



Lumena
MindGym

ONE SMALL STEP FOR MAN.

**One giant leap
for your mind.**



Meet MindGym

A fully immersive training environment
designed to master mental skills



Train your body,
Train your craft,
Train your mind.

Navigating high-stakes situations and intense stress while executing complex cognitive tasks is no easy feat. An operator's ability to perform under pressure is critical. More and more, research shows the need for cognitive resilience amidst daily operations and consequential scenarios. Mindset training is now a vital tool. It's imperative to equip our military with effective mental skills training programs, acknowledging the intricate relationship between stress, cognitive performance, and overall mental health.

That's where Lumena's MindGym comes in.

We empower our military forces to overcome adversity, optimize performance, and safeguard their well-being in the face of formidable challenges.

Ensure Mission Effectiveness: Mindset training sharpens cognitive abilities, rapid decision-making, and emotional resilience, to overcome unpredictability and uncertainty in combat. By optimizing performance under pressure, teams achieve strategic success with agility and precision, bolstering overall effectiveness.

Promote Well-being & Readiness: Mindset training equips military personnel with stress management tools, fostering resilience, reducing burnout risk, and enhancing unit cohesion for a more capable fighting force.

The 3 Core Differentiators of our Solution:



ISOLATED IMMERSION

Engage in profound solitude and immersion at MindGym's non-virtual environment, fostering deep focus and mental preparedness for optimal performance.



DATA-DRIVEN BIOFEEDBACK

Harness cutting-edge technology at MindGym for real-time biometric feedback, enhancing the effectiveness of your training sessions.



SCIENCE-BASED CURRICULUM

Experience MindGym's content, carefully crafted from scientific principles and research in meditation and psychology, ensuring impactful and comprehensive sessions.

Most mindset training solutions offer on-the-go apps and virtual reality hardware for convenience at a lower cost. They also lack the immersive and controlled setting essential to maximizing impact on the individual.

We're different. Lumena developed MindGym as a unique isolation chamber, using mirrors, light, and sound to offer a low-sensory experience to reduce stress and induce a profound meditative state. **We only develop healthy technologies to interact with.**

Cognitive Study within the United States Air Force

In a recent collaborative study with the US Air Force, Lumena assessed the impact of brain-based training on stress reduction and cognitive performance among the 775th Civil Engineering Squadron and 75th Air Base Wing First Sergeants. Participants underwent a six-session Performance Mindset Training Module at MindGym, reporting improved mood, stress reduction, and enhanced task performance.

QUANTITATIVE RESULTS REVEALED

30% Improvement

in mood and mental wellness

61% Reported better stress management

with 15% experiencing significant sleep quality improvements

66% intended to apply new skills in daily life

while 45% planned to utilize them during deployment

16.2% Enhancements

in stress biometrics

46% Improvement

Reported mood and mental wellness improvements with 44% reporting better stress management

29.2% Improvement

in task reaction time, with 8.3% in task accuracy

The study underscores MindGym's effectiveness in bolstering resilience and performance among high-performing operators in challenging environments.

Ensuring mission effectiveness, well-being, and readiness, or better-yet – resilience, is a challenge for leaders:



For Squadron Leaders

In a demanding military environment, Squadron Leaders ensure team readiness amid pressure. Weekly MindGym sessions equip teams to thrive under stress, enhancing operational readiness.



For Prevention & Integration Resilience Leaders

As a Prevention and Integration Resilience Leader, ensuring personnel well-being is crucial. Introducing MindGym offers tangible benefits, bolstering resilience and optimizing performance for mission success.



For Research Professionals

As a Military Researcher, MindGym's solutions aid in evaluating interventions. Analyzing data optimizes cognitive outcomes, impacting individual performance across operations.



For Clinical Psychologists

Incorporate MindGym into therapy for personalized treatment. Biofeedback data empowers clients in their mental health journey.



I can't imagine an airman who wouldn't benefit from this," said Lt. Col. Carsten Stahr, 28th Force Support Squadron commander. "It's a very simple sort of thing, but it's the simplest things in life that, when taken seriously, provide the greatest impacts and changes."

LT. COL. CARSTEN STAHR, COMMANDER -
28TH FORCE SUPPORT SQUADRON | ELLSWORTH AIR FORCE BASE

Ensure Mission Effectiveness.

Many studies are emerging to show the positive impact that mental skills training has on enhancing performance across various domains, including military operations. Studies conducted within military contexts have demonstrated the positive impact of mental skills training on cognitive abilities, decision-making, stress management, and overall performance. Additionally, research in sports psychology, which often parallels military performance contexts, has extensively explored the benefits of mental skills training in optimizing performance under pressure.

SAMPLE CURRICULUM:

Breathwork Guided Training Modules

Jannell MacAuley, Ph.D, U.S. Air Force Veteran | Warriors Edge

Listen to a sample of our training session



1: The Mindful Minute

4: 4X8 Breathing

2: Box Breathing

5: An Introduction To Better Sleep

3: Belly Chest Breathing

6: Body Scan

Promote Well-being and Readiness.

MindGym and mindset training are essential for all military personnel, whether they serve in administrative roles or on the frontline. Even in office-based positions, individuals contend with the stress of burnout, unrealistic deadlines, and the challenges of base living. These practices offer invaluable tools for managing stress, fostering resilience, and maintaining mental well-being, thereby improving relations, culture, and the effectiveness of teams.

SAMPLE CURRICULUM:

Reflective Environment Modules

Dr. John Duarte, Integrated Resilience Office (IRO)

Prevention Coordinator | Joint-base Pearl Harbor-Hickam



Listen to a sample of our training sessions

1: Two Minute Biofeedback Calibration

4: Hickam Air Force Base: Sea To Galaxy

2: Reflective Environment: Rain

5: Reflective Environment: Winter Stream

3: 2024 Demonstration

6: Travis Air Force Base: Flight Variation 1

The most effective solution on the market:

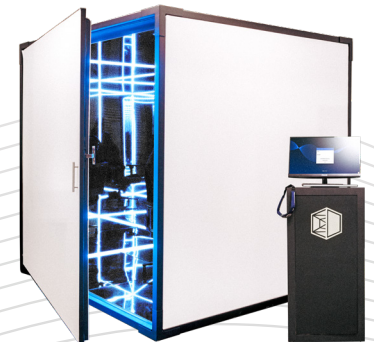
- **NON-DIGITAL INTERFACE:** MindGym employs mirrors and light instead of digital screens, reducing eye strain and potential digital-related side effects.
- **REAL-LIFE EXPERIENCE:** Unlike VR goggles, MindGym is a physical space, offering a real-life environment for training rather than a virtual simulation.
- **PHYSICAL ISOLATION:** MindGym provides a space for physical isolation, allowing users to disconnect from external stimuli and focus on their mental training without virtual distractions.
- **NON-ADDICTIVE NATURE:** MindGym, being non-digital, avoids the addictive qualities associated with digital VR experiences, promoting a healthier approach to mindset training.
- **INCREASING BENEFITS:** Regular engagement with MindGym leads to cumulative benefits, fostering mental resilience and well-being over time through consistent practice.

Suggested Ways to Fund your MindGym:

- ✓ **Squadron Innovation Funds (SIF):** The Squadron Innovation Fund program is designed to give airmen an avenue to think of ideas and contribute to accomplishing the mission.
- ✓ **Operations & Maintenance Funds (O&M):** O&M funds can be used to operate, sustain, and maintain airfield and base facilities to achieve readiness goals and improve the working and living conditions for Air Force personnel.
- ✓ **End-of-Year Funds:** Remaining funds that must be spent before the fiscal year ends to avoid budget reductions in the following year.

Email us to learn more

Hello@lumenalabs.com



Monitoring Mental Skills and Resilience has never been easier

Gain unparalleled insight into your team's resilience with MindGym's advanced biofeedback, reporting, and dashboard features.

Just as upgrading from using manned vehicles to drones revolutionized surveillance, MindGym empowers you with cutting-edge tools to elevate your leadership. Our platform facilitates the tracking and analysis of mental performance across your team seamlessly, without necessitating frequent involvement from medical professionals, such as counselors and psychologists.

With MindGym, you can dive deep into physiological data points, usage metrics, and demographic trends to uncover actionable insights. Identify patterns, address concerns, and optimize performance with ease. Ensure accountability and foster a culture of well-being and readiness among your personnel.

For the protection of individuals, user data is masked and anonymous:

- Personal data remains confidential
- Administrators cannot access identifiable information
- Masked and anonymous data ensures user protection

Application Features & Capabilities

- View collective results across multiple units, teams, or demographics
- Flexible booking and scheduling features
- Distinct and secure administrative user levels
- Advanced data and security protection
- Curriculum library management

IACS STUDY

Contrasting Cognitive, Behavioral, and Physiological Responses to Breathwork vs. Naturalistic Stimuli in MindGym and VR Headset Environments

In a recent study conducted by the Institute for Advanced Consciousness Studies (IACS) and the Department of Biostatistics, Bloomberg School of Public Health, Johns Hopkins University, the following results were uncovered:

SUMMARY: Comparing VR and MindGym, when significant or trend differences were found, MindGym always outperformed VR, regardless of the stimulus condition. MindGym appears especially effective at increasing the experienced realism, immersion, and involvement.

- ✓ **Cognitive Advantage:** MindGym outperforms VR with a 15% increase in accuracy and a corresponding 15% decrease in reaction time, enhancing cognitive abilities and performance.
- ✓ **Emotional Benefits:** MindGym decreases confusion by 32% and negative mood states by 25% compared to VR, offering a more calming and emotionally favorable environment.
- ✓ **Spatial Awareness:** Users experience a 17% increase in Body Size Estimate (BSE) levels compared to VR, indicating improved spatial awareness and immersion during training.
- ✓ **Realism and Relaxation:** MindGym provides a more realistic and immersive experience, with 38% more subjects reporting higher realism ratings compared to VR, potentially enhancing relaxation and well-being.
- ✓ **Realism and Engagement:** MindGym offers 35% greater realism and 17% higher involvement than VR, enhancing the training experience and learning outcomes.
- ✓ **Mindfulness Experience:** MindGym enhances realism by 31% compared to VR, fostering deeper engagement and effectiveness in guided breathwork sessions.
- ✓ **Cognitive Function:** MindGym shows marginally better performance in cognitive tasks like the Trail Making Task (TMT), with improved accuracy, suggesting enhanced cognitive abilities.

Learn more

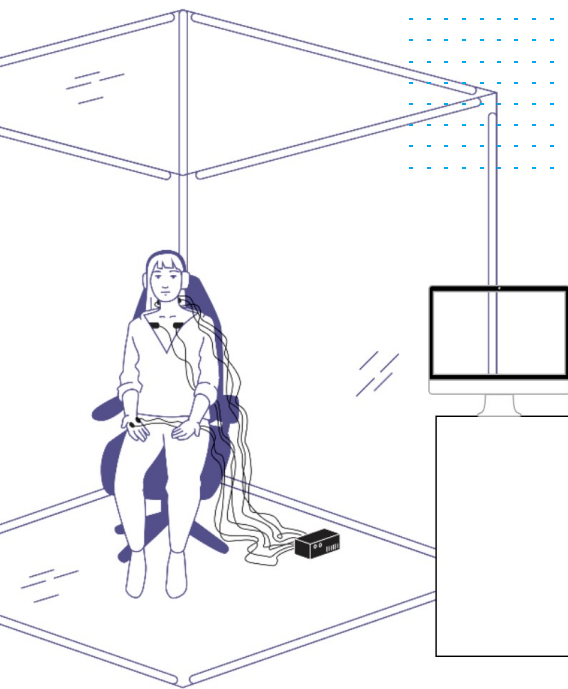
www.LumenaLabs.com/Results

Meet MindGym

Cutting edge technology for optimal performance

MindGym is meticulously crafted from premium materials, ensuring a superior training environment for optimal mindset development. From its state-of-the-art isolation chamber to its high-quality mirrors, lights, and sound systems, every element is designed to elevate the training experience.

The attention to detail in construction reflects our commitment to providing a top-tier environment conducive to mental resilience and peak performance.



BIOSENSOR HEADBAND

Tracks brain activity for enhanced monitoring.

SOUND ISOLATION

Minimizes external noise for focused sessions.

DOOR

Provides privacy and controlled access.

COMFORTABLE CHAIR

Ensures ergonomic support for extended comfort.

MYLAR MIRRORED WALLS

Enhances spatial perception and immersion.

LED LIGHTING

Adjusts ambiance for optimal conditions.

HEADPHONES

Delivers immersive audio experience.

SELF-SERVICE KIOSK

Streamlines user interaction and setup.

The Science Behind MindGym

When creating MindGym, we referenced decades of scientific studies and theories to create a revolutionary, immersive environment for the mind.



Neurofeedback

Neurofeedback is a type of biofeedback that measures brainwave activity through wearable tech. The feedback is captured and presented in real-time, allowing the user to become more attuned to the inner workings of their mind. Understanding how the brain responds to various stimuli and stressors through neurofeedback unlocks the ability to self-regulate brain function, potentially improving attention, mood, and cognitive performance.



Focused Attention Meditation

Focused attention meditation, or FAM, involves directing one's attention to a specific point, object, or thought, such as breathing patterns or a specific mantra. FAM cultivates mindfulness and concentration, helping individuals develop a heightened awareness of the present moment. When practiced regularly, meditation is shown to improve symptoms of anxiety, depression, inattentiveness, and other forms of cognitive dysfunction.



Sensory Deprivation

Sensory deprivation involves creating an environment with minimal or no sensory input, most commonly achieved through floating in a soundproof and light proof tank filled with warm saltwater. Sensory deprivation tanks aim to provide a disconnect from the body so a user can focus on their mind. We deprive the individual of external stimuli to induce a transcendental state of deep relaxation, altered consciousness, and heightened introspection.



Binaural Beats

Binaural beats are an auditory illusion created when two slightly different frequencies that mimic the frequency of brain waves are simultaneously presented separately to each ear. The brain perceives a third tone, the binaural beat, which can improve cognition, memory, and mood depending on the frequency of the generated beat.

How MindGym Works

We built MindGym because there was nothing else like it — a fully immersive experience that uses five core components to tap into the scientific benefits we describe above.



Isolation

MindGym taps into the same benefits you experience from sensory deprivation but with a more carefully curated environment that creates a positive feedback loop rather than a state of nothingness.



Light

MindGym projects images onto its walls designed to immerse the trainee in a tangible environment. We've incorporated key principles of chromotherapy in MindGym's programming so trainees can reap the benefits in a controlled environment.



Reflection

We use floor-to-ceiling mirrors for two main reasons: to invoke the sensation of limitless space and to prompt self-reflection.



Sound

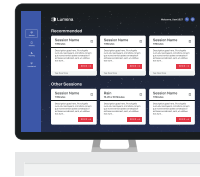
MindGym utilizes binaural tones, custom-composed music, and meditation prompts to guide the brain to a heightened cognitive state in each session.



Feedback

MindGym will analyze neurofeedback to adjust programming and report on results during and after each session.

Easy Self-Service Mindset Training



Choose Session

MindGym is fitted with custom-designed programming so you can refresh, challenge, or engage your mind. Whether it's your first session or your hundredth, you can choose your path.

Select Biosensors

Once you choose your journey, it's time to embark — but not without the right tools. Wearable technology allows the MindGym to analyze your performance, monitor your stress levels, and more.



Reflect

When you first open the doors to MindGym, you'll be struck by... you. MindGym is a cube constructed with mirrors that line all interior surfaces, a reminder that you are the key to mastering your mind.



Master your Mind

When you're ready, you'll start your session. MindGym will immerse you into a restful state using choreographed low sensory light and ambient sounds, guiding you through an experience like no other.



Receive Biofeedback

After your training session is complete, MindGym will provide feedback on how your body and brain responded. Upon each return, MindGym will remember you and tailor sessions to your goals and preferences.

Kiosk and Mobile Self-Service

Choosing your experience in the MindGym starts with navigating our intuitive interface, accessible just outside the cube, provided equipment, and even your personal devices. MindGym training sessions are entirely self-guided, whether it's your first session or your hundredth.

Why Choose MindGym?

Proven Techniques

From the physical construction of MindGym to the technology used in each session, our training is backed by principles of neuroscience.

Faster Results

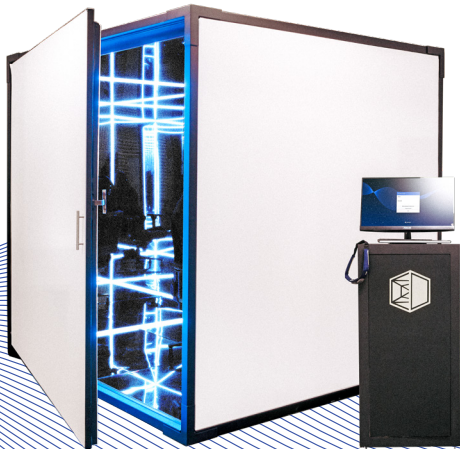
Because MindGym is fully immersive, users tend to experience benefits similar to those unlocked through years of intensive meditation in as little as one session.

Highly Individualized

Every person who enters MindGym has lived a unique experience, and MindGym flexes to help each trainee flourish.

SAMPLE BENEFITS

- ✓ Optimize mental performance
- ✓ Regulate the nervous system
- ✓ Develop a high-performance mindset
- ✓ Learn to harness focus
- ✓ Orient into the present moment
- ✓ Develop mental muscle memory
- ✓ Measure mental performance
- ✓ Explore open-eye meditation
- ✓ Improve mental resilience



Managed Program Services

Lumena can work with you to achieve programmatic goals to drive specific team results.

Resilience Program

EXAMPLE (Sessions subject to change)

EXAMPLE OVERVIEW

- ✓ **OUTCOME:** Airmen with the highest values will earn a Lumena challenge coin
- ✓ 5 Week Program
- ✓ 2 sessions per visit
- ✓ All sessions will include assessment post session
- ✓ All sessions will utilize the biosensor headband

	SESSION 1 (TEACH)	SESSION 2 (PRACTICE)
Week 1	Orientation	Mindful Minuted
Week 2	Box Breathing	10 min in Space or Rain
Week 3	4-8 Breathing	Practice session of choice
Week 4	Body Scanning	Practice session of choice
Week 5	30 min practice session	

What People are Saying

“A Harvard study shows that we are all distracted in the present moment for half our waking lives. I think it’s important for our Airmen to be quicker in thought, to be quicker in deliverance, to meet the mission quicker and to perform better under stress. That is a huge part of why the MindGym is going to help with our Airmen here.”

Amy Egbert, 27th Special Operations Wing Integrated Resiliency Optimization Network interim director | Cannon AFB

“We designed the MindGym so that it would feel familiar to people in the military. It was and is our goal to provide Airmen with access to tools that they may typically need in-person training for.”

Brandon Murphy, Head of Growth | Lumena

“I’m excited for our JBA community to take advantage of this unique resource. It is important for us to consider all aspects of our health, and staying mentally fit is a key component of that holistic approach to fitness.”

Col. Parkin C. “Gage” Bryson, 316th Wing deputy commander | Joint-Base Andrews

“We’re always looking for new and innovative ways to increase resilience. Mindfulness is one of the biggest factors of resilience, something that can help you during stressful situations. We are excited to have something like this that can be another tool for airmen to help them deal with stress in the...”

Daphne Perez, Prevention Coordination Specialist | Ellsworth AFB

“In the future mental training will become as obviously critical as regular physical training.”

Jannell MacAulay, Ph.D, U.S. Air Force Veteran | Warriors Edge

“It’s important to get after cognitive training for our Airmen. We must invest in developing our human resources in the cognitive space and improve their tactical capabilities. This will enable us to be better prepared for strategic competition in tomorrow’s fight.”

Lt. Col Brandon Dues, 318th Special Operations Squadron commander | Cannon AFB

“I can’t imagine an airman who wouldn’t benefit from this. It’s a very simple sort of thing, but it’s the simplest things in life that, when taken seriously, provide the greatest impacts and changes.”

Lt. Col. Carsten Stahr, Commander – 28th Force Support Squadron | Ellsworth AFB

“Our service members work long hours under intense and unpredictable conditions that demand a program for developing new mental skills to help them remain primed for optimal performance in training, at war, and after they come home. This requires a much deeper dive into how operators regulate their emotional state during high pressure and high-intensity situations and using innovative training to build...”

Patrick O’Maille, PhD | Hurlburt Field AFB

“One thing I really love about MindGym is how it expands on the things I’m already doing in our training sessions and increases the exposure, consistency, and repeatability of it. Not only will it help to deliver better results faster, but many operators will prefer this kind of training to traditional methods, which will help improve the mental and emotional health of our fighting...”

Patrick O’Maille, PhD | Hurlburt Field AFB

Dedicated Support:

White Glove Installation:

Sit back and relax as our expert team handles every aspect of installation with precision and care. From setup to configuration, we ensure that your MindGym experience begins seamlessly, allowing you to focus on what matters most—your training.

Training & Education:

Unlock the full potential of MindGym with our comprehensive training and education programs. Whether you're a novice or an experienced user, our resources and guidance empower you to maximize the benefits of mindset training, ensuring optimal performance and well-being.

Managed Program Services:

Let us take the reins and manage your program with efficiency and expertise. Our managed services cover every aspect of MindGym utilization, from scheduling sessions to tracking progress, allowing you to streamline operations and achieve your program objectives effortlessly.

Technical Support:

Experience peace of mind knowing that our dedicated technical support team is always ready to assist you. Whether you encounter a technical glitch or have questions about functionality, our experts are just a call or message away, ensuring smooth operation and uninterrupted training sessions.

Customer Success Manager:

Partner with a dedicated Customer Success Manager who is committed to your success. From onboarding to ongoing support, your designated manager serves as your trusted advisor, providing personalized guidance and strategic insights to help you achieve your program goals effectively.

Lumena's Credentials

Lumena is now operating in all 9 of the U.S. Air Force's major commands.



Lumena is working collaboratively with:

- ✓ Integrated Resilience Teams
- ✓ MFLC Psychologists
- ✓ Air Education Instructors
- ✓ Special Operations Command Drone Pilots



lumenalabs.com

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