

Expectations and Preparation for PNOĒ Metabolic Testing

This document explains what you can expect and how to prepare for the completion of PNOĒ metabolic testing in chronological order.

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Scheduling Your Test

Presently there are two ways to schedule your PNOĒ Tests. You may purchase tests directly from PNOĒ and schedule with a PNOĒ Affiliate. Alternatively you may purchase and schedule your tests directly with a local PNOĒ Owner/Operator with whom you have an existing relationship. Your post-test report consultation is provided by the business from which you purchased your test.

With PNOĒ. Follow the online links to add the tests you want to your shopping cart and pay. PNOĒ will send you a list of their Affiliates so that you can select a nearby location. Use the nearby Affiliate's scheduling link to make an appointment. Ask PNOĒ for a refund if there are no Affiliates within an acceptable distance to you.

With Your Local PNOĒ Owner/Operator. If you have an ongoing relationship or are building a relationship with a PNOĒ Owner/Operator in your area, schedule the test appointment and handle financial arrangements directly with their representative.

Confirming Your Test

Your PNOĒ Test will be confirmed via email with a calendar appointment. An email should also be sent to you confirming the test location, the type of equipment available for your Active Metabolic Test, and offer you the opportunity to book a Resting Metabolic Rate (RMR) test if you have not already done so. It should include a few pre-test questions for you to answer, the pre-test protocol you should follow and further contact information. Consider an early morning appointment if you are booking the RMR test.

RMR Pre-Test Protocol

You should have been sent a preparation and expectations video from your test site at least 48 hours before your test as well as a test clearance form to complete and sign.

If completing an RMR, the quality of your test results, your post-test debrief, report and consult is directly related to your *strict* adherence to the RMR pre-test protocol:

- At least 5 hours of fasting prior to the test
- No intense exercise (>1 hour) 24 hours before the test
- No caffeine, tobacco or stimulating drinks for at least 5 hours prior to the test
- Continue medications as usual -- be prepared to discuss before your test begins
- Wear workout clothing and shoes
- Bring additional clothes and a towel for after the exercise portion of the test
- Bring a snack for after the tests.

There is no fasting requirement for the Fitness Test.

Arriving For Your Test

After introductions, you will enter basic information into the app including your full name and address, email address, height, weight, age, number of times you wish to work out each week and your fitness and wellness goals.

Before Your Test

Depending on your purchase, you will either do a Resting Metabolic Test and/or Fitness Test. The RMR is always conducted before the Fitness Test. After changing into your workout clothes, you will put the Polar H10 Heart Rate Monitor around your chest.

The coach will calibrate the PNO₂ Breath Analysis System using the PNO₂ Application on their smartphone or tablet by exposing the breath sensor to fresh outside air. Once this is accomplished successfully, the breath sensor will be plugged into the face mask.

The coach will fit the mask to your face and work on adjustments with you to make sure it is tight enough to avoid leaks. The coach will ask you to exhale while blocking the breath sensor with their palm to verify there are no leaks.

Your RMR Test

The coach will help you put on and adjust the mask. Work with the coach to complete the mask fit and leak check. You will lay in a supine position (on your back), legs uncrossed, remaining absolutely still and free from any outside disturbances or distractions for at least ten minutes. Prior to initiating the test, the coach will verify that the PNO₂ system is collecting data and operating correctly.

Once the coach confirms the system is operating correctly, the test will begin and then run for approximately ten minutes. Once the test is complete, the coach will help you remove the mask and prepare for the Fitness Test when the RMR test has been completed.

Your Fitness Test

Background

You'll be using exercise equipment for this test, typically a treadmill or a stationary bicycle, although other cardio exercise equipment may be selected. If you are doing the test to calibrate your WHOOP wearable, treadmill and stationary bicycle are preferred.

A ramp test is the best method for identifying your limitations, zones and VO₂peak. It consists of a 3 minute warm up, a 9-12 minute incremental test where the intensities will increase every 1 minute until reaching your maximum effort followed by a 2 minute inactive recovery (no movement). If you are completing a treadmill test and plan on using your results for training on the road, the treadmill should be placed at a 2% incline to mimic the road resistance that you do not have on a treadmill. If you are completing a bike test, your cadence should be maintained between 80-100 RPM throughout the test.

Parameter Check

The coach will now complete a Parameter Check to determine the warm up and starting intensities as well as the increments that will be used during your test. The check is performed as follows:

1. Find the intensity that gives you a heart rate between 100-110 beats per minute by adjusting the speed or wattage of the device until achieving that heart rate range
2. Find 6/10 effort on a Rate of Perceived Exertion (RPE) scale if you were to ride or run at that intensity for 5 minutes
3. Find 9-9.5/10 effort on a Rate of Perceived Exertion (RPE) scale if you were to ride or run at that intensity for 2 minutes

Once these intensities have been identified, your coach will enter your test parameters into the protocol on the app and you are ready for the test.

The coach will help you adjust the straps of the PNO² backpack. You should hold the mask with the breath sensor attached to it in one of your hands during the fitting of the backpack. The coach will then help fit the mask. Once you and the coach are satisfied with the fit, the coach will complete the mask fit and leak check.

Your Test

Do not talk during the test. The coach may ask questions about your degree of effort that you should respond to with visible signals (thumbs up or thumbs down). In order to collect

complete data and therefore ensure a thorough analysis of your performance at all intensity levels, it is vital to push yourself as hard as you safely can during the test. You do NOT have to finish a 1 minute step once you start it.

Your Debrief

After the recovery period, the coach will remove all of the PNOË equipment and you will be offered the opportunity to complete a cool down. The coach will give you some time to towel off, get some water or a snack, and should invite you to review your initial test results. These results are NOT your final results and there may be some discrepancies between the initial results and your report. The RMR and Fitness Test Reports are the most accurate and are the results that should be referenced.

RMR Test Results. The coach should begin with the RMR test results if you completed this test. The coach will provide a quick review of your results tables that includes your caloric expenditure and percentage of fat vs. carbohydrate used during the test. The coach can show you the initial measurement of your resting metabolic rate. PNOË may modify the result based on their further analysis. The coach must submit your test results to PNOË via the API to trigger their analysis and creation of your report. The coach should book a review of your RMR Report and results and will provide specific recommendations on nutrition and training at that time. If you wish to have the PNOË registered dietitians create an individualized nutrition plan, please let the coach know and they can select this option in the API as well.

Fitness Test Results. The coach should review the results table produced by the PNOË system including providing you with your preliminary VO₂peak.

You may ask your coach to send you a link to your results via email. You may find these useful in follow-up consultations or as a basis of comparison for future tests. Make sure the coach *submits* the test results to PNOË from the API to trigger their analysis and creation of your Fitness Report. The coach should book a review of your Fitness Report and review your results, your limitations, your zones and provide specific recommendations on training that will minimize your limitations and achieve your goals at that time.

Receiving Your Report(s)

Your report(s) will be sent to you via email from PNOË. You should have viewed samples of each either in the PNOË Community site or with your coach or both.

PNOË Precision RMR Report

The two-page report presents your RMR test results that include the percentage of fat and carbohydrate burn measured in the test and metabolic rate (fast vs slow) assessment in comparison to norms for gender and age.

The report also includes your estimated daily calorie burn extrapolated from the test, breaking it into:

1. Resting metabolic rate
2. Burn rate from daily activities
3. Calorie burn expected from a typical medium intensity 45-minute workout. Caloric recommendations are presented for workout days and non-workout days for weight maintenance, moderate and medically supervised weight loss programs.

PNOË Precision Fitness Report

The PNOË algorithms in combination with the PNOË's metabolic experts use your test results to produce a comprehensive test report. The report provides a top-level ten-factor assessment, including:

1. Aerobic Fitness
2. Cardiovascular Fitness
3. Respiratory Capacity
4. Respiratory Capability
5. Breathing and Cognition
6. Breathing and Stability
7. Metabolic Efficiency
8. Fat Burning Efficiency
9. Mechanical Efficiency
10. Recovery Capacity

The report also provides:

Heart Rate Training Zones: The report includes five heart rate zones based on metabolic markers and thresholds determined from your active metabolic test measurements. The report identifies zone characteristics and the potential benefit for working out in each one. Clients who want to calibrate their WHOOP wearable or who follow a Heart Rate Zone training program will benefit from the custom training zones delivered in the report. Currently, the accurate zones provided by PNOË are NOT part of the the WHOOP integration. PNOË heart rate zones are the most accurate zoning available and should be manually input into your training device in order to maximize your training. The zones are MOST accurate for the modality tested (bike or treadmill), so I recommend testing on the device you will train on most. If you are a triathlete, I recommend having a bike and treadmill test as your results, limitations and zones will be different for each.

Workout Recommendations: The Fitness Report includes a breakdown of recommended daily workouts into resistance, interval and cardio, including a weekly schedule based upon the number of days you want to workout collected you entered into the app. The recommendations are based on your workout frequency, goals and active metabolic test results.

Your Consultation

Cardio-metabolic test results are comprehensive and so the reports, despite their thoroughness and explanations, can be complex. The purpose of the consultation is to review your actual test results (numbers/graphs) with the information published in your report(s).

Post-report consultations will not only provide a two-way discussion of the report and your test results but also help identify the best nutritional and exercise programs that help you minimize your limitations and achieve your identified goals.

If your test was purchased directly from PNOË, you are entitled to a free 30-minute telephone consultation with a PNOË specialist after your report is received. If your test was purchased through your local owner/operator, you should schedule a further consultation with the site that completed the test.

The consultation with PNOË should be scheduled using the link within the email sent with your reports. The consultation with your local PNOË owner/operator should be scheduled directly with the coach that conducted your test.

Integration With Your WHOOP Wearable

If your test was purchased through PNOË, your coach will select “WHOOP analysis” and enter the customer’s Shopify code in the API. If you purchased your test directly from the test site, your coach must send an email to support@mypnoe.com requesting the WHOOP integration.

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