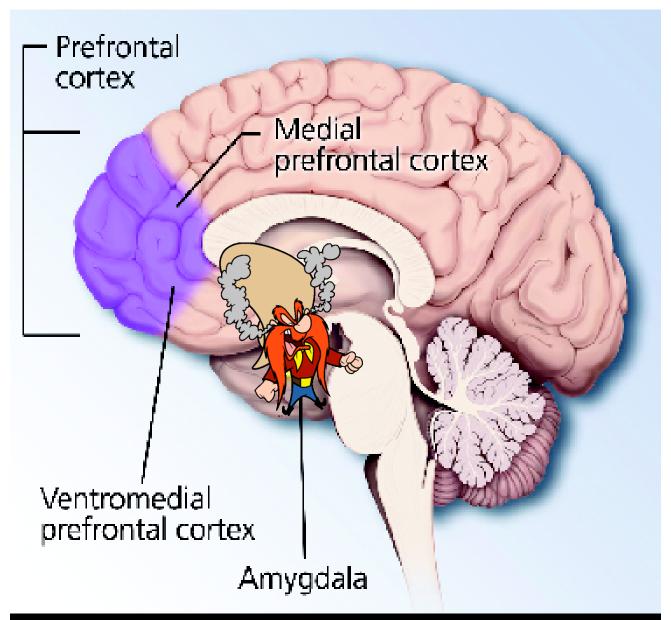


Anxiety is not a disease-it is simply a symptom of an irritable Amygdala



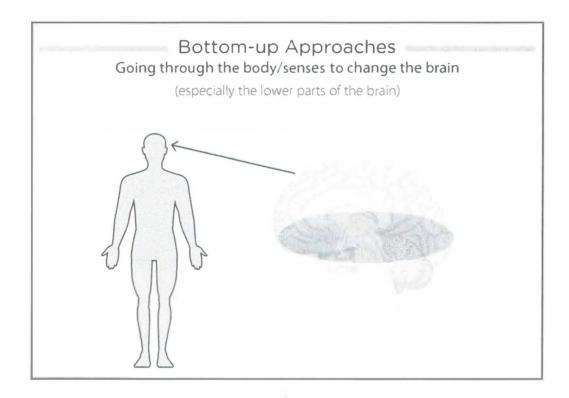
Brain Structures Involved in Dealing with Fear and Stress



# Change the Brain Bottom-Up

Bottom-up approaches produce brain change by working through the body. The body and the brain are connected by the spinal cord, which transmits information from the body to the brain, and vice versa. It is possible to alter the brain by sending signals through the body for the brain to process. Bottom-up, body-based techniques work best for changing the lower parts of the brain, such as the fear brain, which are outside of conscious awareness and are difficult to control top-down (with your mind).

For example, if you have ever noticed how challenging it is to simply stop feeling anxious by telling yourself, "Stop it!" you know how difficult it can be to down-regulate the fear center of the brain with your thoughts. A more effective way to regulate the lower areas of the brain is to work from the other direction, bottom-up, as opposed to top-down.



#### The Importance of Bottom-Up Processing for Reducing Anxiety

Understanding how body-based interventions help regulate the brain and emotions

#### What is bottom-up processing?

Bottom-up processing refers to the way our brain interprets information that starts from the body and sensory input. This is in contrast to top-down processing, where thinking and cognitive strategies attempt to manage emotions or sensations. Bottom-up processing is essential in emotional regulation because it directly targets the nervous system, particularly when dealing with anxiety.

#### Why bottom-up processing matters for anxiety

- • Anxiety is often stored in the body—through muscle tension, shallow breathing, and a hyperactive nervous system.
- • Top-down approaches like cognitive reframing can be helpful, but may not reach the body's physiological response.
- • Bottom-up methods regulate the nervous system directly, helping the body signal to the brain that it is safe.

#### **Bottom-up strategies for anxiety reduction**

- ♦ Breathwork: Deep belly breathing activates the parasympathetic nervous system (rest and digest).
- Somatic Awareness: Tuning into body sensations grounds attention in the present moment.
- Movement: Walking, stretching, or yoga discharge excess stress energy.
- ♦ Grounding Techniques: Pressing feet into the floor or holding an object to focus the senses.
- ◆ Cold Exposure: Splashing cold water or using an ice pack can reset the stress response.

### The Science Behind it

The vagus nerve, which runs from the brainstem to the body, plays a key role in bottom-up regulation. Stimulating it through breathing, movement, and sensory input helps shift the body from fight-or-flight mode to a state of calm. This helps the brain access rational thinking, empathy, and resilience more easily.

## **Summary**

Bottom-up processing is a powerful tool for reducing anxiety by working through the body to influence the mind. Incorporating breath, movement, and sensory grounding can restore a sense of safety and calm, especially when cognitive strategies alone are not enough.

# **How Meditation Improves the Brain**

Unlock the mental and physical power of mindfulness

# What is Meditation?

A mind-body practice that enhances awareness, emotional balance, and mental clarity.

Types include: Mindfulness, Transcendental, Loving-Kindness, Guided Meditation

# 1. Builds Gray Matter

Areas Affected: Hippocampus, Prefrontal Cortex Benefit: Improves memory, learning, and self-awareness Evidence: MRI studies show regular meditators have more gray matter volume

# **6** 2. Calms the Amygdala

Role: Processes fear & stress

Meditation Effect: Shrinks amygdala size

Result: Reduced anxiety, increased emotional resilience

## **3.** harpens Focus

Region: Anterior Cingulate Cortex

Benefit: Better attention span, reduced distractions Evidence: Improves

concentration and decision-making

## **4. Enhances Emotional Control**

Effect: Regulates mood and reduces reactivity

Region: Strengthens Prefrontal Cortex

Result: More thoughtful, less reactive behavior

# 5. Slows Brain Aging

Cellular Benefit: Preserves telomeres (linked to longevity) Promotes: Neuroplasticity and brain connectivity Outcome: Delays cognitive decline

# Scientific Insights

- \( \bigsize \) 8 weeks of practice changes brain structure (Harvard)
- ② 20 minutes/day lowers cortisol (stress hormone)

How to Start

Step Tip

## **Loving-Kindness Meditation (LKM)**

## Cultivate Compassion, Connection, and Inner Peace

#### What is Loving-Kindness Meditation?

Loving-Kindness Meditation (LKM), also known as Metta Bhavana, is a mindfulness practice that focuses on developing feelings of compassion and unconditional love —first toward yourself, then expanding to others.

The goal is to nurture an open heart and foster goodwill, empathy, and emotional resilience.

#### **Key Benefits**

- Reduces negative emotions like anger, resentment, and judgment
- Increases positive affect, including joy, gratitude, and hope
- Improves relationships by building empathy and forgiveness
- Boosts well-being and reduces symptoms of anxiety and depression
- W Enhances self-love and emotional regulation

#### How It Works

- 1. Find a quiet, comfortable space
- 2. Close your eyes and focus on your breath
- 3. Repeat specific phrases silently to yourself
- 4. Visualize the subject of your goodwill while saying the phrases

#### **●** Common Phrases

Repeat slowly and sincerely:

- "May I be happy."
- "May I be healthy."
- "May I be safe."
- "May I live with ease."

Then, expand these wishes to others:

- A Loved One: "May you be happy, may you be healthy..."
- A Neutral Person: Someone you don't know well
- A Difficult Person: Someone you've had conflict with
- All Beings Everywhere: "May all beings be free from suffering..."

#### Example Practice: 10-Minute Loving-Kindness Session

Minute Focus		Action
0-2	Settle In	Focus on your breath and relax
2–4	Self	"May I be happy" (use all 4 phrases)
4–6	Loved One	Bring someone to mind and repeat phrases
6–8	Difficult Person	Picture them, send loving- kindness
8-10	All Beings	Expand your compassion outward

#### **Tips for Practice**

- Don't force feelings—just set the intention
- Use imagery to help (visualize light, warmth, or smiles)
- Practice regularly, even 5 minutes a day can help
- Be patient—loving-kindness grows with time

#### **Summary**

Loving-Kindness Meditation is a simple yet powerful way to increase emotional warmth, resilience, and compassion—for yourself and others.

With regular practice, it nurtures a kinder, more peaceful mindset that benefits your health, your relationships, and the world around you.

# **CHAIR YOGA**

## Gentle Poses for Stretching and Mobility

Sit in a sturdy, armless chair with your feet flat on the floor. Breathe deeply and hold each pose for 3–5 breaths.



SEATED MOUNTAIN POSE

Improves posture and promotes grounding



SEATED SPINAL TWIST

Stretches the back and shoulders



CHAIR CAT-COW STRETCH

Increases flexibility of the spine



**ANKLE-TO-KNEE POSE** 

Opens the hips and glutes

Sit in a sturdy, armless chair with your feet flat on the floor. Breathe deeply and hold eah pose for 3–5 breaths

- Tips for chair Yoga practice
- Use a sturdy chair without wheels or armrests.
- Keep your feet flat on the floor or supported.
- Move with your breath—inhale to lengthen, exhale to deepen.
- • Listen to your body and modify poses as needed.
- • Start with 10–15 minutes and build up gradually.

## Summary

Chair yoga is a powerful way to stay active, mindful, and mobile—no matter your age or physical ability. It brings the benefits of yoga to everyone, from the comfort of a chair.

#### How to Practice Chair Yoga: Step-by-Step Guide

Learn how to perform four foundational chair yoga poses for flexibility, posture, and relaxation.

#### - Seated Mountain Pose

This foundational pose promotes grounding, improves posture, and centers your awareness.

## Steps:

- • Sit tall on a sturdy chair with your feet flat on the floor, hip-width apart.
- • Align your head, neck, and spine; rest your hands on your thighs.
- • Press your feet into the ground and lengthen through the crown of your head.
- • Engage your core and take 3–5 slow, deep breaths.

## **6** Seated Spinal Twist

This pose gently stretches the spine and improves spinal mobility while promoting detoxification.

# Steps:

- • Sit sideways on the chair or remain forward-facing with your feet flat.
- • Place your right hand on the backrest or arm of the chair and your left hand on your right thigh.
- • Inhale to lengthen your spine, exhale to gently twist toward the back of the chair.
- • Hold for 3–5 breaths, then repeat on the opposite side.

#### Chair Cat-Cow Stretch

This pose increases spinal flexibility and encourages gentle movement through the back.

## Steps:

- • Sit with your hands on your knees or thighs, feet flat on the ground.
- • Inhale, arch your back and lift your chest and chin (Cow Pose).
- • Exhale, round your back and tuck your chin toward your chest (Cat Pose).
- • Continue to flow between the two with each breath for 4–6 rounds.

#### Ankle-to-Knee Pose

This pose opens the hips and glutes and helps release lower back tension.

## Steps:

- • Sit tall with both feet on the ground.
- • Lift your right leg and rest the ankle across your left thigh (just above the knee).
- • Flex your right foot and sit up tall. If comfortable, gently lean forward to deepen the stretch.
- • Hold for 3–5 breaths, then switch sides.

#### **&** Summary

Chair yoga is a simple yet effective way to enhance physical well-being and mindfulness. These four poses can be done anywhere with a stable chair, helping you stretch, strengthen, and reconnect with your breath.