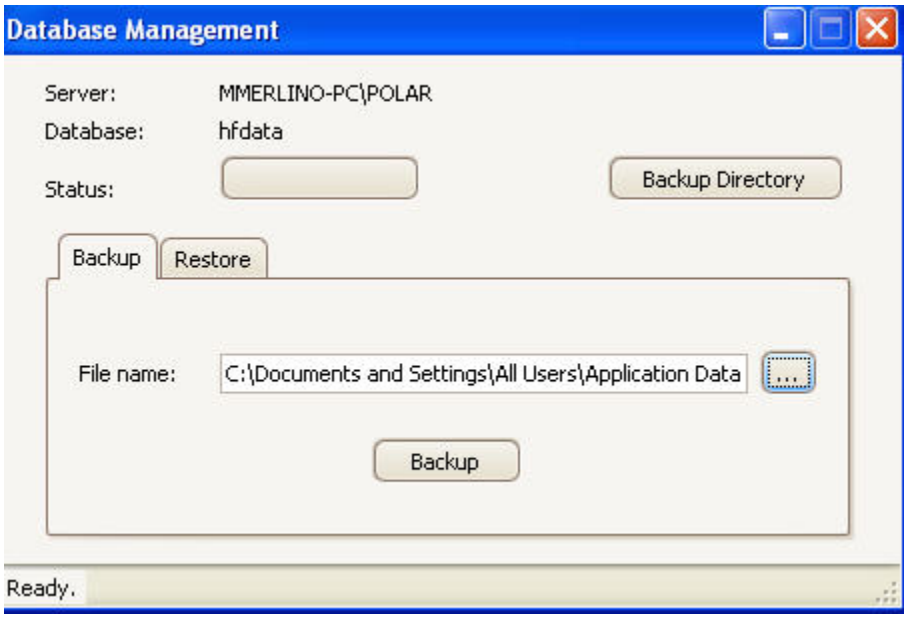
Click Database Management from the Utilities menu.



To run DB Management click 'Yes'



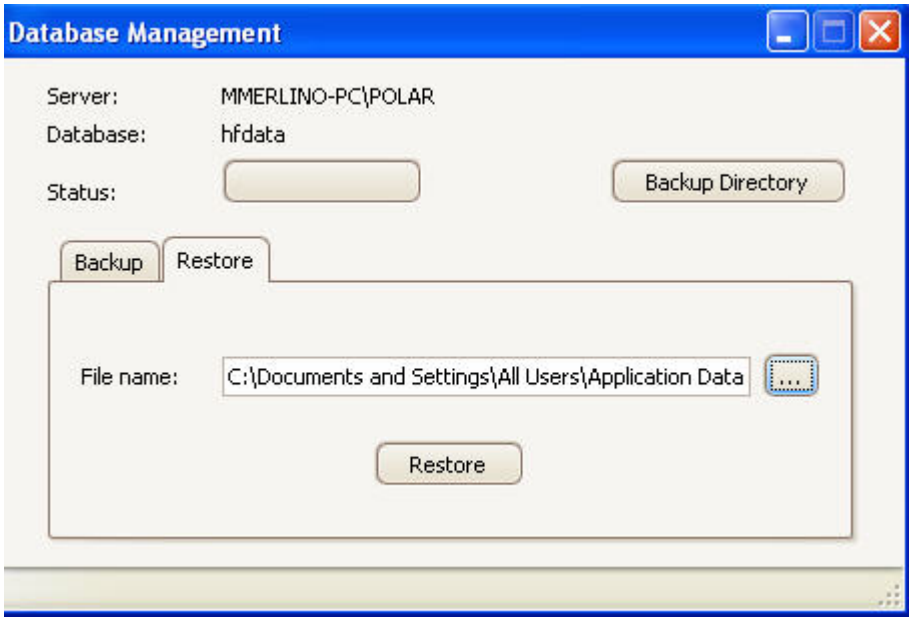
To Backup data click 'Yes"



Map where you would like the backup data to appear and click on the "Backup" button.

Backup Directory will show you all of the databases that have been saved previously to the Backup folder

7.2 Restore



Restore: Click 'Restore' tab, choose the path that leads to the Backup file, click 'Restore' tab.

**** Warning: Restoring a database will overwrite all of your current data with the backup copy and it cannot be undone*.

7.3 SQL Server

How to manually remove a Microsoft SQL Server 2000 Desktop Engine (MSDE 2000) instance

SUMMARY

This step-by-step article describes how you manually remove a Microsoft SQL Server 2000 Desktop Engine (also known as MSDE 2000) instance. If you experience a problem when you try to remove an MSDE 2000 instance by using Add/Remove Programs in Control Panel, you can manually remove the instance instead. To manually remove MSDE 2000, follow the steps in the "More Information" section of this article.

Note: Use Add/Remove Programs in Control Panel to remove the SQL Server 2000 Desktop Engine (MSDE 2000) instance before you try to manually remove the instance.

MORE INFORMATION

Remove Windows Installer references to installed products

The steps in this section require the Windows Installer Software Development Kit (SDK) command-line tool Msizap.exe. To acquire this tool, visit the following Microsoft Web site:

http://www.microsoft.com/downloads/details.aspx?familyid=A55B6B43-E24F-4EA3-A93E-40C0EC4F68E5

The Msizap.exe tool is also included in Microsoft Windows Server 2003 Support Tools. To install Windows Support Tools, open the Tools folder on the Microsoft Windows Server 2003 CD, and then double-click Suptools.msi.

After you install this tool, Msizap.exe is available in the Program Files\Microsoft Platform SDK\Bin folder.

For more information about the Msizap.exe tool, visit the following Microsoft Web site:

http://msdn2.microsoft.com/en-us/library/aa370523.aspx

Warning The Msizap utility may cause programs that were previously installed with the Windows Installer to fail. For more information, see the Platform SDK documentation.

Follow these steps to remove the MSDE 2000 installer references:

1. Determine the **ProductCode** for the MSDE instance that was installed. For more information about how to identify the **ProductCode**, use the **ProductCode** to Original Package Name mapping table that is in the following Microsoft Knowledge Base article:
   311762 How to identify which MSI file was used for an existing MSDE installation

   For example, if the MSDE 2000 instance is a default instance, you can find the **ProductCode** key value in the following registry key:

   HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSSQLServer\Setup

   If the MSDE 2000 instance is a named instance, you can find the **ProductCode** key value in the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL Server\<INSTANCENAME>\Setup

2. Use Msizap.exe to remove all Windows Installer information for the **ProductCode** of the MSDE 2000 instance. Type the following line at the command prompt:

   MSIZAP.EXE T {GUID}

   For example, if your MSDE 2000 instance has a **ProductCode** of E09B48B5-E141-427A-AB0C-D3605127224A, and you want to use Msizap.exe to remove the Windows Installer information, run the following command from the command prompt on your computer:

   MSIZAP.EXE T {E09B48B5-E141-427A-AB0C-D3605127224A}

Remove files and folders

Remove the MSDE 2000 instance data and program installation folders. You can find the root folder information for the default instance data folder in the **SQLDataRoot** registry key value under this registry key path:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSSQLServer\Setup

- For example, remove the MSDE 2000 data folder for a default instance:

  ```
  \Program Files\Microsoft SQL Server\MSSQL\Data
  ```

- For example, remove the MSDE 2000 data folder for a named instance:

  ```
  \Program Files\Microsoft SQL Server\MSSQL$<INSTANCENAME>\Data
  ```

- For example, remove the MSDE 2000 program folder for a default instance:

  ```
  \Program Files\Microsoft SQL Server\MSSQL\Binn
  ```

- For example, remove the MSDE 2000 program folder for a named instance:

  ```
  \Program Files\Microsoft SQL Server\MSSQL$<INSTANCENAME>\Binn
  ```

Clean up the registry

Important This section, method, or task contains steps that tell you how to modify the registry. However, serious problems might occur if you modify the registry incorrectly. Therefore, make sure that you follow these steps carefully. For added protection, back up the registry before you modify it. Then, you can restore the registry if a problem occurs. For more information about how to back up and restore the registry, click the following article number to view the article in the Microsoft Knowledge Base:
322756 How to back up and restore the registry in Windows

The Msizap.exe tool removes only Windows Installer specific keys or data for the **ProductCode**. It is best to manually remove the MSDE 2000 registry keys. Use Registry Editor to remove the following MSDE 2000 registry keys:

1. For an MSDE 2000 default instance, remove the following key:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSSQLServer

2. For an MSDE 2000 named instance, remove the following key:

   HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL Server\<INSTANCENAME>

3. If the following registry key points to the MSDE 2000 instance **ProductCode**, remove the value *InstanceComponentSet.x*. For example, InstanceComponentSet.1 has a value that matches the **ProductCode** of Sqlrun01.msi:

   HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL Server\Component Set\InstanceComponentSet.1

4. Remove the SQLServer Service registry key.

   For an MSDE 2000 default instance, remove the following:

   HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\MSSQLServer

   For an MSDE 2000 named instance, remove the following:

   HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\MSSQL$<INSTANCENAME>

5. Remove the SQLServerAgent Service registry key:

   For an MSDE 2000 default instance, remove the following:

   HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\SQLServerAgent

   For an MSDE 2000 named instance, remove the following:

   HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\SQLAgent$<INSTANCENAME>

REFERENCES

For more information, click the following article number to view the article in the Microsoft Knowledge Base:
324998 How to obtain and install SQL Server 2000 Desktop Engine (MSDE 2000)

For more information about MSDE 2000, visit the following Microsoft Web site:

http://www.microsoft.com/sql/prodinfo/previousversions/msde/prodinfo.mspx

APPLIES TO

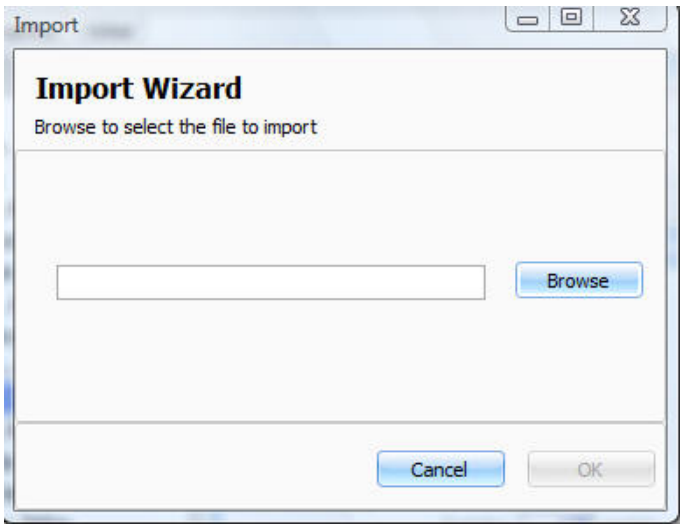
- Microsoft SQL Server 2000 Desktop Engine (Windows)
- Microsoft SQL Server 2000 Desktop Engine

Keywords: kbguidelines kbhowtomaster kbsysadmin kbhowto kbinfo KB320873

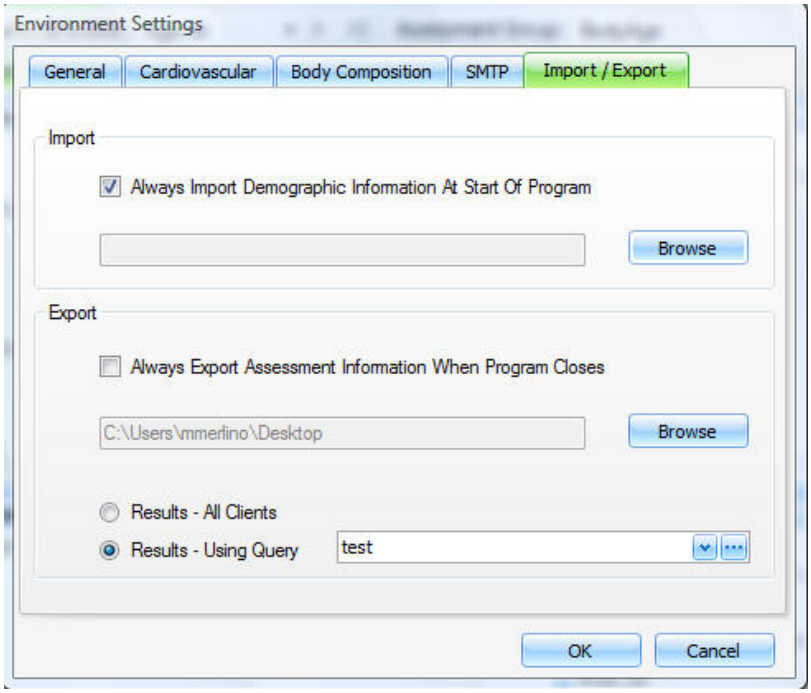
7.4 Import/Export Function

The Import \ Export feature is designed for mass import and export of data.
The import feature allows a user to import demographic information and Organizational Level information in an XML file following a strict format. The format can be seen in an XML example included for as well as an included schema.
The data can be imported two different ways.

1. For importing a single file, every so often this method would be optimal. From the file menu go to Import \ Export and choose Import. Browse to, and select the file to be imported. Click OK. The form will show the number of clients that have been added. Click the finish button to close the form.

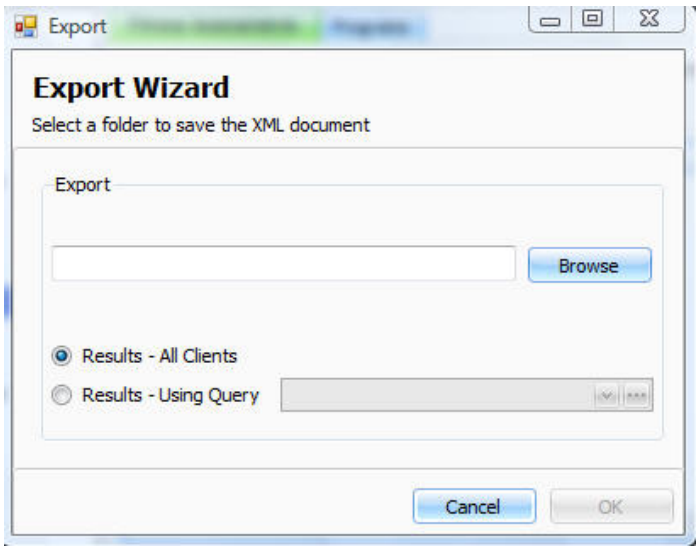


2. When importing multiple files or importing often, this method will be optimal. From the Defaults menu click on the environment menu button. Choose the last tab on that form called Import \ Export. Checking or unchecking the checkbox that says "Always Import Demographic Information At Start Of Program" and selecting a folder to browse to will force the program to check the chosen folder to import each file in the folder. After each file is imported a folder called "Imported" will be created in this folder. All files imported will be placed in this folder. At the application start the client tree will be updated with the information imported.

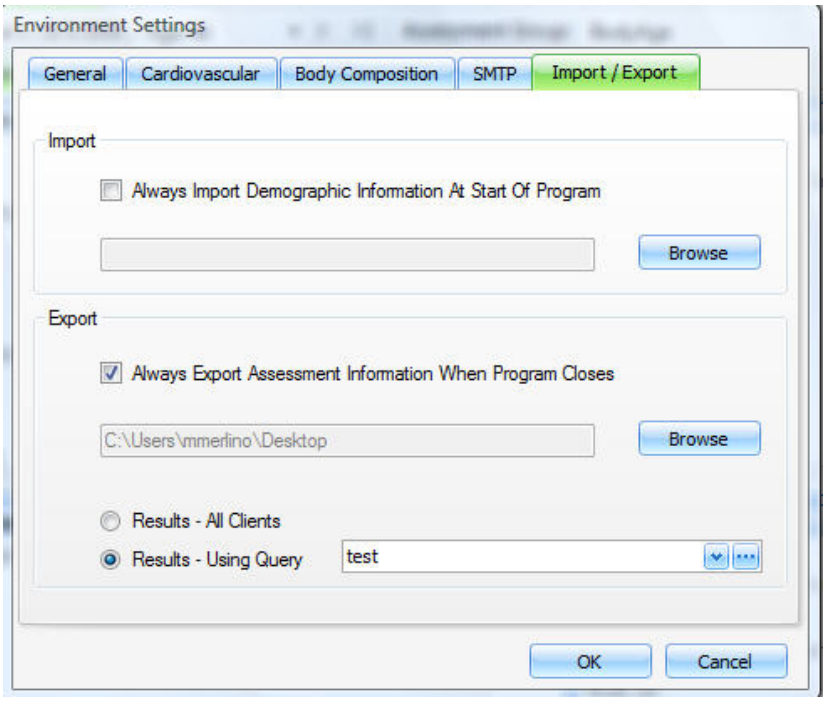


The export feature allows a user to export assessment information for each person. If the person has multiple assessments, all will show up in the XML file. An example of an Export file will also be included.
The data can be exported two different ways.

1. From the file menu go to Import \ Export and choose Export. Browse to the folder you want the data to be exported to. Give the file a name. If you only want some of the data, use the query builder to create a subset of data to be exported. Click OK. The number of assessments will be given. Click OK to close the form. For exporting rarely, this will probably be the method of choice.



2. To export every time the application closes, from the defaults menu choose the Environment menu button. Choose the last tab on that form called Import / Export. Checking the checkbox that says “Always Export Assessment Information At Close Of Program” will force the program to export an XML document at close. The Query Builder dropdown box will allow the user to select a query to which the exported data will conform. The user will also have to select a path that they would like the data to be exported to.



Type Table

The type table document has each property and the possible values for each property. If the value doesn’t conform to the type table the property will not be included.

Property	**Types**
Gender	Male
	Female
Race	Caucasian Asian African/American Hispanic Latino American Indian Black Japanese Native

	White Others
State	AK AL AR AZ CA CO CT DC DE FL GA GU HI IA ID IL IN KS KY LA MA MD ME MI MN MO MS MT NC ND NE NH NJ NM NV NY

	OH OK OR PA PR RI SC SD TN TX UT VA VI VT WA WI WV WY
Country	AFGHANISTAN ÅLAND ISLANDS ALBANIA ALGERIA AMERICAN SAMOA ANDORRA ANGOLA ANGUILLA ANTARCTICA ANTIGUA AND BARBUDA ARGENTINA ARMENIA ARUBA AUSTRALIA AUSTRIA AZERBAIJAN BAHAMAS BAHRAIN BANGLADESH

	BARBADOS BELARUS BELGIUM BELIZE BENIN BERMUDA BHUTAN BOLIVIA BOSNIA AND HERZEGOVINA BOTSWANA BOUVET ISLAND BRAZIL BRITISH INDIAN OCEAN TERRITORY BRUNEI DARUSSALAM BULGARIA BURKINA FASO BURUNDI CAMBODIA CAMEROON CANADA CAPE VERDE CAYMAN ISLANDS CENTRAL AFRICAN REPUBLIC CHAD CHILE CHINA CHRISTMAS ISLAND COCOS (KEELING) ISLANDS COLOMBIA COMOROS CONGO CONGO, THE DEMOCRATIC REPUBLIC OF THE COOK ISLANDS

	COSTA RICA CÔTE D'IVOIRE CROATIA CUBA CYPRUS CZECH REPUBLIC DENMARK DJIBOUTI DOMINICA DOMINICAN REPUBLIC ECUADOR EGYPT EL SALVADOR EQUATORIAL GUINEA ERITREA ESTONIA ETHIOPIA FALKLAND ISLANDS (MALVINAS) FAROE ISLANDS FIJI FINLAND FRANCE FRENCH GUIANA FRENCH POLYNESIA FRENCH SOUTHERN TERRITORIES GABON GAMBIA GEORGIA GERMANY GHANA GIBRALTAR GREECE GREENLAND GRENADA GUADELOUPE GUAM

	GUATEMALA GUERNSEY GUINEA GUINEA-BISSAU GUYANA HAITI HEARD ISLAND AND MCDONALD ISLANDS HOLY SEE (VATICAN CITY STATE) HONDURAS HONG KONG HUNGARY ICELAND INDIA INDONESIA IRAN, ISLAMIC REPUBLIC OF IRAQ IRELAND ISLE OF MAN ISRAEL ITALY JAMAICA JAPAN JERSEY JORDAN KAZAKHSTAN KENYA KIRIBATI KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA, REPUBLIC OF KUWAIT KYRGYZSTAN LAO PEOPLE'S DEMOCRATIC REPUBLIC LATVIA LEBANON

	LESOTHO LIBERIA LIBYAN ARAB JAMAHIRIYA LIECHTENSTEIN LITHUANIA LUXEMBOURG MACAO MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF MADAGASCAR MALAWI MALAYSIA MALDIVES MALI MALTA MARSHALL ISLANDS MARTINIQUE MAURITANIA MAURITIUS MAYOTTE MEXICO MICRONESIA, FEDERATED STATES OF MOLDOVA, REPUBLIC OF MONACO MONGOLIA MONTENEGRO MONTSERRAT MOROCCO MOZAMBIQUE MYANMAR NAMIBIA NAURU NEPAL NETHERLANDS NETHERLANDS ANTILLES

	NEW CALEDONIA NEW ZEALAND NICARAGUA NIGER NIGERIA NIUE NORFOLK ISLAND NORTHERN MARIANA ISLANDS NORWAY OMAN PAKISTAN PALAU PALESTINIAN TERRITORY, OCCUPIED PANAMA PAPUA NEW GUINEA PARAGUAY PERU PHILIPPINES PITCAIRN POLAND PORTUGAL PUERTO RICO QATAR REUNION ROMANIA RUSSIAN FEDERATION RWANDA SAINT BARTHÉLEMY SAINT HELENA SAINT KITTS AND NEVIS SAINT LUCIA SAINT MARTIN SAINT PIERRE AND MIQUELON SAINT VINCENT AND THE GRENADINES

	SAMOA SAN MARINO SAO TOME AND PRINCIPE SAUDI ARABIA SENEGAL SERBIA SEYCHELLES SIERRA LEONE SINGAPORE SLOVAKIA SLOVENIA SOLOMON ISLANDS SOMALIA SOUTH AFRICA SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS SPAIN SRI LANKA SUDAN SURINAME SVALBARD AND JAN MAYEN SWAZILAND SWEDEN SWITZERLAND SYRIAN ARAB REPUBLIC TAIWAN, PROVINCE OF CHINA TAJIKISTAN TANZANIA, UNITED REPUBLIC OF THAILAND TIMOR-LESTE TOGO TOKELAU TONGA TRINIDAD AND TOBAGO

	TUNISIA TURKEY TURKMENISTAN TURKS AND CAICOS ISLANDS TUVALU UGANDA UKRAINE UNITED ARAB EMIRATES UNITED KINGDOM UNITED STATES UNITED STATES MINOR OUTLYING ISLANDS URUGUAY UZBEKISTAN VANUATU VENEZUELA VIET NAM VIRGIN ISLANDS, BRITISH VIRGIN ISLANDS, U.S. WALLIS AND FUTUNA WESTERN SAHARA YEMEN ZAMBIA ZIMBABWE

Property	**Data Type**	**Required**	**Owner**	**Comments**
Import		Yes		
Person		Yes	Import	
DEMOGRAPHIC_INFORMATION		Yes	Person	
LookupID	String	Yes	Demographic Info	50 Character max
First_Name	String	Yes	Demographic Info	50 Character max

Middle_Name	String	No	Demographic Info	50 Character max
Last_Name	String	Yes	Demographic Info	50 Character max
Date_Of_Birth_Day	int	Yes	Demographic Info	
Date_Of_Birth_Month	int	Yes	Demographic Info	
Date_Of_Birth_Day	int	Yes	Demographic Info	
Gernder	String	Yes	Demographic Info	Male or Female *
Home_Phone	String	No	Demographic Info	50 Character max
Work_Phone	String	No	Demographic Info	50 Character max
Other_Phone	String	No	Demographic Info	50 Character max
Home_Email	String	No	Demographic Info	200 Character max
Work_Email	String	No	Demographic Info	200 Character max
Race	String	No	Demographic Info	See Type Table
Address_Line1	String	No	Demographic Info	50 Character max
Address_Line2	String	No	Demographic Info	50 Character max
Address_Line3	String	No	Demographic Info	50 Character max
Address_Line4	String	No	Demographic Info	50 Char Max
Address_Line5	String	No	Demographic Info	50 Character max
City	String	No	Demographic Info	30 Character max
State	String	No	Demographic Info	See Type Table

Country	String	No	Demographic Info	See Type Table
Zip_Code	String	No	Demographic Info	10 Character max
ORGANIZATION_COLLECTION	Collection	Yes	Demographic Info	
ORGANIZATION_LEVEL	String	Yes	ORGANIZATION_COLLECTION	

8. Support for the Polar *OwnTest*™ System

In this section:

- Troubleshooting
- Polar/HealthFirst Corporation Warranty
- License Agreement
- Limited Warranty (software)

8.1 Troubleshooting

8.1.1 Computer will not Turn On

1. Turn the main power switch, located on the right side of the computer compartment, off and on. If power is applied, the switch will glow red.
2. Hold the power button on the front of the CPU down for 2 seconds. If the switch glows green, power is applied.
3. Unplug the unit and test the wall power outlet with an electrical appliance (such as a lamp). If outlets were changed, repeat Steps 1 and 2.
4. Unplug the ROM cable from the TriFIT interface and slowly remove the computer; set it down directly behind the cart. Make sure the power cable is securely plugged in on the back of the case as well as the surge protector.
5. Repeat steps 1 and 2.

8.1.2 Computer Turns On, but the Monitor does not

1. Check the power cable on the back of the monitor. Make sure it is secure.
2. If no lights are on the monitor, press the monitor power switch again. Wait for 30 seconds. Note the color of the monitor lights.
3. If there is power to the monitor, but you have no video (amber light), reseat the VGA cable on the back of the monitor.
4. If power is still not applied (no lights) turn off the main power switch on the left rear of the cart. Unplug the ROM cable from the TriFIT interface and slowly remove the computer; set it down directly behind the cart. Make sure the AC adapter for the monitor is securely plugged in on the surge protector and the body of the adapter.
5. Turn on the main power switch and check again.
6. If you have power to the monitor (lights on the front) and still no video, verify that the VGA cable is securely connected on the rear of the computer.

8.1.3 Printer will not Turn On or Print

Hardware checks

1. Check the power cable going into the right side of the back of the Hewlett Packard printer.
2. Check the data cable (USB) going into the right side on the back of the Hewlett Packard printer.
3. Turn off the main power switch on the left rear of the cart. Unplug the ROM cable from the TriFIT interface and slowly remove the computer; set it down directly behind the cart. Verify that the AC adapter for the printer is securely connected to the surge protector.
4. Check the back of the computer to see that the USB cable is securely connected.
5. Check the printer cartridges as described in the Hewlett Packard material, which came with the printer (located in the accessories box).

Software Checks

1. Close TriFIT.
2. Click Start.
3. Go to Printers.
4. With the mouse, highlight the printer you are using and click the right mouse button.
5. Go to Properties and click the left mouse button.
6. The printer should be checked as being the default printer. If it is not, click on the default.
7. Write down any error codes, as this will be helpful in identifying any problem.

8.1.4 On-Line Peripherals

PLATFORM

Platform is giving low or high readings

- Re-calibrate (Defaults/Calibration) being sure to follow the instructions on the screen exactly.
- Use a person who has a known weight between 68 and 86 kg.
- Make sure the person **DOES NOT** step on the scale before it is zeroed. This will cause the platform to be mis-calibrated.
- Make sure the person stands very still. Any movement from side to side will cause a mis-calibration.
- Go to a test and perform an actual body weight with the same person that was used to calibrate the scale. The weight should be within 0.5 kg.
- If the weight is not within 0.5 kg, re-calibrate and re-measure the body weight.

CALIPERS

On-Line Calipers are giving inaccurate readings

- Re-calibrate as instructed on the screen. (Defaults/Calibration).
- Go into a 3-site Skinfold test.
- Zero the calipers.
- Place the 25.4mm calibration dowel in the jaws of the calipers lengthwise.
- Press the "Measure" switch on the calipers.
- The reading on the screen should be within 24.5mm and 26.0mm. Do this 3 times and note each reading.
- If the readings are not within 24.5mm and 26.0mm, re-calibrate and repeat.

SIT & REACH (Range of Motion)

Range of Motion handle is not retracting

- If the ROM handle is not retracting, the internal mechanism needs to be repaired by Polar/HealthFirst service personnel.
- Remove the ROM unit from the Sit & Reach station using a 5/32" Allen wrench provided with your system.
- Remove the four screws mounting the unit to the station.
- Unplug the ROM cable from the Polar OwnTest™ System.
- Remove the ROM unit.

Range of Motion is inconsistent

- Re-calibrate ROM (Defaults/Calibration) according to the instructions in the Calibration Section of this manual.
- Enter into a client test and perform another Sit and Reach test.
- When the screen prompts to "Zero the System", pull the handle out exactly 30 cm from the footplate and press the Enter key.
- Return the handle slowly to the footplate and allow the TriFIT to take the reading.
- The measurement should be within 1 cm of 30cm.
- If the measurement is not within 1 cm, re-calibrate and repeat.

Ergometer Compatibility

CERTIFICATE

Compatibility check

The following products of company

ERGO-FIT GmbH & Co. KG

ERGO-FIT

have passed the compatibility check with the POLAR OwnTest System of company

POLAR Electro Oy Finland

POLAR
LISTEN TO YOUR BODY

CYCLE 3000 MED
CYCLE 3000 S MED
CYCLE 3100 MED
CYCLE 3100 S MED

CIRCLE 3000 MED
CIRCLE 3000 S MED
CIRCLE 3100 MED
CIRCLE 3100 S MED

RECUMBENT 3000 MED
RECUMBENT 3000 S MED

RECUMBENT 3100 MED
RECUMBENT 3100 S MED

CYCLE 457 MED

8.2 Polar/HealthFirst Corporation Warranty

Warranty

Polar/HealthFirst Corporation, warrants its equipment for one year from the date of shipment. This warranty is limited and is in lieu of all other warrants expressed or implied. Within the warranty period, Polar/HealthFirst Corporation will repair or replace, without charge, any parts, which become defective due to material or workmanship.

Accessories, components and major sub-assemblies of Polar/HealthFirst Corporation's systems not manufactured by Polar/HealthFirst Corporation (i.e., Bike Ergometer) will be warranted according to the terms of the original manufacturer. This warranty shall not apply to any part or parts of the system if it has been altered, repaired or misused through negligence; nor does this warranty cover replacements or repairs necessitated by loss or damage resulting from any cause beyond the control of Polar/HealthFirst Corporation, including but not limited to acts of God, acts of Government and labor disputes.

The above warranty provisions do not apply to any "consumer products" in that the products described herein should not and are not normally used for personal family or household purposes as same is defined in the Maganison-Moss Warranty – Federal Trade Commission Improvement Act, 15 U.S.C. 2301, et seg,.

Extended Warranty

The warranty may be extended an additional year (total of two) within 30 days of the equipment delivery for ten percent (10%) of the purchase price.

Priority Plan

Polar/HealthFirst Corporation provides one year of free technical support for TriFIT 700 customers. Customers have the option of renewing their Priority Plan subscription which guarantees on-going support and technical assistance annually. As a Polar/HealthFirst Corporation Priority Plan subscriber, you get the following benefits:

Automatic software maintenance upgrades.

A 15% or more discount on all NEW Polar/HealthFirst Corporation software product releases.

8.3 License Agreement

*****Important: By using this software you accept the following terms of this License Agreement. If you do not agree with these terms, you should not use the software and promptly return it for a refund.**

Ownership

Polar/HealthFirst Corporation retains the ownership of this copy of the enclosed software package. It is licensed to you for use under the following conditions.

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You may only concurrently use the enclosed software on the number of computers for which this license grants (for example, single-user version licenses one concurrent usage; five-user network version licenses five concurrent usages). If the number of users of the software exceeds the licenses, you must have a reasonable process in place to assure that the number of persons concurrently using the software does not exceed the number of licenses.

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You may not copy the documentation or software except as described in the installation section of this manual. You may not distribute, rent, sub-license or lease the software or documentation, including translating, decompiling, disassembling, or creating derivative works. You may not reverse-engineer any part of this software, or produce any derivative work. You may not make telecommunication transmittal of this software.

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This license and your right to use this software automatically terminates if you fail to comply with any provision of this license agreement.

Rights

Polar/HealthFirst Corporation retains all rights not expressly granted. Nothing in this license agreement constitutes a waiver of Polar/HealthFirst Corporation's rights under the U.S. copyright laws or any other Federal or State law.

8.4 Limited Warranty (software)

If you discover physical defects in the media, Polar/HealthFirst Corporation will replace the media or documentation at no charge to you, provided you return the item to be replaced with proof of payment to Polar/HealthFirst Corporation during the 90-day period after having taken delivery of the software.

Polar/HealthFirst Corporation excludes any and all implied warranties, including warranties of merchantability and fitness for a particular purpose and limits your remedy to return the software and documentation to Polar/HealthFirst Corporation for replacement.

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