



Ixcela Internal Fitness™

Results for Jane Doe

Sample and Analysis Information

This test was analyzed at Ixcela, 135 South Rd., Bedford, MA 01730

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This is not a health assessment intended diagnose, treat, cure, or prevent any disease.

Client Name

Jane Doe

Client Email

Ixcela Product

Data Sample Taken

February 9, 2020

Date Sample Received by Lab

February 11, 2020

Sample Received







Dried Blood Spot (DBS)

Introducing the Five Areas of Health

Ixcela Tests 11 Metabolites and Maps them to 5 Areas of Health



Ixcela tests eleven metabolites that are extremely important to your health. These metabolites were identified from data arising from thousands of studies spanning the last fifty years. Our co-founder’s research team processed more than 35,000 samples over the last five decades. Through careful data mining and statistical analysis, we determined that these eleven blood-based metabolites were extremely significant markers of disease risk and progression, and were overall markers of health and wellness. All eleven metabolites are related to the gut microbiome in some way—they are either secreted by specific types of bacteria in the gut, are molecules that are regulated by the gut, or are metabolites that indicate the output and functionality of the gut. Many of them are critical because the body converts them into other substances (for example, tryptophan is eventually converted into melatonin, which is important for sleep). In your report, you will find descriptions of the metabolites that are above or below optimal levels, as well as those that did not trigger any recommendations. For additional context, we have also correlated the metabolites with the various areas of health they influence. We call these the “Five Areas of Health.” They include Gastrointestinal Fitness, Emotional Balance, Cognitive Acuity, Energetic Efficiency, and Immuno Fitness. Many of the metabolites we test are not just important for gut health; they also play key roles in these other areas of health. With this information, we hope you will gain the knowledge you need to understand and improve your gut health.

-  **View 5 Areas of Health and Metabolite Chart** +
-  **Gastrointestinal Fitness** +
-  **Immuno Fitness** +
-  **Emotional Balance** +
-  **Cognitive Activity** +
-  **Energetic Efficiency** +


Your Metabolite Levels

In simple terms, a metabolite is the by-product of a breakdown process in the body (e.g., digestion or another chemical breakdown process). Metabolites can come from the breakdown of consumed food, ingestion of medicines, or tissue breakdown. These metabolites then travel to different areas of the body and can serve in various functions including growth, reproduction, and health maintenance.

- High Metabolites are the compounds we found to be above the optimal range.
- Low Metabolites are the compounds we found to be below the optimal range.

↓


Low Metabolites



None of your metabolites were too low.

↑

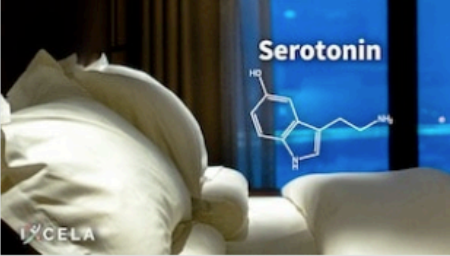
High Metabolites



Kynurenine

Kynurenine

Kynurenine is a tryptophan metabolite. Gut bacteria influence the conversion of tryptophan into kynurenine. High levels of kynurenine can indicate chronic infection and/or vitamin B6 deficiency. Because B vitamins influence kynurenine metabolism, high or low levels of kynurenine may be due to vitamin B deficiencies.



Serotonin

Serotonin

Serotonin is a tryptophan metabolite. Gut bacteria help to regulate and support the production of serotonin in the gut. Elevated peripheral serotonin can be affected by diet and prescription medications, and may indicate a bacterial dysbiosis of the gut. This imbalance can cause gastrointestinal distress and poor sleep quality.



Metabolites Within The Ideal Levels



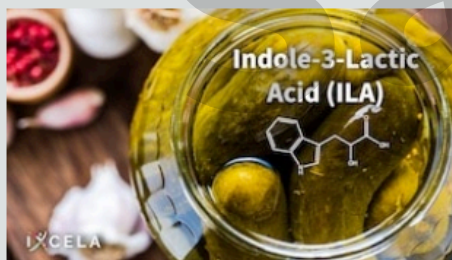
3-Methylxanthine

3-Methylxanthine (3MXAN) is a purine metabolism-breakdown product of caffeine and the drug theophylline. Gut bacteria play a role in the metabolism of caffeine into downstream metabolites, like 3MXAN and uric acid. Metabolites of the purine pathway are significant because they affect both the gut and the brain. In the gut, 3MXAN increases hydrochloric acid and pepsin secretion, which both aid digestion.



Indole-3-Acetic Acid

Indole-3-acetic acid (IAA) is a naturally occurring plant hormone that is also produced by some gut bacteria. Proper levels of IAA maintain beneficial Lactobacillus species of gut bacteria. IAA is a precursor to other important metabolites, like indole-3-propionic acid (IPA). Both high and low levels of IAA can indicate a potential dysbiosis (bacterial imbalance).



Indole-3-Lactic Acid

Indole-3-lactic acid (ILA) is found in fermented foods and produced by some gut bacteria from the amino acid tryptophan. ILA is important for the production of other essential metabolites, like indole-3-propionic acid (IPA). Both low levels of ILA and high levels of ILA may indicate gut bacteria dysbiosis (bacterial imbalance).



Indole-3-Propionic Acid

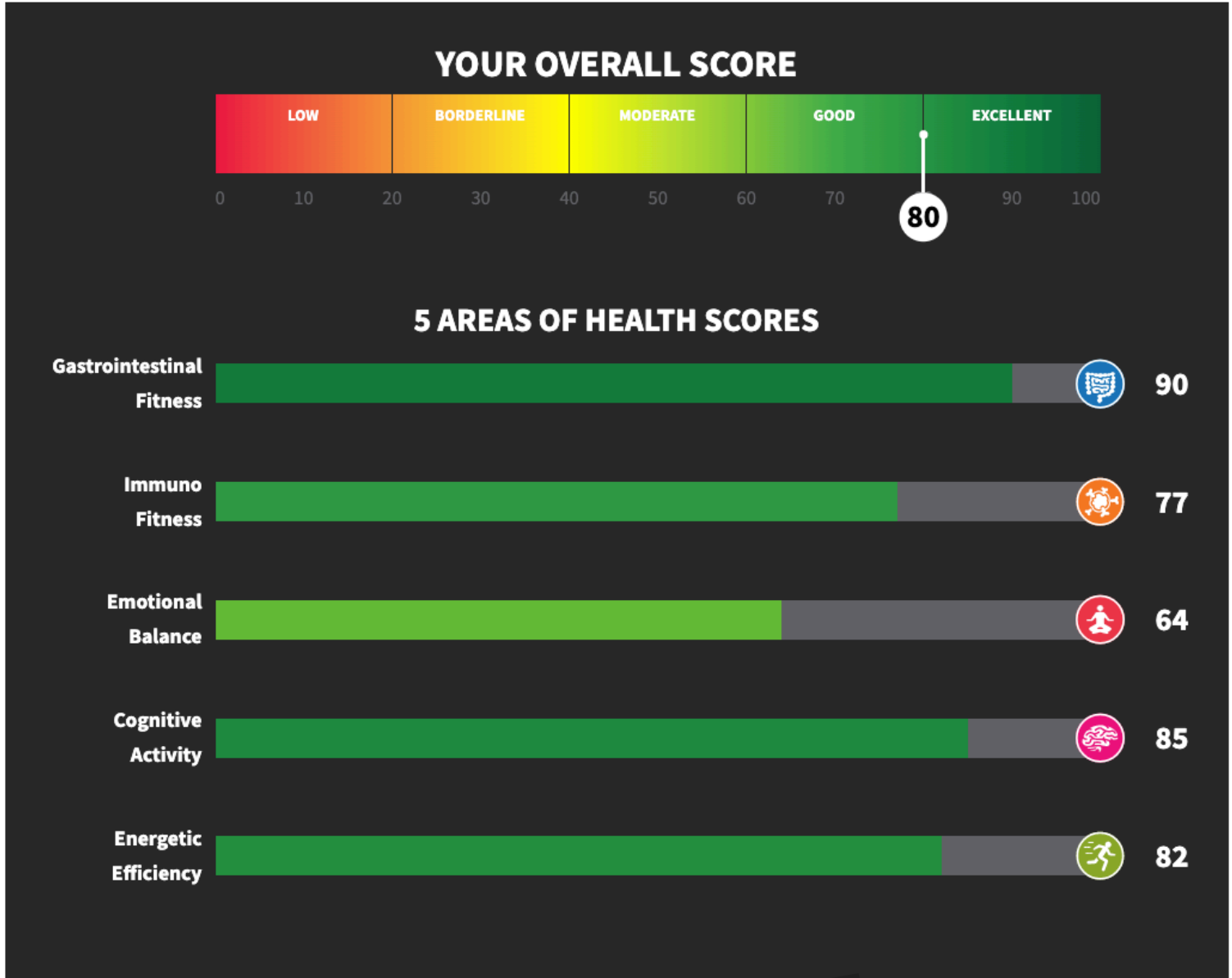
Indole-3-propionic acid (IPA), a strong antioxidant, is a key indicator of a healthy gut microbiome. IPA plays a crucial role in regulating intestinal permeability. Healthy intestines allow nutrients to pass, yet prevent potentially harmful substances from migrating to areas of the body where they could cause inflammation and gastrointestinal (GI) distress.



Total Indoxyl Sulfate

Total indoxyl sulfate (IDS) is derived from the breakdown of tryptophan. Specifically, when tryptophan is not adequately absorbed in the small intestine, excess tryptophan enters the large intestine and converts to indole. IDS is also considered a uremic toxin, which is why it is important to maintain optimal levels of IDS.

Your Internal Fitness™ Results



What do your scores tell you?

Your overall Internal Fitness™ score is a composite of your five categorical scores: Gastrointestinal Fitness, Immuno Fitness, Emotional Balance, Cognitive Acuity, and Energetic Efficiency, which are all critical for determining your total internal health score. The scoring methodology is based on reviewed literature and data collected at Ixcela. These scores can be improved by implementing the nutrition, exercise, supplement, and lifestyle interventions listed in this report.

An overall score in the 70s reflects that your daily lifestyle choices seem to be doing a **great job** of giving your body what it needs. An average Ixcela Internal Fitness™ score is between 45 and 65. A score in the 70s is something to be very proud of and should reassure you that you are including a variety of healthy dietary and lifestyle practices. Review the metabolite-specific nutrition, supplement, and lifestyle recommendations in your report to further boost your great score.

[Dashboard](#)[Results](#)[Recommendations](#)[Print](#)

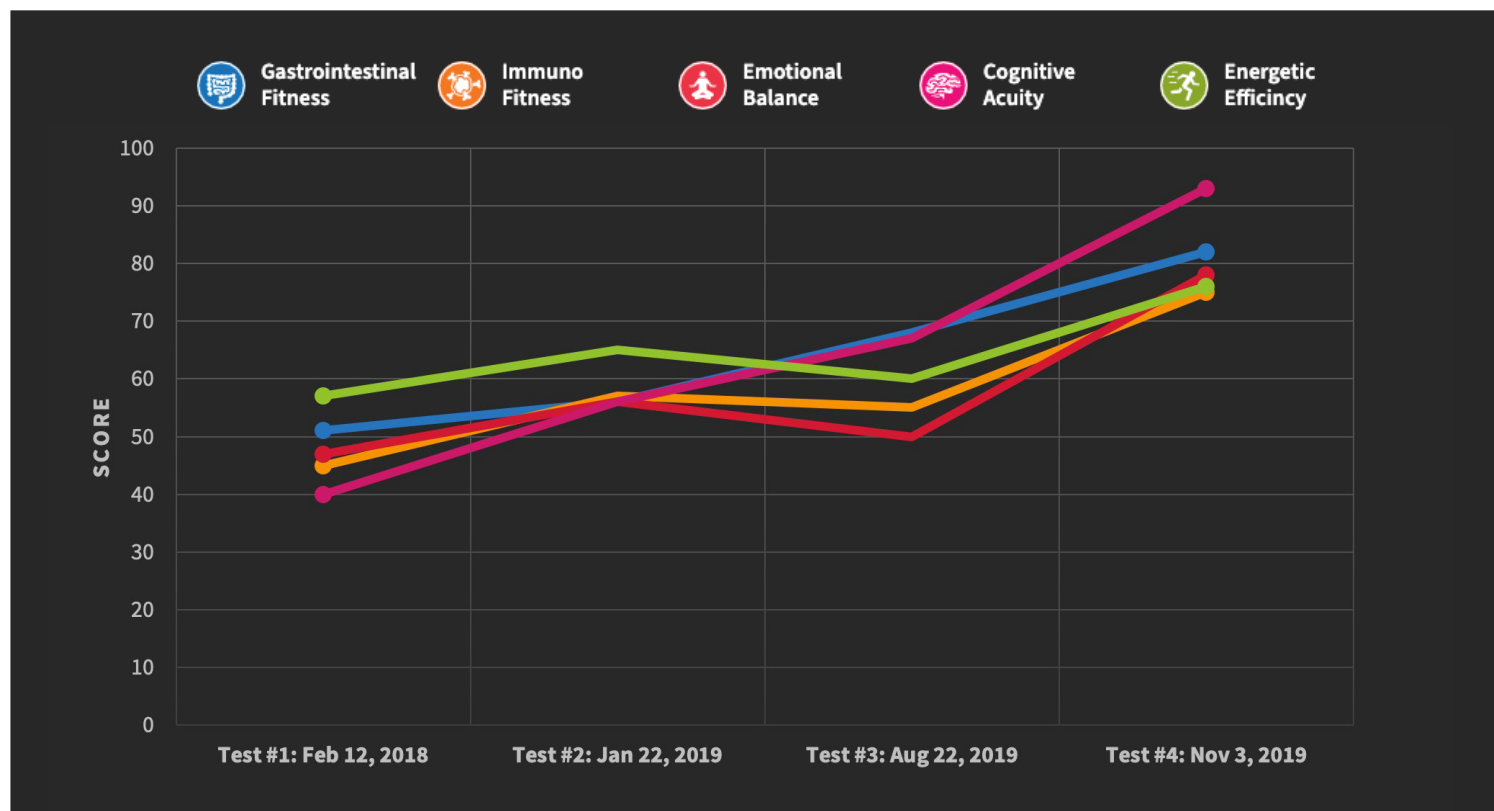
Ixcela Profile History Tracker

Monitoring Your Progress Over Time

Great gut health is not a destination—it's a journey that requires consistency and thoughtful lifestyle choices. It can take up to six months to see significant changes in your gut microbiome after incorporating new healthy habits. We recommend retesting your gut health every three months to track changes. This allows you to see the impact of the nutritional, fitness, and mindfulness changes you incorporate into your daily routine.

Physical and mental stress are often overlooked as important factors in microbiome changes. Factors that could negatively impact your scores include recent antibiotic use, mental stress, overtraining, poor sleep quality, sudden diet changes, heavy caffeine intake, alcohol consumption, and medications.

View your personalized recommendations for specific suggestions for improving your metabolites and your scores.



Overview of Your Recommendations



Results

Ixcela believes in a personalized, holistic approach to wellness. That is why your report contains information across three broad categories of health: nutrition, mindfulness, and fitness. Your report is customized based on your levels of eleven crucial metabolites and your health questionnaire responses. At the beginning of the report, you will see a list of “high” and “low” metabolites as well as metabolites that did not trigger any recommendations. Also provided are your scores in the five areas of health, which are derived from your metabolite levels.



Your Nutrition Recommendations

1. Focus on including a variety of fiber-rich foods daily





SHOW ALL

- Why this recommendation

A diet that includes a variety of fibrous foods will support the population and diversity of the gut microbiome. Because fibrous foods encourage the growth and metabolic activity of the bacteria living in the gut, they are essential for maintaining a healthy gut microbiome. The metabolites indole-3-propionic acid, indole-3-lactic acid, and indole-3-acetic acid offer insight into the population and diversity of the gut microbiome. When these metabolites are out of range, it may indicate a gut bacterial dysbiosis (imbalance).

The gut microbiome helps to regulate the digestion and absorption of nutrients in the diet. Imbalances in the population of the gut microbiome can lead to poor nutrient utilization and insufficiencies in the tryptophan and tyrosine pathways. Tryptophan and tyrosine are amino acids that support gut-related processes involved in digestion, brain function, sleep, recovery, immunity, and emotional stability. In addition to including a variety of foods that support gut health, focus on practicing mindfulness and meditation. These lifestyle practices promote gut health and support the metabolism of tryptophan and tyrosine.

High levels of tryptophan, serotonin, and tyrosine can be caused by over-supplementation. If taking L-tryptophan, 5-HTP (5-hydroxytryptophan), tyrosine, or BCAA (branch chain amino acids) supplements, consider discontinuing use to support healthy tryptophan (TRP) levels. Consult your physician for guidance.

Including fiber-rich foods supports the gut microbiome in maintaining optimal levels of:

- SER

+ What to do if already including these foods

2. Include foods that are rich in B vitamins





SHOW ALL

Your 90-Day Macronutrient Plan





Good Nutrition is Important for Gut Health

Your Ixcela macronutrient plan is based on the individual profile you completed. It factors in your current activity level, age, gender, height, and target weight. If your activity level increases or decreases, you may need to adjust your calories. Ixcela uses the well-researched Mifflin-St. Jeor formula, a predictive equation for resting energy expenditure in healthy individuals, to determine calorie and macronutrient recommendations. Please consult your physician before starting a nutrition and exercise program.

In your profile, you indicated that you:

- ✓ Would like to lose weight
- ✓ Currently work out 4-6 hours per week
- ✓ Prefer to eat an omnivore diet (including both plan-based and animal-based foods)

Meal Breakdown: Approximately 2028 Calories

				
	PROTEINS	FATS	LOW CARBS	MOD-HIGH CARBS
Breakfast	1 Hand Protein (40g / 160Kcal)	2 Thumbs Fat (20g / 180Kcal)	2 Fists Low Carbs (30g / 120Kcal)	3 Cupped-Hands Mod-High Carbs (60g / 240Kcal)
Snack 1	0.5 Hand Protein (20g / 80Kcal)	0 Thumb Fat (0g / 0Kcal)	0 Fist Low Carbs (0g / 0Kcal)	0 Cupped-Hand Mod-High Carbs (0g / 0Kcal)
Lunch	1 Hand Protein (40g / 160Kcal)	3 Thumbs Fat (30g / 270Kcal)	3 Fists Low Carbs (45g / 180Kcal)	2 Cupped-Hands Mod-High Carbs (40g / 160Kcal)
Snack 2	0.5 Hand Protein (20g / 80Kcal)	0 Thumb Fat (0g / 0Kcal)	0 Fist Low Carbs (0g / 0Kcal)	0 Cupped-Hand Mod-High Carbs (0g / 0Kcal)
Dinner	1 Hand Protein (40g / 160Kcal)	1 Thumb Fat (10g / 90Kcal)	2 Fists Low Carbs (30g / 120Kcal)	0 Cupped-Hand Mod-High Carbs (0g / 0Kcal)

Quick Ways to Measure Macronutrients



Proteins

We use HANDS to measure protein amounts. Using your hand as a visual representation of a portion size will help you stick to your macronutrient guidelines. To understand how much protein you are eating, we suggest you use a food scale to weigh a serving of protein and then



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Your Top 3 Recommended Recipes

Gut-Healthy Meal Ideas

We recommend trying recipes that contain ingredients that support your two lowest scores. Log into your Ixcela.com account to find additional entrée, side, and snack options in the Ixcela Recipe Library. *Note: Access to the recipe library is included in all Ixcela subscriptions. If you have the one-time kit, you get a 30-day trial. You can upgrade to a subscription at any time.*



1. Wild Rice Power Bowl with Kimchi

Step aside kombucha there are two new probiotic power-house foods in town! Ok, we still love kombucha for its probiotic properties, but it is time to think outside the box and add a few more probiotic foods to your menu. Kimchi and miso are fermented foods that, like kombucha, contain beneficial bacteria that can help maintain the health of the gut microbiome.

Take me to the recipe



2. Greek Breakfast Salad

Why not take the flavors of a Greek salad, add two hard boiled eggs and call it breakfast. This non-traditional breakfast will completely redefine the way you think about breakfast. Fresh cucumber, tomatoes, and leafy greens add a nice crunch and a lot of nutrients.

Take me to the recipe



3. Tuscan White Beans and Kale Skillet

If you love beans, but don't love the way they sit in your stomach consider adding Tuscan White Beans and Kale Skillet to your menu. The skin or outer coating of a white bean is softer, and therefore more easily digested than black or kidney beans. If you feel discomfort after eating all beans, consider reducing the serving size and mixing with additional FODMAP friendly vegetables like spinach, red bell pepper, and carrots.

Take me to the recipe

Go to ixcela.com/resources/ixcela-citations.html to view all citations in this report.

† Before starting any supplement, dietary, or exercise program, including this one, you should consult your doctor.

* These statements have not been evaluated by the FDA. These products are not intended to diagnose, treat, cure, or prevent any disease.



Your Recommended Supplements

Supplements to Support Your Metabolite Levels

The following supplements are recommended based on your metabolite levels. While Ixcela recommends using our high-quality, lab-tested supplements, you can substitute with supplements from your favorite brand.



1. Ixcela Power (*Vitamin B Complex*)

B vitamins play an important role in the breakdown of the metabolite kynurenine and support a variety of systems in the body.

+ [About B Vitamin Complex](#)

[View Nutrition Label](#)



2. Ixcela Protect (*N-Acetyl-L-Cysteine + L-Methionine + Selenium*)

Antioxidants support the reduction of oxidative stress in the body and promote healthy growth and metabolism.

+ [About N-Acetyl-L-Cysteine \(NAC\)](#)

+ [About L-Methionine](#)

+ [About Selenium](#)

[View Nutrition Label](#)

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Dashboard

Results ▾

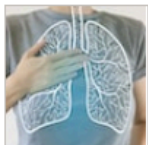
Recommendations ▾

Print

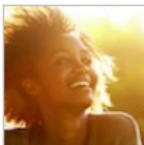
Your Mindfulness Recommendations

1. Try mindfulness-based stress reduction

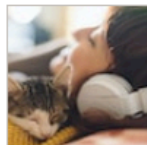
Options Include:



Breathe dee...



Get 10 minu...



Listen to rel...



Meditate 10 ...



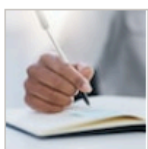
Limit caffei...

+ [Why this recommendation](#)

+ [What to do if already this activity](#)

2. Take time for journaling and logging

Options Include:



Log a one-s...

+ [Why this recommendation](#)

+ [What to do if already this activity](#)

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Your Top 3 Mindfulness Resources

Calm, Resorative Ideas to Recharge Your Battery

The mind plays an important role in your overall health. Ultimately, the mind controls many of the fundamental processes critical to internal health. Our goal is to help you learn how to harness and build some of the mental skills that will allow you to get the most benefit from our lifestyle modification recommendations.



1. Mindful Journaling and Logging

Mindful journaling and logging is meditative writing that helps us to evaluate our emotions and determine why we are feeling a certain way (stressed, hurt, happy, relaxed). With time and practice, mindful writing not only becomes more comfortable, but it can also provide a great deal of emotional relief.

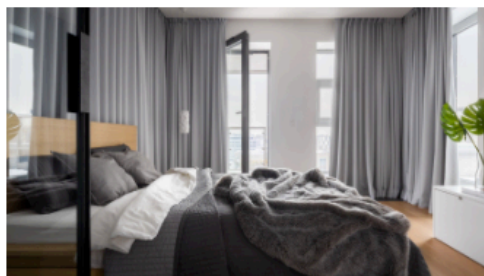
[Take me to the resource](#)



2. Change Your Daily Intentions: A Positivity Guide

Being constantly reminded of all the things we should not do can be very discouraging. Let's take some time to turn off the negative noise and refocus our attention on the simple, positive habits that we can apply to our daily routines, meals, and thoughts.

[Take me to the resource](#)



3. 12 Point Bedroom Audit for Quality Sleep

You may need to adjust a few simple things in your bedroom or in your nightly habits to maximize your quality of sleep. View this checklist for a quick audit for a more restful sleep.

[Take me to the resource](#)

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Your Fitness Recommendations



Dashboard

Results ▾

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Print

Your Fitness Recommendations

1. Aim to include 5 minutes of light stretching daily

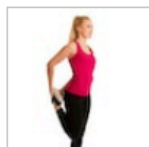
Here are some ideas:



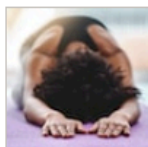
Cat stretch



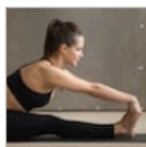
Cobra stretch



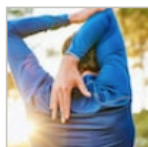
Quad stretch



Child's pose



Toe touch s...



Tricep stretch



Ardha Mats...



Ixcela warm...

+ [Why this recommendation](#)

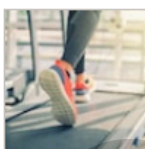
+ [What to do if already this activity](#)

2. Walk before or after your lunch break

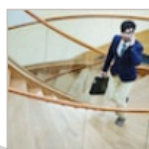
Here are some ideas:



Quick walk ...



Brisk walk o...



Take the stairs

+ [Why this recommendation](#)

+ [What to do if already this activity](#)

3. Review the at-home workouts in the Ixcela Exercise Library

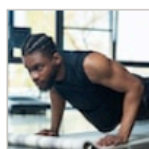
Here are some ideas:



Ixcela home...



Squats



Push-ups

+ [Why this recommendation](#)

+ [What to do if already this activity](#)

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Your 90-Day Fitness Plan


Variety and Daily Movement is Important for Gut Health

Varying intensity and types of exercise is important for maintaining gut health. Your Ixcela fitness plan was designed by Olympic-caliber trainers and it includes strength training, cardio training, and restorative exercises. Your plan was personalized using the information you provided in your health profile. In your health profile, you indicated that you:

- ✓ Would like to lose weight
- ✓ Currently do 2 sessions of strength training per week
- ✓ Currently do 3 sessions of cardio per week
- ✓ Have a gym membership
- ✓ Want to focus on strengthening your core (You will see this in the work-on section of your strength training workout.)
- ✓ Consider yourself a beginner at strength training

Month 1 Workouts


MONDAYS	TUESDAYS	WEDNESDAYS	THURSDAYS	FRIDAYS	SATURDAYS	SUNDAYS
STRENGTH YOUR PRT - TOTAL BODY 1 40–60 minutes	CARDIO: HIIT High-intensity intervals 20–25 minutes	CARDIO: VIIT Varied-intensity intervals 40–75 minutes	LIFE Walk, yoga, golf, etc. 1–4 hours	STRENGTH YOUR PRT - TOTAL BODY 2 40–60 minutes	CARDIO: VIIT Varied-intensity intervals 40–75 minutes	RESTORATION Eat well, repair, growth, low stress, low activity



Mondays: YOUR PRT - TOTAL BODY 1

This Progressive Resistance Training (PRT) workout takes 40–60 minutes to complete. Click on the links below to watch a video on how to do the exercises.

- [Kettlebell Goblet Squat](#)
- [Push Ups](#)
- [TRX Row](#)
- [Warm-Up Sequence](#)
- [Instructions on how to do your PRT workout](#)



Tuesdays: Cardio HIIT Session

Choose the cardio modality that you prefer for this high-intensity interval session (HIIT). This workout is only 20–25 minutes. Here are some ideas: Run, bike, swim, row, or skate.



YOUR PRT - TOTAL BODY 1 (Weeks 1-4)

STEP 1: PREPARATION (MOBILIZE AND ACTIVATE MUSCLES)

MOBILITY	ACTIVATION
Cobra x 6 → Open-Close Book x 5 E/S → Cat-Cow x 8 → Thread the Needle x 6 E/S → Yoga Lunge-Rotation x 5 Breaths E/S → 4 Point Hip Thrusts x 8	SL Hip Thrusts x 12 E/S → DL Hip Thrusts x 15 → Air Squats x 15 → SL Aeroplane HOLD 3 sec x 5 E/S

STEP 2: MAIN (STRENGTH TRAINING SECTION)

	EXERCISE	REST	SET	WEEK 1		WEEK 2		WEEK 3		WEEK 4		Coaching
				REPS	LOAD	REPS	LOAD	REPS	LOAD	REPS	LOAD	NOTES
COUPLET #1	Kettlebell Goblet Squat	0 sec	1	10		10		10		10		
			2	10		10		10		10		
			3	10		10		10		10		
	Barbell Hip Thrusts Floor	90 sec	1	12		12		12		12		
			2	12		12		12		12		
			3	12		12		12		12		
COUPLET #2	Push Ups	0 sec	1	8		8		10		10		
			2	8		8		10		10		
			3	8		8		10		10		
	TRX Row	90 sec	1	8		8		10		10		
			2	8		8		10		10		
			3	8		8		10		10		

STEP 3: WORK ON (TARGETED BODY PART)

CORE CIRCUIT #1	
30 sec	Prone Plank
30 sec	1/4 Plank
30 sec	Side Plank
30 sec	1/4 Plank
30 sec	Prone Plank
	REPEAT other side
30 sec	REST
	x 2 Rounds

Step 4: FINISHER (Cardio Blast)

HIIT—1—MINUTE ROUNDS	
40 sec	Row/ Bike/ Run (Very Hard RPE 8-9+)
20 sec	REST
	x 8-10 Rounds

YOUR PRT - TOTAL BODY 2 (Weeks 1-4)