



NEW YOU CREW
— NUTRITION & FITNESS —



METABOLIC ANALYSIS

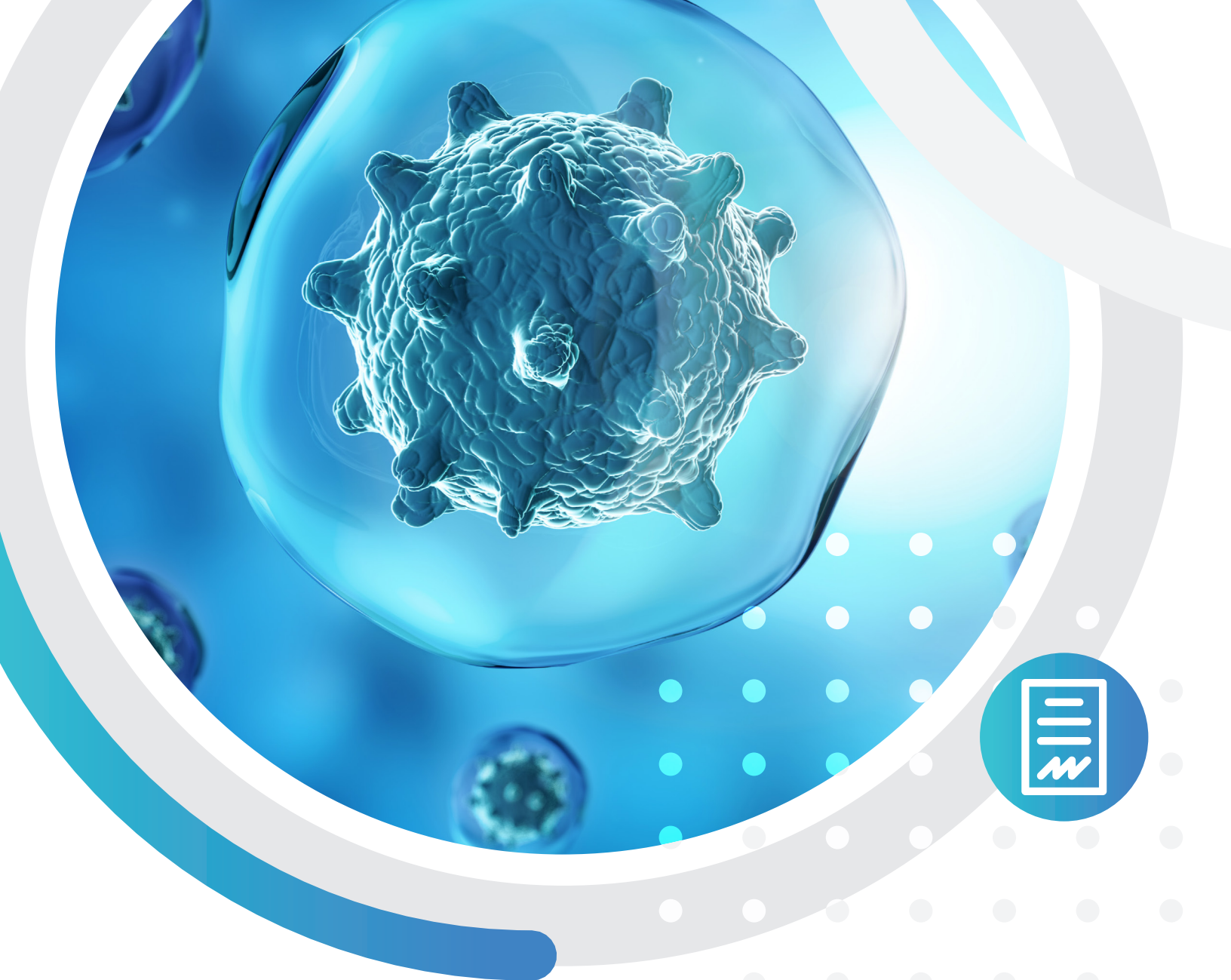
SAMPLE CLIENT

34_{YRS} · 65_{IN} · 179_{LB}

OCTOBER 24TH 2022

Medical Advice Disclaimer

The Information, including but not limited to text, images, and other material contained in this Metabolic Report, are for informational purposes only. No material in this Metabolic Report is intended to be a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of your physician or another qualified healthcare provider with any questions you may have regarding a medical condition or treatment before undertaking new healthcare, nutrition, exercise, or lifestyle regimen. You should never disregard professional medical advice or delay seeking it because of something you have read in this Metabolic Report.

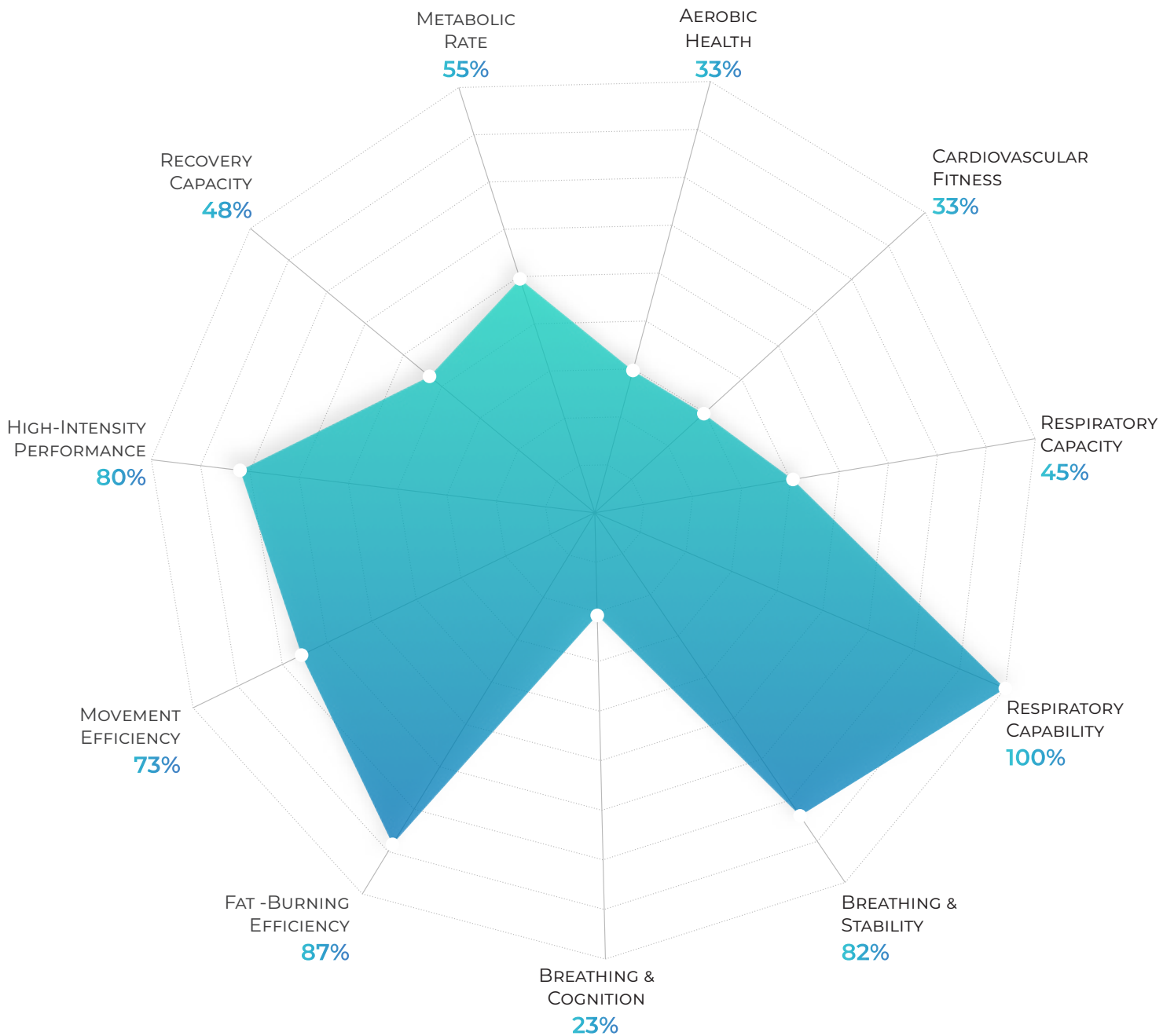


INTRODUCTION

This report contains the results of your recent Metabolic Assessment. The included findings represent a snapshot into your body's metabolic health, cardiovascular fitness, lung function, and measures extrapolated from these data. These data integrate metrics from 12 biomarkers to provide a complete health and performance breakdown of how your body utilizes molecular substrates to generate energy. Because metabolism is the root of our physiology, these data can be used to assess the relative risks of various diseases and conditions.

Please note that, although based on peer-reviewed evidence and literature, all data presented in this report are provided to you for informational purposes only and should never be interpreted as medical advice. You should always consult your physician before changing your exercise routine, diet, or overall lifestyle. Additionally, you assume all risks and limitations associated with adopting any nutrition and exercise recommendations contained throughout this report.

METABOLIC OVERVIEW



AEROBIC HEALTH

PERFORMANCE

Your body utilizes oxygen to break down nutrients (i.e., fats, carbs, and protein) and provide energy to live and exercise. When the oxygen supply is disrupted or becomes insufficient due to the energy demands of your activity, your body will shift to anaerobic metabolism, which is unsustainable and leads to rapid fatigue. The more oxygen you can use per kilogram of body weight per minute of exercise leads to better performance.

WELLNESS

The American Heart Association has recognized aerobic health as the most holistic gauge of overall health. It's no surprise that nearly all significant chronic conditions (i.e., COPD, cardiovascular disease, etc.) relate to your body's ability to take in and utilize oxygen. A sedentary lifestyle, lack of cardiovascular training, or excessive weight training will lower this score.



Aerobic health is a gauge of your overall health and is the strongest predictor of how long and well you will live. It's also one of the most vital indicators of athletic performance.

CARDIOVASCULAR FITNESS



Cardiovascular fitness is a gauge of the ability of your cardiovascular system to pump oxygen-rich blood throughout your body. Your cardiovascular system includes your heart, blood vessels, and blood.

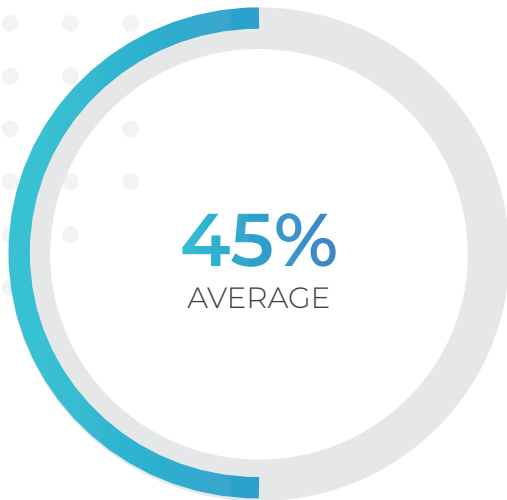
PERFORMANCE

Your body utilizes oxygen to break down nutrients and provide energy to live and exercise. When the oxygen supply is disrupted or becomes insufficient due to the energy demands of your activity, your body will shift to anaerobic metabolism, which is unsustainable and leads to rapid fatigue. Your cardiovascular system is responsible for pumping vital oxygen throughout your body to sustain aerobic activity.

WELLNESS

Cardiovascular disease is the number one cause of death and includes several life-threatening conditions such as ischemic heart disease, heart failure, and valvular disease. A low VO_2 max score combined with flattening or declines in O_2 pulse is considered a reliable risk factor for cardiovascular disease.

RESPIRATORY CAPACITY



Respiratory capacity measures how well your lungs expand and contract relative to your age, gender, height, and weight. Essentially, it's the relationship between how much air you can bring into your lungs and how quickly you can expire that air from your lungs.

PERFORMANCE

A high respiratory capacity relates to more oxygen delivery throughout the body. During an athletic performance, oxygen deprivation is the primary factor preventing your muscles from maintaining higher intensity activities. More specifically, oxygen deprivation leads to metabolic fatigue, higher-intensity reduced fat-burning capacity, and reduced recovery capacity.

WELLNESS

A high respiratory capacity relates to more oxygen delivery throughout the body. Increases in available oxygen relate to enhanced fat burning at rest and optimal organ function. Decreases in available oxygen relate to feelings of fatigue, dizziness, and even mood disorders.

RESPIRATORY CAPABILITY

PERFORMANCE

Athletic performance requires a high respiratory capability, as we need to be as efficient as possible at utilizing the entire volume of air available in our lungs. Low respiratory capability will limit your athletic performance through inefficient oxygen delivery to circulation. This leads to a more rapid approach to anaerobic metabolism described previously.

WELLNESS

Respiratory capability is essential to your overall well-being, as the more efficiently we utilize our lungs, the better oxygenated our entire body is. Insufficient oxygen delivered throughout the body can lead to feelings of fatigue during daily activities, dizziness, and even mood disorders.



Respiratory capability measures how well you utilize your lung capacity while training. Each of us has lungs of different sizes, and this metric assesses how well we use our lungs during activity.

BREATHING & STABILITY

PERFORMANCE

Abnormal breathing patterns are significant contributors to musculoskeletal injuries across all sports. Moreover, they directly reduce performance during endurance activities and increase the rate at which fatigue is approached. Correcting breathing abnormalities that destabilize the core is one of the simplest and most effective ways to improve performance.

WELLNESS

In daily life, abnormal breathing patterns significantly contribute to musculoskeletal issues like lower back pain. Lower back pain contributes to the burden on health care systems and reduces the overall quality of life. Correcting one's breathing can improve posture, alleviate musculoskeletal pain, and improve the overall quality of life.



Breathing and stability assess how your respiratory volumes affect your spinal strength, limb power, and posture.

BREATHING & COGNITION



Breathing and cognition assesses how your breathing affects your cognitive function during exercise.

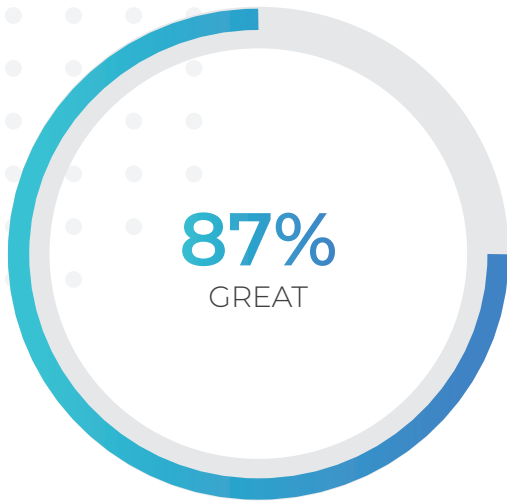
PERFORMANCE

Hyperventilation during exercise reduces oxygen delivery to the brain almost immediately. This reduces reaction and response times to stimuli requiring rapid reflexes. Hyperventilation primarily occurs at high intensity; however, more than 30% of athletes suffer from subtle breathing abnormalities at low to moderate intensities.

WELLNESS

Hyperventilation is considered one of the most common and underdiagnosed health conditions severely impacting our quality of life. It's estimated that around 15% of the population chronically hyperventilates. Chronic hyperventilation reduces cognitive function, increases feelings of fatigue, and is associated with an increased risk for anxiety and panic attacks.

FAT-BURNING EFFICIENCY



PERFORMANCE

Fat is an abundant and sustainable fuel source for the body, regardless of body fat percentage. The average person stores over 30,000 calories of fat (compared to ~ 2,000 calories stored as carbs). During exercise, carbohydrate storage can be quickly depleted, leading to fatigue and the inability to sustain activity for an extended period.

WELLNESS

Fat-burning efficiency is one of the most powerful indicators of cellular and metabolic health, both correlated with overall longevity. When the body relies on fat as a fuel source, fewer feelings of fatigue between meals and fewer cravings occur. This can lead to better weight management and sustainable energy throughout the day.

Fat-burning efficiency is a gauge of your body's ability to use fat as a fuel source at rest and during increasingly intense exercise. The higher your score, the more your cells rely on fat as a fuel source.

MOVEMENT EFFICIENCY

PERFORMANCE

Having high movement efficiency is valuable in all areas of athletics. High movement efficiency ensures your body will require less energy to function (i.e., become more efficient) and reduce the food intake needed during athletic events.

WELLNESS

Having a high movement efficiency relates to more sustainable long-term exercise habits. A low movement efficiency would lead to poor utilization of fuel during exercise, increased feeling of fatigue during and after exercise, and abnormal hunger and appetite cues experienced throughout the day.



Movement efficiency assesses how efficiently you burn calories during exercise compared to predicted values based on age, gender, height, and weight.

HIGH-INTENSITY PERFORMANCE

PERFORMANCE

A high and continuously increasing O₂ Pulse and VO₂ /BF throughout exercise intensities will ensure sufficient oxygen is delivered to working muscles. This, in turn, allows the body to remain in an aerobic metabolic state for longer while exercising at higher intensities. As previously described, staying in an aerobic state can prevent metabolic fatigue during exercise.

WELLNESS

High-intensity performance relates to more sustainable long-term exercise habits. Being able to utilize oxygen at varying intensities of exercise efficiently can reduce fatigue and burnout experienced after exercise, making the overall experience more enjoyable compared to poor high-intensity performance.



High-intensity performance assesses how well your lungs and cardiovascular system perform during high-intensity exercise.

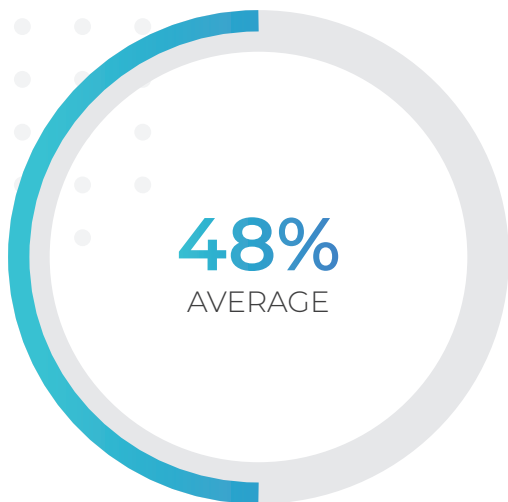
RECOVERY CAPACITY

PERFORMANCE

A high recovery capacity is essential for every sport involving a continuous change in intensity levels (i.e., basketball). A higher recovery capacity positively correlates with a more remarkable recovery ability and a lower fatigue accumulation rate.

WELLNESS

High recovery capacity relates to more sustainable long-term exercise habits. Efficiently recovering from varying exercise intensities can reduce fatigue and burnout experienced after exercise, making the overall experience more enjoyable compared to poor recovery capacity.



Recovery capacity assesses your ability to recover from physical activity efficiently.

METABOLIC RATE



Metabolic rate assesses how “fast” or “slow” your metabolism is. In other words, it determines how many calories your body requires at rest compared to your age, gender, height, and weight predictions.

PERFORMANCE

A higher metabolic rate relates to lower levels of fatigue experienced during training. A reduction in resting metabolic rate is positively correlated with unsustainable strain levels accumulated during exercise.

WELLNESS

A higher metabolic rate will protect against weight gain while the body burns more calories at rest. Increased metabolic rate supports weight loss better, as burning more energy means even modest reductions in caloric intake can create a significant calorie deficit and promote weight loss.

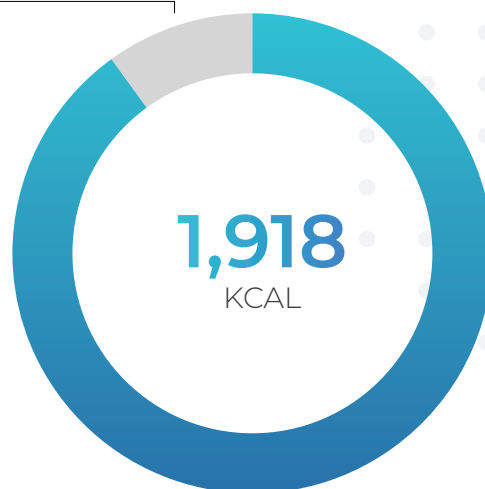
FUEL SOURCES

The human body utilizes a mixture of carbohydrates and fats (and sometimes protein and alcohol) to live. A higher reliance on fat as a fuel source is one of the most reliable indicators of cellular health and is strongly associated with a low likelihood of weight gain or weight regain.

At rest, your metabolism utilizes a mixture of 90% fats and 10% carbohydrates to produce energy.

*80% fats and 20% carbs is ideal

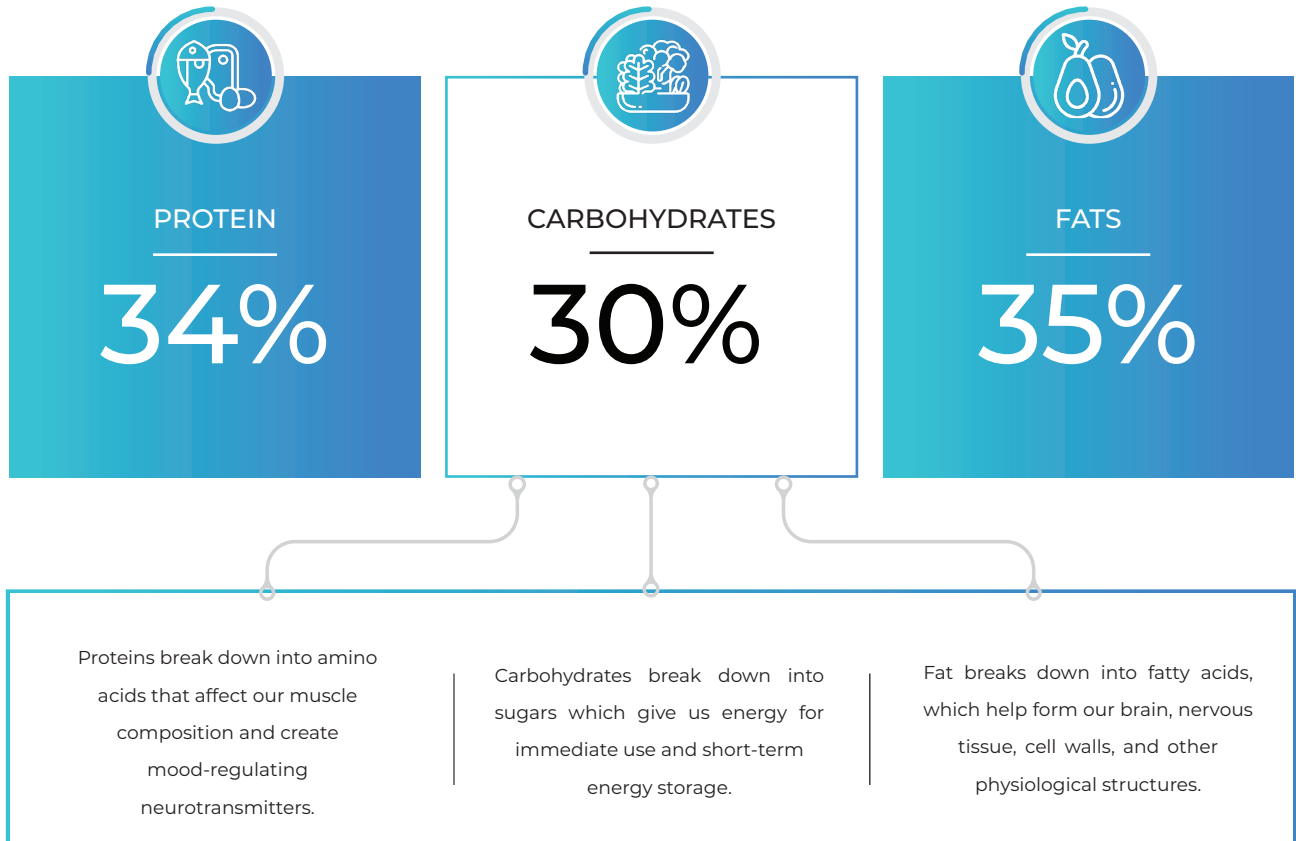
CARBS - 10%



90% - FAT

MACRONUTRIENT BALANCE

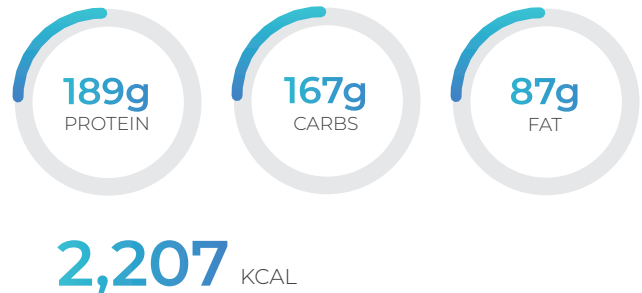
Your body will function optimally by consuming the following percentages of protein, carbohydrates, and fat daily. These recommendations aim to improve your substrate utilization and overall fat-burning efficiency.



YOUR MACRO TARGETS

FAT LOSS

These macro recommendations support your fitness goal & metabolic deficiencies. You should work to meet them as often as possible without adding in any calories to account for exercise.



TRAINING BALANCE

Your body will function optimally by adopting a training plan that follows a specific division of resistance, cardiovascular, and high-intensity interval training. These recommendations are geared toward your peak performance while improving your overall fat-burning efficiency.

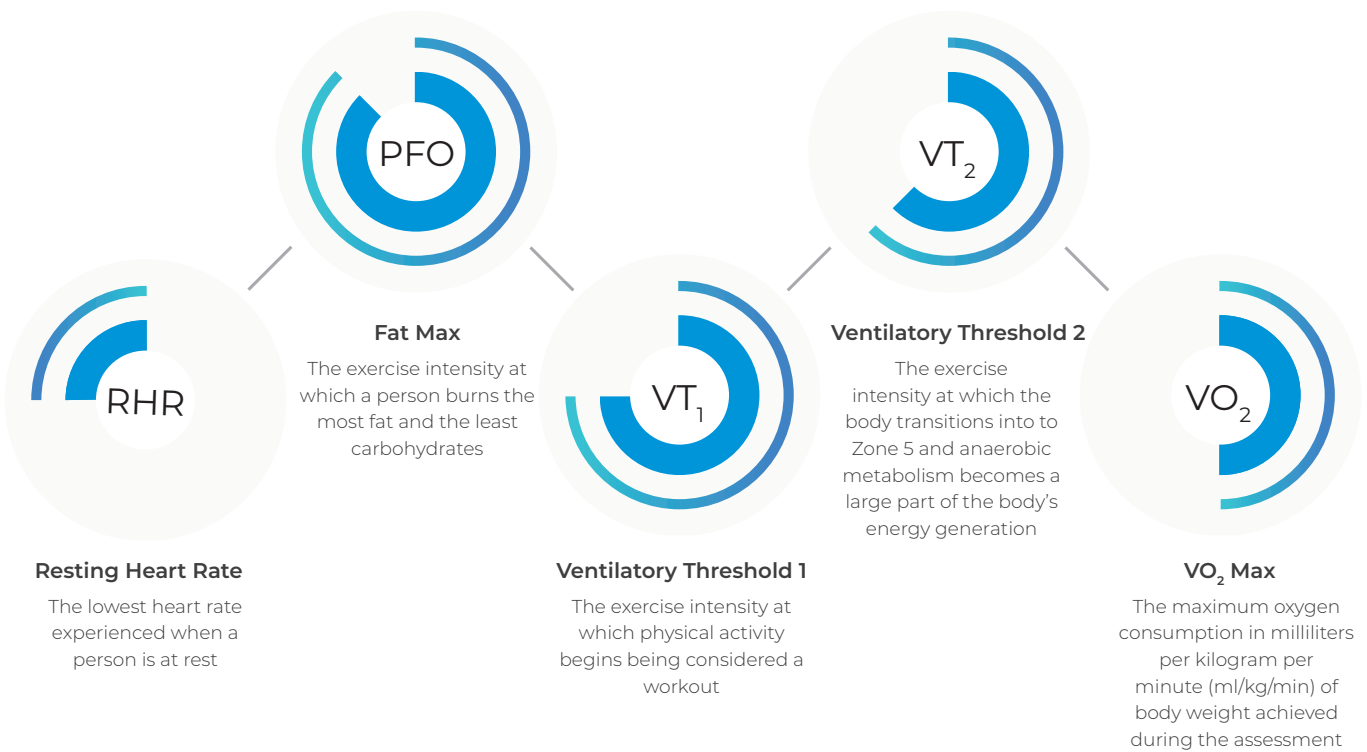


HEART RATE TRAINING ZONES

	HEART RATE	FEELING	RPE	BENEFITS	TRAINING STYLE
ZONE 5	159 - 167		10 / 10 Impossible to continue and completely out of breath	Improves aerobic capacity, muscle metabolism, and VO_2 max	Short, high intensity interval training
ZONE 4	146 - 159		8-9 / 10 Difficult to maintain and hard to speak more than one word	Improves anaerobic capacity through improvements in buffering capacity	Medium to high intensity interval training
ZONE 3	140 - 146		6-7 / 10 Boarderlining uncomfortable, short of breath while able to speak a few words	Impacts cardiac output and lactate shuffle to improve cardiorespiratory health and VO_2 max	Medium to long intensity interval training and tempo splits
ZONE 2	117 - 140		4-5 / 10 Feels sustainable for long periods of time while holding short conversations	Improves aerobic capacity and muscle metabolism through increased mitochondrial density and angiogenesis	Steady state, low intensity cardiovascular training
ZONE 1	107 - 117		3-4 / 10 Feels sustainable for hours while easy to breathe and carry on a conversation	Improves fat burning and recovery through increased oxygen delivery to muscles without significant utilization	Steady state, low intensity cardiovascular training and recovery intervals

THRESHOLD VALUES

Four threshold values exist that provide insight into cardiovascular fitness, lung health, and help guide optimal training intensities.



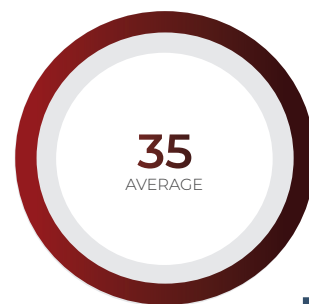
RESTING HEART RATE & VO₂ MAX



VO₂ max is a single predictor of cardiorespiratory fitness or exercise capacity estimates and has a protective effect on cardiovascular disease. Several epidemiological studies have shown that high RHR and low VO₂ max increase the risk of cardiovascular disease. Therefore, the lower your RHR and higher your VO₂ max, the lower your risk for cardiovascular disease.

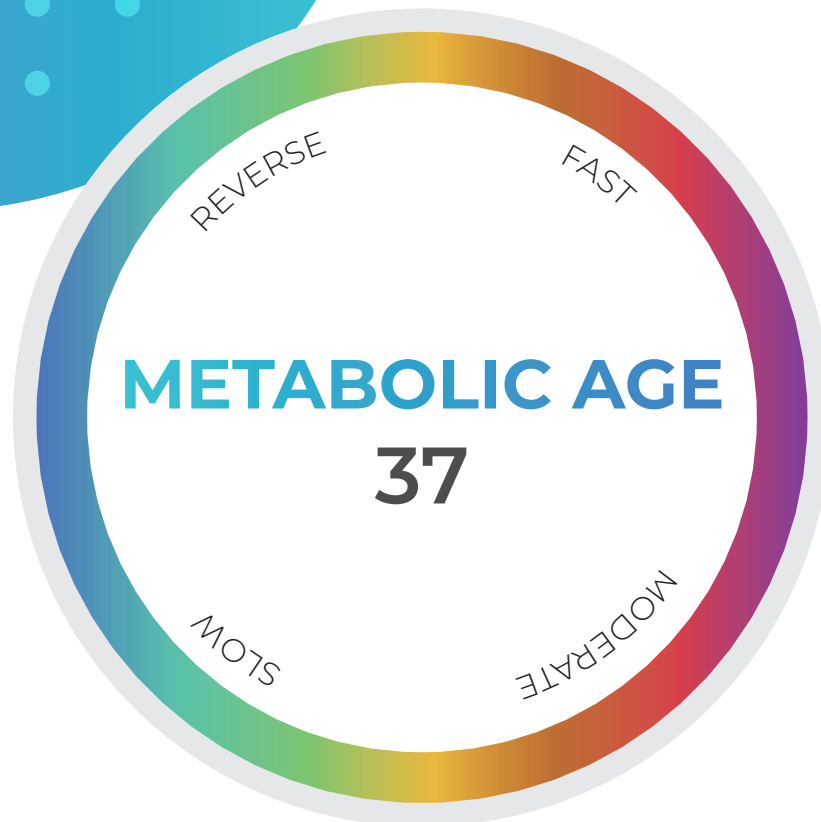
YOUR THRESHOLD VALUES

Resting Heart Rate	69	BPM
Fat Max	117	BPM
Ventilatory Threshold 1 (VT ₁)	118	BPM
Ventilatory Threshold 2 (VT ₂)	156	BPM
VO ₂ Max	36	ml / min / kg



VO₂ MAX

VO₂ max is the maximum amount of oxygen a person can take in during exercise. The best predictor of cardiac health is exercise capacity. One can raise their VO₂ max by completing Zone 4 & 5 intervals during 20% of their weekly training sessions.



↑ 2 YEARS
FROM CHRONOLOGICAL AGE

Medical Advice Disclaimer

We estimate your biological age based on your cardiorespiratory fitness (VO₂ max), cellular health, and metabolic efficiency. Chronic dieting, over-exercising, or prolonged excessive stress can reduce these values. You can improve these metrics by improving your nutrition, physical activity, and recovery habits. This information, including but not limited to text, graphics, images, or other material contained in this analysis, is for informational purposes only. None of the material contained in this analysis is intended to be a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of your physician or other qualified health care provider with any questions you may have regarding a medical condition or treatment before undertaking a new fitness, nutrition, lifestyle, or healthcare regimen. You should never disregard professional medical advice or delay seeking it because of something you have read in this analysis.



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NEXT ASSESSMENT DATE

JANUARY 24TH 2023

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