

# Internal Fitness<sup>™</sup> Results

# Sample Report

- for -

#### 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** jane@company.com

**Ixcela Product** Ixcela Complete **Data Sample Taken** February 1, 2019

**Date Sample Received by Lab** February 3, 2019

Sample Received Dried Blood Spot (DBS)

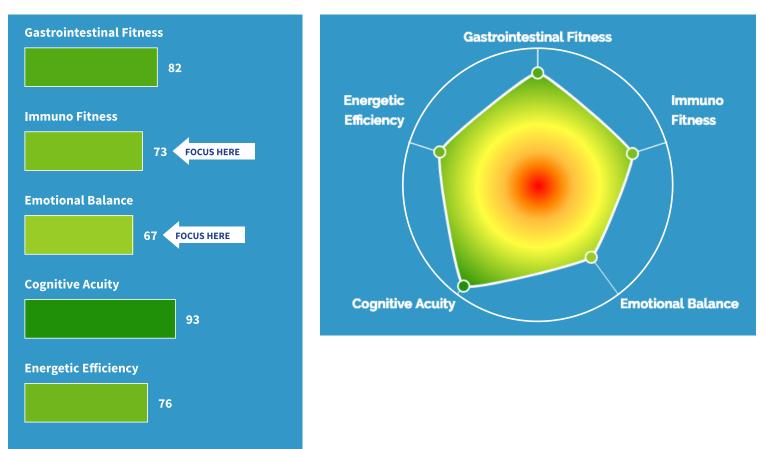
## Your Internal Fitness<sup>™</sup> Results

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### **Overall Internal Fitness Score**



Your **Overall Internal Fitness<sup>™</sup>** Score is a composite of your five categorical scores: Gastrointestinal Fitness, Immuno Fitness, Emotional Balance, Cognitive Acuity, and Energetic Efficiency, as they are critical to determining your total internal health score. The scoring methodology is based on reviewed literature and data collected here at Ixcela. **To improve your scores, start by incorporating the** *nutrition recommendations listed at the bottom of the page of your two lowest category scores, as well as the personalized nutrition plan on page 11. Your recommended supplements are listed on page 13. Follow the personalized fitness plan outlined on page 4 and detailed on page 19.* 



### What do the scores mean?

- A score above 80 indicates *Excellent* internal health, and your goal should be to **maintain** a score in this range.
- A score between 60–80 is considered *Good*, and suggests generally healthy diet and lifestyle practices with **potential to improve**.
- A score between 40–60 is considered *Moderate*. Your goals should be to improve your internal health and take active measures to avoid further lowering your score.
- A score between 20-40 is characterized by *Borderline* internal health. We recommend actions that could help raise your fitness score, such as modifying diet
  and lifestyle habits, and participating in physical activities.
- The *Low* category covers scores under 20, and suggests a need to significantly **improve your internal health.** We encourage you to go through the recommendations to increase your scores for each category and monitor your progress through the Ixcela Complete program.

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



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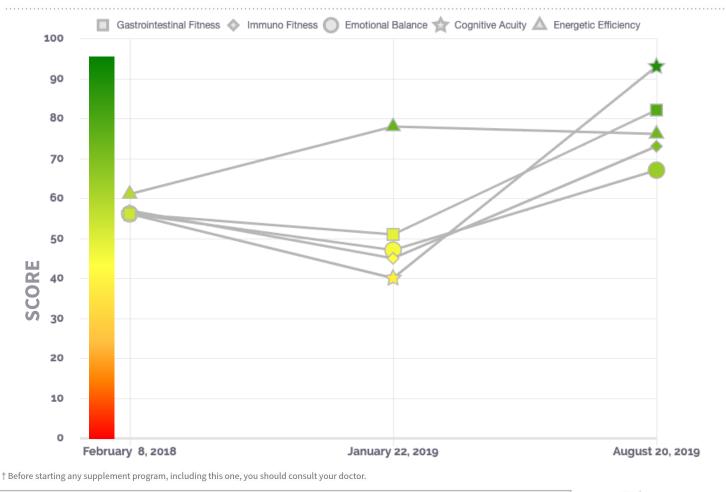
## Your Internal Fitness<sup>™</sup> Results





## Ixcela Profile History Tracker

Great gut health is a journey and lifestyle. The graph below shows what your results look like over time so that you can see how the nutritional, fitness, and mindfulness changes you incorporate in your daily routine impact your health. If you are on the Ixcela Complete subscription program, we will send you a new test kit every other month to retest and track progress so that you can see your gut health improvement over time.



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CELA 2 AMBROSIA

## Your Gastrointestinal Fitness Results MBROSIA



### vour score 82 out of 100 previous score: 51

#### **METABOLITES INVOLVED**

- Indole-3-Propionic Acid (IPA)
- Indole-3-Lactic Acid (ILA)
- Indole-3-Acetic Acid (IAA)
- Tryptophan (TRP)
- Serotonin (SER)
- Tyrosine (TYR)
- 3-Methylxanthine (3MXAN)
- Uric Acid (UA)

## What is Gastrointestinal Fitness?

The gastrointestinal (GI) tract is an organ system comprising the esophagus, stomach, and both large and small intestines. The GI tract is responsible for the swallowing and digestion of food, absorption of nutrients, and generation of waste. The GI tract is also home to trillions of microbes, known as the gut microbiome, which has been found vital to GI and systemic health, modulation of the immune system, and regulation of brain function.<sup>1–3 GI</sup> health and fitness revolve around maintaining the structural integrity of the intestinal wall and maintaining optimal levels of biochemicals and gut microbes. *Factors that could negatively impact this score include recent antibiotic use, physical or mental stress, sudden diet change, heavy caffeine intake, and heavy consumption of purine-rich foods.* 

### How to Improve Your Score

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MIND These recommendations are to improve the gut-brain axis and reduce stress, which has a negative impact on your microbiome.

**BODY** Focus on doing a consistent and varied exercise program, and remember to get enough rest.

**NUTRITION** You should aim to consume these foods based on your personalized eating plan.

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## Your Immuno Fitness Results

YOUR SCORE 73 OUT OF 100 PREVIOUS SCORE: 45

#### **METABOLITES INVOLVED**

- Indole-3-Propionic Acid (IPA)
- Tryptophan (TRP)
- Serotonin (SER)
- Kynurenine (KYN)
- Total Indoxyl Sulfate (IDS)Tyrosine (TYR)
- Uric Acid (UA)

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### What is Immuno Fitness?

The immune system's response to various physiological perturbations plays a role in maintaining optimal internal health. Additionally, research has shown that the relationship between the body's immune system and gut microbiome is inter-dependent, with both systems producing compounds that affect each other.<sup>1,6–9</sup> A healthy gut improves the body's ability to fight infection. Growth and development of the gut microbiome over the human lifespan, especially postnatally and through infancy, also influences the development of the immune system and vice versa.<sup>1,10</sup> Normal levels of antibodies and immune cells, stable gut wall integrity, and lack of food allergies are some characteristics of a healthy immune system. *Factors that could negatively impact this score include heavy weight lifting, mental or physical stress, not enough intake of animal-based protein, and anti-depressant use.* 

## How to Improve Your Score

MIND These recommendations are to improve the gut-brain axis and reduce stress, which has a negative impact on your microbiome.

**BODY** Focus on doing a consistent and varied exercise program, and remember to get enough rest.

#### **NUTRITION** You should aim to consume these foods based on your personalized eating plan.

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## Your Emotional Balance Results

#### YOUR SCORE 67 OUT OF 100 PREVIOUS SCORE: 47

#### **METABOLITES INVOLVED**

- Tryptophan (TRP)
- Serotonin (SER)
- Kynurenine (KYN)
- 3-Methylxanthine (3MXAN)

## What is Emotional Balance?

Emotional well-being is one of the most important factors in the overall health of an individual. The body's response to stress—physical, physiological, or psychological—is a key determinant in the regulation of one's emotional state,<sup>3,14</sup> and studies increasingly support that the gut microbiome is a significant contributor to stress response,<sup>3,14,15</sup> and thus, emotional well-being. Through various biochemicals, the gut microbiome has been linked to affecting mood, anxiety, and other conditions modified by stress.<sup>3,14–16</sup> *Factors that could negatively impact this score include a sudden change of diet, heavy caffeine consumption, not enough intake of animal-based protein, and anti-depressant use.* 

## How to Improve Your Score

MIND These recommendations are to improve the gut-brain axis and reduce stress, which has a negative impact on your microbiome.

**BODY** Focus on doing a consistent and varied exercise program, and remember to get enough rest.

**NUTRITION** You should aim to consume these foods based on your personalized eating plan.

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## Your Cognitive Acuity Results



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**YOUR SCORE** 93 out of 100 **PREVIOUS SCORE:** 40

- Indole-3-Propionic Acid (IPA)
- Tryptophan (TRP)
- Serotonin (SER) Kynurenine (KYN)

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Tyrosine (TYR)

### What is Cognitive Acuity?

In the last decade, there has been research about the complex bidirectional communication between the brain and gut microbiome. Through numerous studies, it has become evident that the gut microbiome regulates, and is itself regulated by, the brain via various hormones and signaling molecules.<sup>3,5,14,15</sup> Effects of the gut microbiome on the brain have been linked to certain types of microbial species residing in the gut.<sup>3,20</sup> Through mechanisms such as stimulation of the nervous system, production of toxic metabolites, and change in intestinal wall permeability, the gut microbiome influences neurological chemistry and function, enhancing cognitive function.<sup>3,5,14–16</sup> Factors that could negatively impact this score include mental or physical stress, not enough intake of animal-based protein, recent antibiotic use, and anti-depressant use.

## How to Improve Your Score

MIND These recommendations are to improve the gut-brain axis and reduce stress, which has a negative impact on your microbiome.

**BODY** Focus on doing a consistent and varied exercise program, and remember to get enough rest.

**NUTRITION** You should aim to consume these foods based on your personalized eating plan.

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CELA 8 AMBROS/A COLLECTIVE

Your Energetic Efficiency Results



#### YOUR SCORE **76** OUT OF 100 PREVIOUS SCORE: 78

#### METABOLITES INVOLVED

- Tryptophan (TRP)
- Kynurenine (KYN)
- Tyrosine (TYR)Xanthine (XAN)
- Uric Acid (UA)

## What is Energetic Efficiency?

Primary functions of the gut are digestion of food and absorption of nutrients, and the gut microbiome plays a critical part in these processes.<sup>1,4,11,21</sup> Microbes in the gut synthesize molecules known as short-chain fatty acids from nondigestible dietary components.<sup>1,22,23</sup> These molecules act as a source of energy for the body and promote cellular mechanisms that maintain tissue integrity. Additionally, studies have found that harvesting energy from food is a microbial species-dependent process.<sup>24,25</sup> Thus, having the right microbes in your gut will improve your daily energy levels. *Factors that could negatively impact this score include strenuous cardiovascular exercise, heavy consumption of purine-rich foods, not enough intake of animal-based protein, and caffeine supplementation.* 

## How to Improve Your Score

MIND These recommendations are to improve the gut-brain axis and reduce stress, which has a negative impact on your microbiome.

**BODY** Focus on doing a consistent and varied exercise program, and remember to get enough rest.

**NUTRITION** You should aim to consume these foods based on your personalized eating plan.

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