
Can Your Mind Heal Your Body?

What Modern Science Says About
Stress, Breathing, and Healing

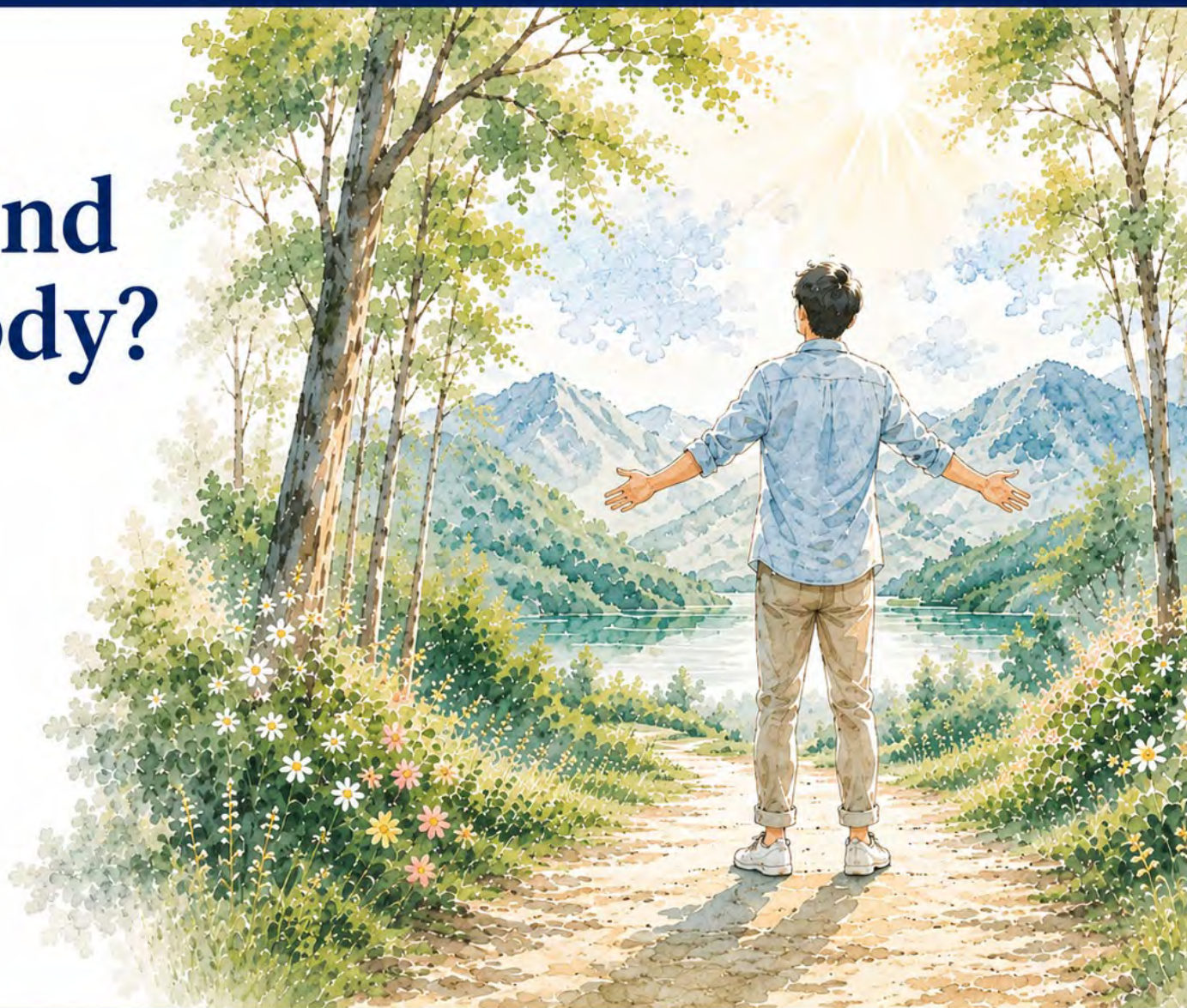
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KIOM

Korea Institute of
Oriental Medicine



I Breathing = Life

Conscious, mindful breathing brings physiological changes to the body and mind



Breathing
sustains life.

Physiological Changes from Conscious Breathing



Lowers Blood Pressure

Helps relax blood vessels
and reduces blood pressure.



Reduces Anxiety

Calms the nervous system
and reduces feelings of anxiety.



Reduces Depression

Improves mood and
alleviates depressive symptoms.



Reduces Stress

Decreases stress hormones
and promotes relaxation.



Increases Alpha Waves

Enhances alpha brain waves
linked to relaxation and focus.

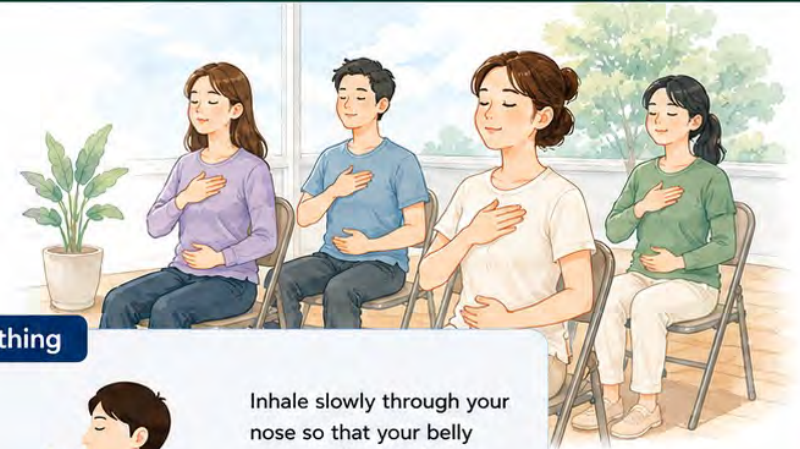


Conscious breathing supports both body and mind through measurable physiological benefits.

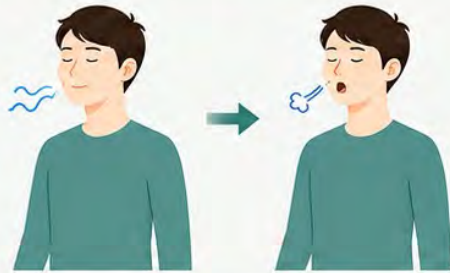
Breathe Deep, Feel Calm

Breathing Techniques

Simple breathing practices to calm the mind, relax the body, and support your well-being.



1. Diaphragmatic Breathing



Inhale slowly through your nose, exhale through your mouth with a soft “whoosh” sound, letting all the air out. Focus on the gentle rise and fall of your chest as you breathe in and out.

2. Abdominal Breathing



Inhale slowly through your nose so that your belly expands like a balloon. Exhale slowly and steadily through your mouth, letting your belly fall. Focus on the movement of your abdomen.

3. The 4–7–8 Breathing Method (Complete Cycle)

1 Inhale for 4 seconds



Close your lips and inhale quietly through your nose for a count of 4.

2 Hold for 7 seconds



Hold your breath for a count of 7.

3 Exhale for 8 seconds



Exhale completely through your mouth for a count of 8, making a soft “whoosh” sound.

4

7

8

Repeat 4–8 times. Especially helpful before sleep.

Benefits



Promotes relaxation
Reduces tension and calms the mind.



Increases oxygen supply
Enhances oxygen intake and supports physical recovery.



Supports better sleep
Helps regulate the nervous system and improve sleep quality.

The True Enemy of Health: Stress

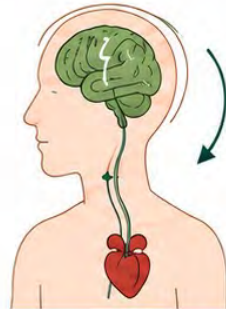
Stress sets in motion a chain of events that can affect both mind and body.

1. React to our environment



We respond to daily life and stressors

2. Internal physiological changes



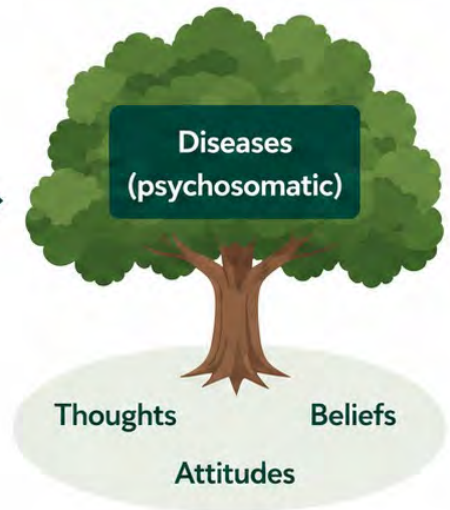
Stress triggers changes inside the body

3. Disease states or symptoms



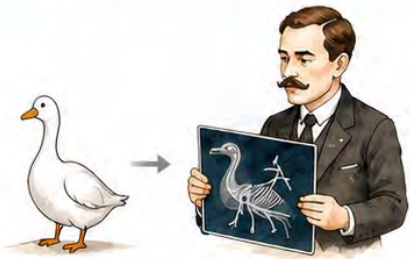
These changes can lead to physical or mental illness

4. Diseases = psychosomatic



The Fight-or-Flight Response & Stress: A Short Summary

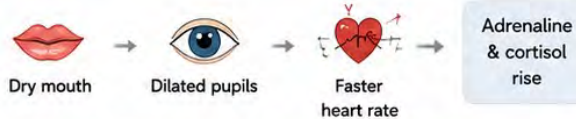
The Fight-or-Flight Response



Harvard researcher
Walter Cannon
watched geese swallow
buttons with X-rays
to study digestion.

He noticed: when animals felt threatened,
digestion stopped.

From Animals to Humans



He called this system the “sympathetic nervous system”.

Stress Is Inevitable

Hans Selye showed that almost everything
causes a mini stress response.



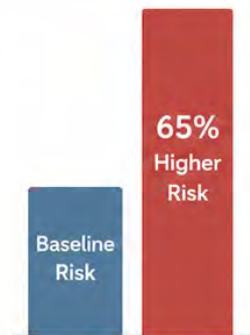
We can't avoid stress, but we can manage it.

Stress and Health

Chronic stress is linked to:

- Heart disease
- Sleep problems
- Depression & anxiety
- Weaker immune system (autoimmune diseases)
- Diabetes
- Pain, headaches, stomach problems
- Slower healing, sexual dysfunction, etc.

High job stress =
65% higher risk of
heart attack or stroke



Five Simple Ways to Manage Stress



Breathe to relax
Slow, deep breathing
calms body and mind.



Take action
Do something—any action—
to solve or move forward.



Inspirational stories
Learn from people
who overcame
hard times.



“What if” exercise
Imagine your best
possible future. Write
it down. Read it often.



**Don't add stress
to your stress**
Don't worry about being
stressed. Focus on solutions,
not guilt.

Self-management training = Mind–Body intervention

Using the power of mind to support the body's natural healing processes

Self-management training (Mind–Body intervention)



Meditation

Focuses attention and awareness to calm the mind.



Autogenic Training

Uses self-suggestion to promote relaxation and balance.



Imagery Training

Guided mental images to reduce stress and pain.



Progressive Relaxation

Systematically tenses and relaxes muscles to reduce stress.



Biofeedback

Uses real-time feedback to gain control over body functions.



Dajun Breathing

Deep, slow breathing to regulate mind and body.



Qi-training / Qi-therapy (Qigong)

Cultivates life energy (Qi) to harmonise body and mind.



Yoga

Combines postures, breathing and mindfulness to improve strength, flexibility and well-being.



Tai Chi

Slow, flowing movements that enhance balance, flexibility and mental clarity.

Qi, Meditation, and Qigong: A Path to Health and Vitality

Ancient wisdom. Modern science. My personal experience.

Qi is the body's vital energy.

When Qi flows in balance and harmony, we feel healthy, energetic, and at peace.

Qigong

Qigong combines



Breathing



Gentle movement



Mental focus



Relaxation



Body awareness

Qigong integrates body, breath, movement, and mind to cultivate and balance Qi.

My Experience



I began practicing qigong regularly.



Because qigong includes movement, meditation, and breathing,



it calmed my mind and filled my body with energy.



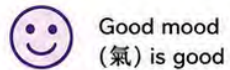
My body became stronger, my mind more stable, and my overall health improved.

Cultivate Qi. Calm the mind. Strengthen the body. Live in harmony.

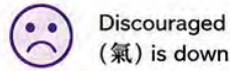


What is Qi (氣)?

Qi (氣) is the invisible energy that connects our body, mind, nature, and the universe.



Good mood
(氣) is good



Discouraged
(氣) is down



Weather & climate
(sun, wind, rain, etc.)



Seasonal changes
(hot, cold,
humid, dry)



Mind (心)

Mental and
emotional activities
are governed
by Qi (氣).



Nature (自然)

All natural
phenomena are
expressions of
the movement
and change of Qi (氣).

氣

Qi (氣)
Invisible energy
that connects
everything

Body (身)

Life activities
are sustained
and regulated
by Qi (氣).



Universe (宇宙)

Energy and
information
flow in the
universe are
also Qi (氣).



Full of energy
(氣運) is strong



Fatigue
(氣運) is weak



Waves & vibrations
(sound, light,
radio waves)



Radio & TV signals
(invisible
but real)

A SIMPLE ANALOGY

TV and radio signals exist in the air
but we cannot see them.
However, when we tune to the
right frequency, we can see the
picture and hear the sound.

Broadcasting Station
(transmitter)



(KBS, MBC, SBS, etc.)

Different frequencies exist in the air.



TV/Radio (receiver)



When we tune to the
selected frequency,
the picture and sound appear.



Qi (氣) is similar.

Invisible energy exists around us
and living systems (body, mind,
nature, universe) interact with it.



MODERN SCIENTIFIC PERSPECTIVE



Everything in nature exists
through movement, vibration,
and waves.



Traditional East Asian medicine
understands this dynamic life
process as Qi (氣).



Qi (氣) is therefore not simply a mystical
concept, but a way of understanding the
interactions between body, mind,
and the environment.



TAKE-HOME MESSAGE

Qi (氣) is the invisible dynamic force that links our thoughts, our body, nature, and the universe.

(From a scientific perspective, Qi may be understood as the dynamic interactions and flow of information that occur in biological, physical, and environmental processes.)

氣

未由
興

The Composition of Qi (氣) — Qi and Rice (米)

A Chinese character (漢字) is a combination of its radical (sound component) and its semantic component.

氣 Qi (氣) — Sound Component

The radical '气 (qi)' represents sound and is composed of three elements connected together.



Steam / Gas (雲氣)
Steam rises and becomes gas, forming clouds.



Wind (風)
Wind moves all things.

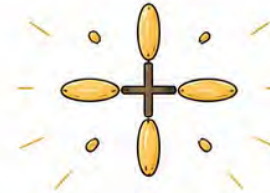


Feeling / Life (情)
Connects the sky, the earth, and human beings.

Qi (氣) represents the vital energy that connects the universe and all life, linking the sky (heaven), the earth, and people.

米 Rice (米) — Semantic Component

The radical '米 (mi)' represents rice, the essential staple for human life.



- **Humankind's most essential food (rice)**
The staple food needed for human survival.
- **Composed of '+' and 'x'**
The combination of the Ten Heavenly Stems (+) and the Twelve Earthly Branches (x), symbolizing the cycle of time and the universe.
- **Rice changes through stronger light — the image of sunlight (sun power)**
Rice, nurtured by sunlight, stores abundant light energy.

Rice (米) is the seed that stores strong light and becomes the source of life through the power of sunlight.

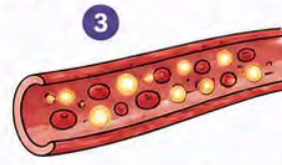
The Transformation of Rice — 'Love of Light' (米 illuminated by light)



1 Eat the love of light
Rice intake



2 Release the carbon bond
Separate carbon and water (found in air and soil) in rice.



3 Light particles → Energy
Transported by blood and transformed into energy in body components through heat.



4 Waste elimination
Converted into carbon dioxide and water, and discharged.

Cycle of Water (Steam/Gas)



氣

Ultimately, rice stores the greatest amount of light and provides energy for our body.



Qi (氣) composed of steam/gas (气) and rice (米) — the 'radical of light'.



The invisible force that connects the universe, nature, and humans, working together with the principles of Yin and Yang, moves all phenomena in life.



The Origin of the Character 'Qi (氣)'

From Oracle Bone Inscriptions to Bronze Inscriptions in the Shang (Yin) Dynasty

1. ORACLE BONE INSCRIPTIONS (甲骨文字)



Oracle Bone Inscriptions (甲骨文字)
Yin (殷) Dynasty

- Shang (Yin) Dynasty (c. 14th–11th century BCE)
- Characters incised on tortoise plastrons or animal bones
- The character 'Qi (氣)' does not yet appear

2. BRONZE INSCRIPTIONS & XINGQI YUPEI MING (行氣玉佩銘)

- Early Zhou period (c. 11th–3rd century BCE)
- Characters cast or incised on bronze and jade
- The earliest attestation of the character 'Qi (氣)'
- Recorded in the Xingqi Yupei Ming



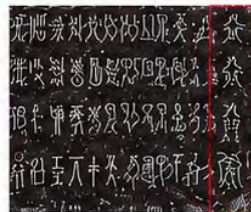
— EVOLUTION OF THE CHARACTER FORM —

1 Oracle Bone Inscriptions



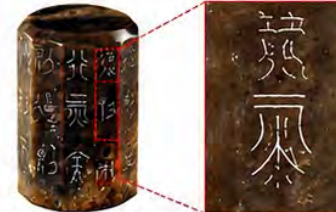
Shang (Yin) Dynasty
(c. 14th–11th century BCE)
No evidence of the character 'Qi (氣)'

2 Bronze Inscriptions



Early Zhou period
(c. 11th–3rd century BCE)
Characters newly inscribed on bronze and jade
Earliest form of 'Qi (氣)' confirmed

3 Xingqi Yupei Ming (enlarged)



The earliest known form of the character 'Qi (氣)'

4 Structural Principle



'Qi (氣)' is composed of fire (heat) and grain (vital nourishment), symbolising warmth, breath, and life.



365 Terminals of Qi & the Palm

Our hands connect us to the flow of Qi in the body and the cosmos.

365 VITAL POINTS

365

terminals of Qi across the body,
where acupuncture meets the flow —
our channels of exchange with the cosmos.



Fingertips & Palms

The tips of the fingers and the center of the palm have the densest pores. We absorb and radiate Qi most strongly there, so we sweat there under strain.



Clapping & Rubbing

Clapping and rubbing the hands amplifies Qi and stirs its flow.



Daily Self-Care

Simple hand practices help circulate Qi and support overall well-being.



The palm is a microcosm of the body.

Through our hands, we connect, balance, and circulate Qi — linking our body, mind, and the cosmos.

THE FIVE VISCERA & SIX ENTRAILS

mirrored on the palm

Thumb

- Lung

Index Finger

- Liver
- Gallbladder

Center of Palm

- Spleen
- Stomach

Wrist

- Kidney
- Bladder

Middle Finger

- Heart
- Small Intestine

Ring Finger

- Pericardium
- Triple Burner

Little Finger

- Large Intestine
- Small Intestine

Liver
(Wood)

Heart
(Fire)

Lung
(Metal)

Gallbladder
(Wood)

Large
Intestine
(Metal)

Spleen
(Earth)

Kidney
(Water)



An expert can read
a body's strength
from the hands.

WHY IT MATTERS



Hands are rich in Qi pores

Our palms and fingertips absorb and radiate Qi powerfully.



Map of inner health

The five viscera and six entrails are reflected on the palms.



Activate & harmonize

Clapping and rubbing the hands boosts Qi and balances the organs.



Daily self-care

Simple hand practices help circulate Qi and support overall well-being.



Acupoint
(vital point)



Conpent →



Circulate →



Balance

The Power of Clapping

A simple habit that stimulates acupoints in the palms and promotes whole-body health.

WHY CLAPPING IS GOOD FOR YOU



Palm Stimulation

The palms contain **365** acupoints and **6** meridians connected to internal organs.



Whole-Body Exercise

Clapping vigorously activates muscles from head to toe, similar to aerobic exercise.



Health Benefits

Improves circulation, boosts metabolism, relieves stress, and strengthens organ function.



Scientifically Proven

Studies show 30 seconds of clapping is similar to 10 m shuttle run in exercise intensity.

SCIENCE-BACKED BENEFITS

Clapping vs. Shuttle Run (10 m)

After 30 seconds



Heart Rate
(beats/min)

134

Clapping

138

Shuttle Run



Recovery Rate
(after 15 minutes)

94.8%

Clapping

90.6%

Shuttle Run



Clapping provides whole-body exercise benefits with faster recovery.



Stroke Rehabilitation Study (USA)

Stroke patients who received hand stimulation therapy 6 hours a day for more than 2 weeks showed:

- 2x increase in brain tissue in the damaged area
- Nearly 2x improvement in hand function

Hand stimulation activates neural circuits and promotes recovery.

WHO USES THEIR HANDS, LIVES LONGER

People who live long and healthy (USA survey)

1st

Conductors



2nd

Pianists



★ Common factor: They use their hands a lot!

CLAPPING IS FOR EVERYONE



- ✓ Simple, safe, and free
- ✓ Can be done anytime, anywhere
- ✓ Great for all ages

8 TARGETED CLAPPING TECHNIQUES FOR BETTER HEALTH

Stimulate specific acupoints and meridians to support organ health and prevent disease.

1 Palm-to-Palm Clap



Clap with palms together firmly.

Benefits



Improves circulation, relieves numbness, and neuralgia.

2 Palm Clap



Clap using the palms only with fingers stretched and wrists together.

Benefits



Enhances overall organ function and digestion.

3 Fist Clap



Clap with fists, hitting the finger joints together.

Benefits



Helps relieve headaches, shoulder pain, and upper body tension.

4 Finger Clap



Touch fingers together without palms touching and clap fingers.

Benefits



Good for heart and lungs; helps with respiratory issues and sinus problems.

5 Fingertip Clap



Clap using only the fingertips.

Benefits



Supports eye health and nasal health; helps with allergies and nosebleeds.

6 Wrist Clap



Clap using the base of the palms near the wrists.

Benefits



Stimulates the bladder and supports reproductive health and vitality.

7 Back-of-Neck Clap



Clap behind the neck with both hands.

Benefits



Relieves shoulder stiffness, improves posture, and helps tone upper arms.

8 Back-of-Hand Clap



Clap the back of each hand alternately.

Benefits



Strengthens lower back, relieves back pain, and supports spine health.



Just a few minutes of clapping each day can energize your body, calm your mind, and support your health.

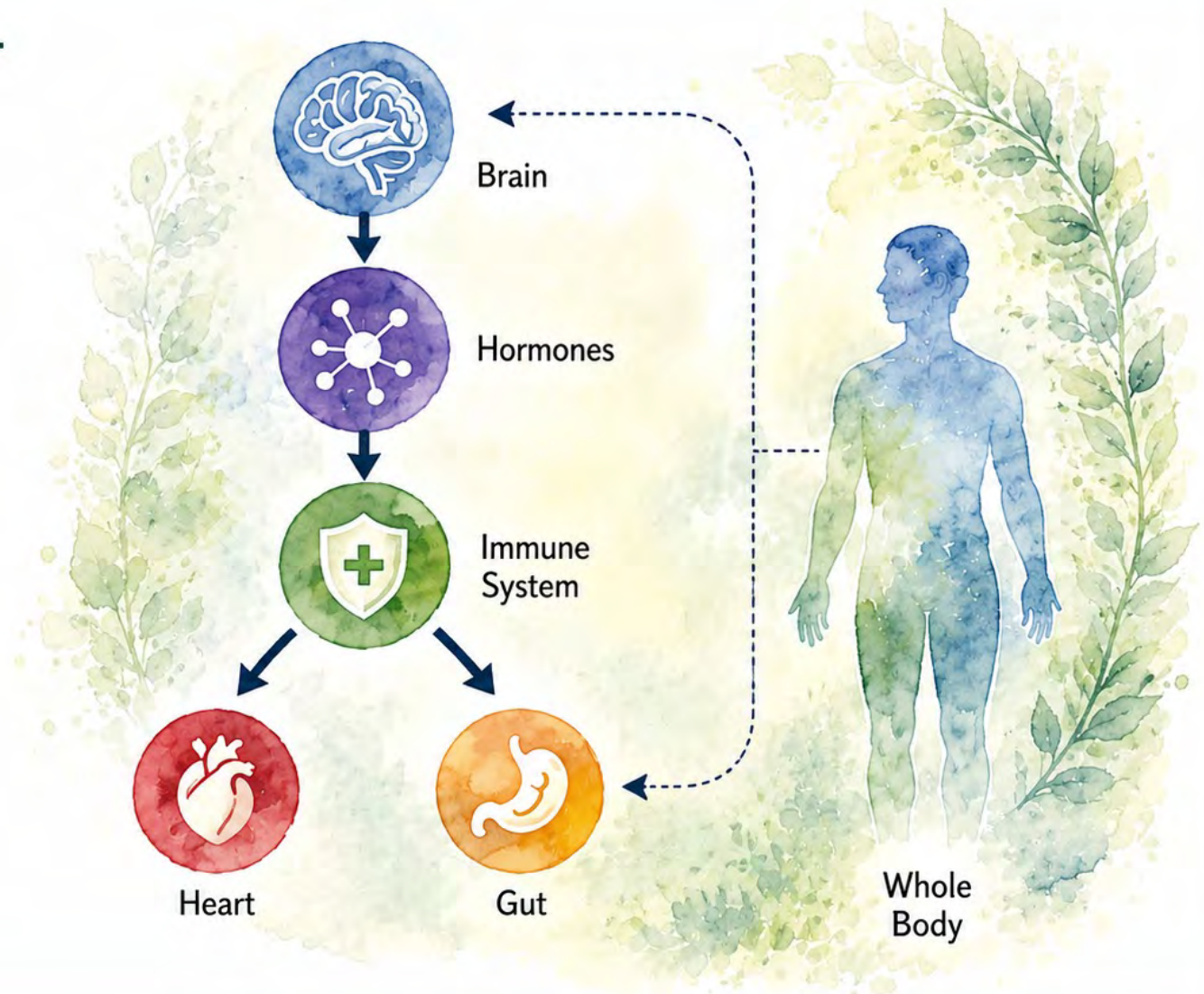
Let's clap for a healthier life!



Your Body Is Always Listening

Everything is connected.

- Brain
- Hormones
- Immune system
- Heart
- Gut



Everything depends on mind (一切唯心造)

A builder aged 29 came to the accident and emergency department having jumped down on 15 cm nail.



1 He had jumped down on to a 15 cm nail.



2 As the smallest movement of the nail was painful he was



3 The nail was then pulled out from below.



BMJ 1995;310:70



4 When his boot was removed a miraculous cure appeared to have taken place.



5 Despite entering proximal to the steel toecap the nail had penetrated between the toes:



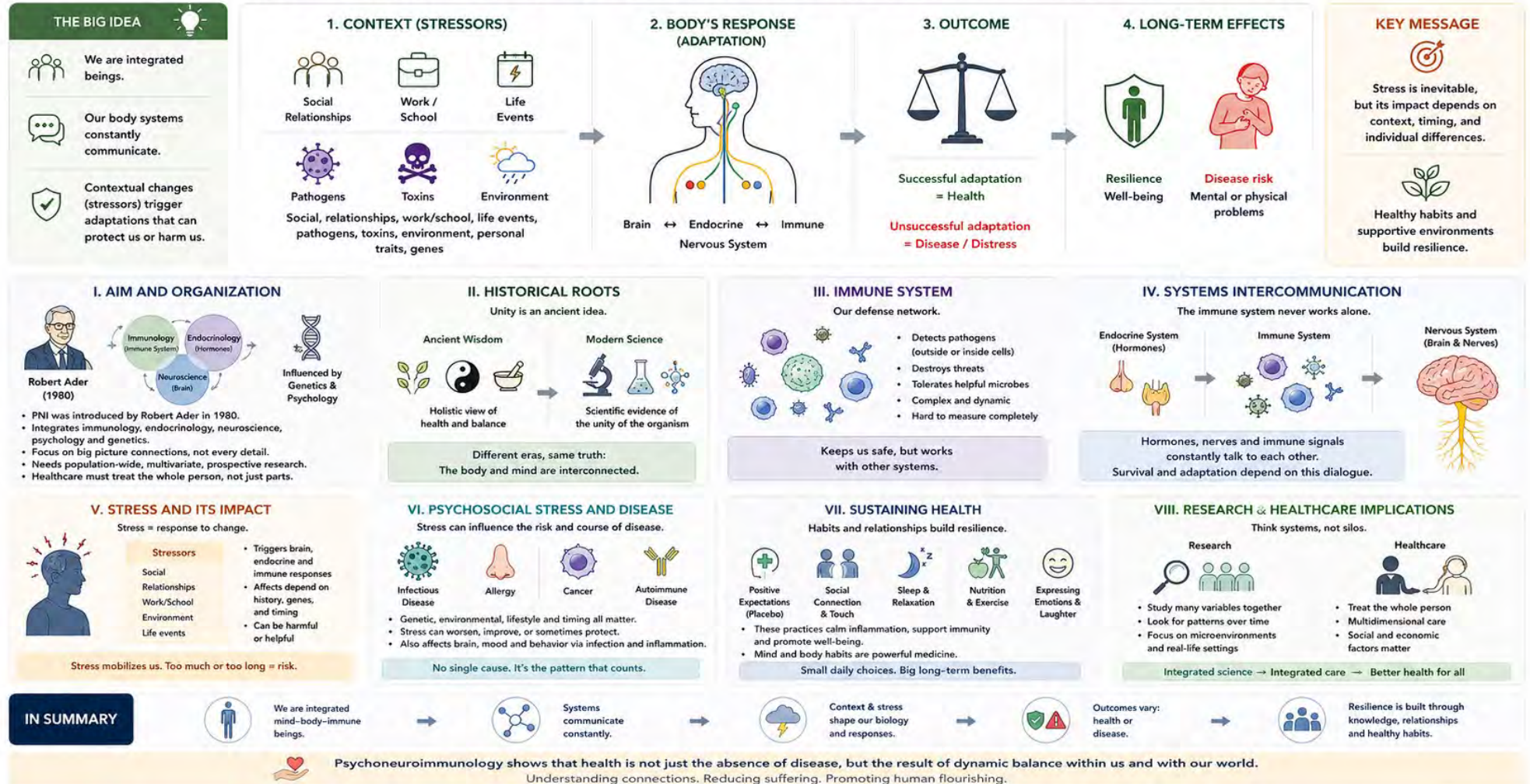
6 the foot was entirely uninjured.

J P Fisher et al.
BMJ 1995;310:70

thebmj

PSYCHONEUROIMMUNOLOGY (PNI) at a Glance

The science of how mind, brain, body and immune system work together to maintain health and prevent disease.





Meditation

How to Practice Meditation

Meditation is not simply about emptying the mind. It is a process of reflecting on your day, organizing your thoughts, and setting a clear direction for the future. Rather than trying to stop all thoughts, meditation encourages us to return to our natural state of kindness, compassion, and inner balance.



A simple way to practice meditation

1



Settle Your Body and Breath

Sit quietly in a comfortable position and allow your breathing to become slow and natural.

2



Reflect on Your Day

Reflect honestly on your words, actions, and thoughts throughout the day.

3



Observe with Kind Awareness

Notice what went well and what could be improved, without judging or blaming yourself.

4



Let Go

Let go of unnecessary worries, attachments, and negative emotions.

5



Set an Intention

End your practice by setting a clear intention to live tomorrow with greater kindness, wisdom, and compassion.



Key Message

Meditation is a daily practice of self-reflection and mental organization. By reviewing the past, letting go of what is unnecessary, and setting a positive intention for the future, **we cultivate a calmer mind, greater emotional balance, and a more meaningful way of living.**

Clinical Evidence for Meditation: Effects on Mind and Body

A growing body of research shows that meditation improves a wide range of physical and mental health outcomes.



1 Anxiety, Depression and Stress



RCTs and meta-analyses show significant reductions in anxiety, depression, and stress.

2 Chronic Pain



Meta-analysis of RCTs shows improvement in pain, function, and quality of life.

3 Fatigue



Meta-analysis of RCTs shows meditation is effective for fatigue management.

4 PTSD



MBSR significantly reduces depressive symptoms and improves quality of life.

5 Cognitive Function



Meta-analysis shows meditation significantly improves overall cognitive function.

6 Sleep



Systematic review shows significant improvement in sleep in adults.

7 Blood Lipids



- Mindfulness-based:
↓ total cholesterol and triglycerides
- Ayurveda-based:
↓ total cholesterol
- Eastern-style:
↑ HDL cholesterol

8 Vipassana Meditation



Systematic review shows **benefits across** psychological, physiological, neurobiological, and behavioral domains.

Summary of Evidence Levels



Anxiety, Depression and Stress

High

(Many RCTs, meta-analyses)



Chronic Pain

Moderate-High



Fatigue

Moderate



PTSD

Moderate



Cognitive Function

Moderate



Sleep

Moderate



Cardiovascular Risk Factors (Lipids, etc.)

Early-Moderate



Vipassana Meditation

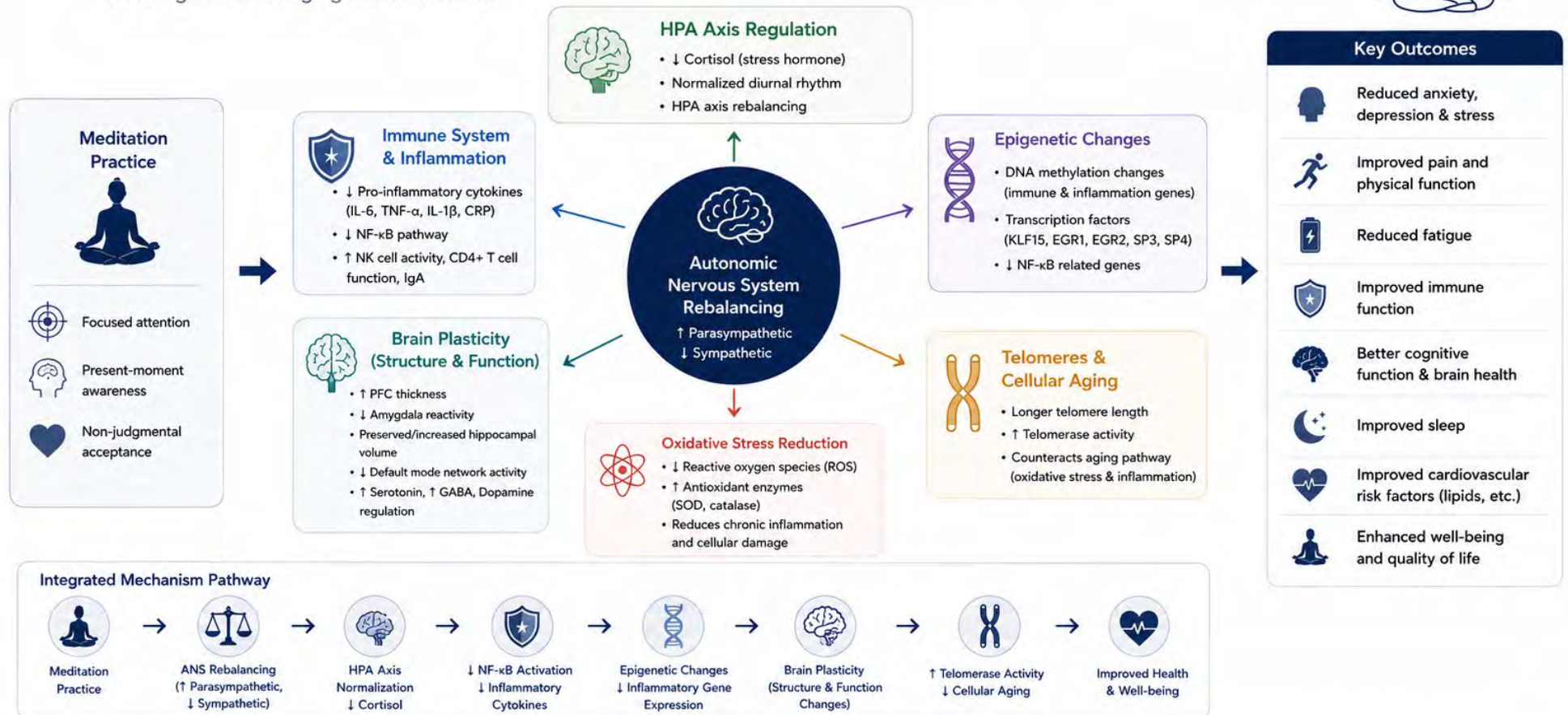
Moderate

RCT: Randomized Controlled Trial | MBSR: Mindfulness-Based Stress Reduction | GAD: Generalized Anxiety Disorder
MCI: Mild Cognitive Impairment | HDL: High-Density Lipoprotein

Sources: See corresponding studies and reviews (2010–2025).

How Meditation Works: Key Mechanisms and Health Benefits

Meditation influences interconnected systems—from stress regulation to immunity and gene expression—resulting in wide-ranging health benefits.



ANS: Autonomic Nervous System; HPA: Hypothalamic–Pituitary–Adrenal Axis; HRV: Heart Rate Variability;
MBSR: Mindfulness–Based Stress Reduction; NF-κB: Nuclear Factor kappa B

Sources: See corresponding studies and reviews (2010–2025).

Tai Chi & Qigong

Ancient practices. Modern benefits.

Both Tai Chi and Qigong are gentle mind-body practices that can improve your physical and mental well-being.

Tai Chi can improve



Balance



Flexibility



Muscle strength



Stress management



Quality of life

Qigong combines



Breathing



Gentle movement



Mental focus



Relaxation



Body awareness



Improve balance
and coordination



Reduce stress
and tension



Enhance strength
and flexibility



Support mental
clarity and focus



Enhance overall
quality of life

Move gently. Breathe deeply. Live well.

Clinical Evidence for Tai Chi & Qigong

High-quality studies show these mind-body practices improve physical, mental, and overall health.



TAI CHI — CLINICAL BENEFITS

1 Musculoskeletal & Pain



- Knee osteoarthritis: pain and function improved
- Chronic musculoskeletal pain: benefits confirmed
- Chronic low back pain: pain & disability improved

Optimal dose: ≥3 times/week, ≥12 weeks

2 Cardiovascular & Metabolic



- Blood pressure reduced (SBP -6.14 mmHg, DBP -3.45 mmHg)
- HDL-C improved, 6-min walk distance increased
- Type 2 diabetes: improves blood glucose, blood pressure, and QoL
- **High certainty** for osteoporosis (bone density) and hypertension (blood pressure)

3 Mental Health & Cognition



- Depression (older adults): improves mood, metabolic markers, cognition, and QoL
- Anxiety, depression, sleep: best effects with 3–5 sessions/week
- Mild cognitive impairment (MCI): cognitive function improved
- Type 2 diabetes + MCI: contributes to cognitive recovery

4 Balance & Fall Prevention



- Improves balance, gait speed, and confidence
- Reduces risk of falls
- High level of evidence and recommended in clinical guidelines

KEY TAKEAWAYS



Improves physical, mental, and cognitive health



Enhances balance and reduces fall risk



Regular practice (≥3 times/week, ≥12 weeks) is most effective



Safe, low-cost, and suitable for a wide range of people

QIGONG — CLINICAL BENEFITS

1 Stress & Mental Health



- Lowers stress, cortisol, and perceived stress
- Reduces anxiety and depression
- Improves physical function
- **Baduanjin** is the most studied Qigong form

2 Quality of Life in Cancer Patients



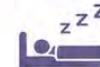
- Improves overall quality of life
- Reduces fatigue, improves sleep
- Enhances immune function (e.g., NK cells)
- Reduces anxiety and improves mental health

3 COPD (Chronic Obstructive Pulmonary Disease)



- Improves exercise tolerance, dyspnea, and nutrition
- Forms such as **Liuzijue** and **Wuqinxin** are effective for pulmonary rehab
- Improves lung function (FEV1) and mental health

4 Sleep



- Improves sleep quality in older adults

5 Chronic Low Back Pain



- RCTs (8 studies, n=729, 4–24 weeks)
- Reduces pain and functional disability
- Effective non-pharmacological approach

KEY TAKEAWAYS



Reduces stress, anxiety, and depression



Enhances quality of life and immune function in cancer patients



Improves lung function and exercise capacity in COPD



Improves sleep quality



Reduces pain and disability in chronic low back pain



OVERALL BENEFITS



Less stress, anxiety, and depression



Better sleep and rest



Better cognition and memory



Lower blood pressure & better cardiovascular health



Stronger immune function



Better balance & fall prevention



Improved quality of life

RCT: Randomized Controlled Trial | HDL-C: High-Density Lipoprotein Cholesterol | DBP: Diastolic Blood Pressure | SBP: Systolic Blood Pressure | FEV1: Forced Expiratory Volume in 1 Second
QoL: Quality of Life | NK: Natural Killer Cell | COPD: Chronic Obstructive Pulmonary Disease

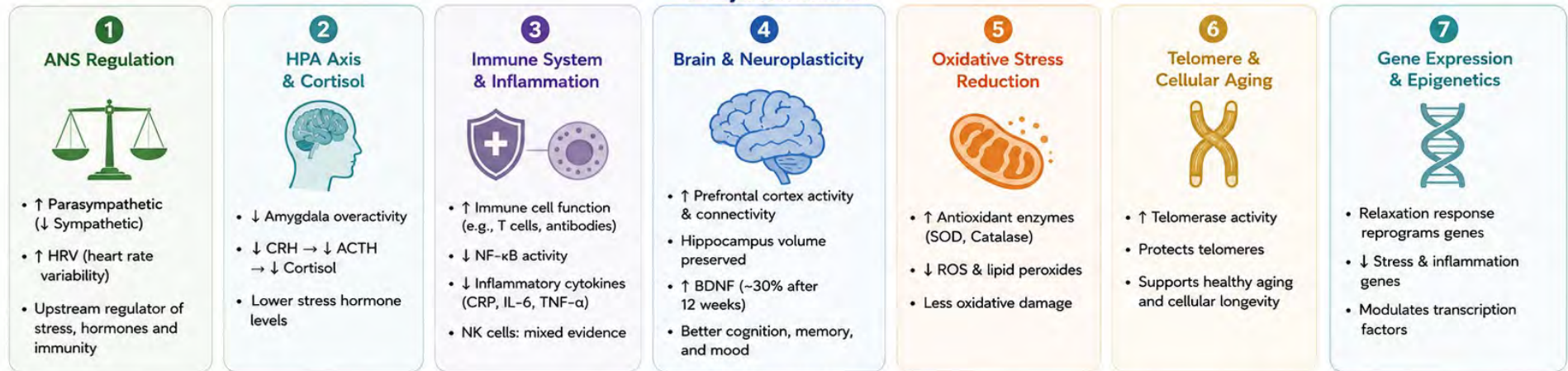
Sources: See corresponding studies and reviews (2014–2025).

Qigong & Tai Chi (TCQ): How They Work

Movement + Breathing + Intention work together to regulate body and mind.



7 Key Mechanisms



Integrated Mechanistic Pathway



ANS: Autonomic Nervous System; HPA: Hypothalamic-Pituitary-Adrenal Axis; HRV: Heart Rate Variability; NF-κB: Nuclear Factor kappa B; BDNF: Brain-Derived Neurotrophic Factor; ROS: Reactive Oxygen Species.

Sources: See corresponding studies and reviews (2024–2025).

Yoga

Yoga integrates



Breathing



Stretching



Strength



Balance



Mindfulness



Key Message

*Movement, breathing, and awareness
work together.*



Clinical Evidence for Yoga: Summary of Systematic Reviews

Yoga improves physical and mental health across a wide range of conditions.



1 HIGHEST LEVEL EVIDENCE: UMBRELLA REVIEW (2025)

- Wang et al., Medical Review, 2025
- 51 systematic reviews (34 meta-analyses)
- 579 RCTs, 28,403 participants
- AMSTAR 2 for quality GRADE for evidence level
- Overall effect size: SMD -0.61 (95% CI: -0.73 to -0.49)

Evidence Level	Outcome	Effect Size (SMD)
Strong	Depression	-0.52 ($I^2=6%$, $p<0.001$) ↓
Strong	Systolic Blood Pressure	-0.48 ↓
Strong	Diastolic Blood Pressure	-0.39 ↓
Strong	Fasting Blood Glucose	-1.24 ↓
Strong	Postprandial Blood Glucose	-0.70 ↓
Strong	Fatigue	-0.40 ↓
Moderate	Anxiety	-0.55 ($I^2=60%$) ↓
Moderate	HbA1c	-0.72 ↓
Low	Pain	-0.72 ($I^2=75%$) ↓
Low	Arthritis	-1.08 ($I^2=98%$) ↓

SMD: Standardized Mean Difference

2 EVIDENCE LEVEL BY CONDITION (SUMMARY)

✓ Strong Evidence

- Low Back Pain
- Depression
- Blood Pressure
- Blood Glucose
- Fatigue



— Moderate Evidence

- Anxiety
- Type 2 Diabetes (HbA1c)
- Cancer-related Fatigue
- Menopausal Symptoms
- COPD
- Osteoarthritis



! Evidence Limited

- PTSD
- Other pain conditions
- Long-term outcomes



3 MAJOR GUIDELINES RECOMMENDATIONS



ACP (2017)

Recommends yoga for acute, subacute, and chronic low back pain (non-pharmacological therapy)



ASCO (2022)

Recommends yoga for cancer-related fatigue, anxiety, and sleep disturbance



ESC (2021)

Mentions mind-body exercises including yoga for cardiovascular prevention



NIH NCCIH

Recognizes yoga as an evidence-based complementary health approach



KEY TAKEAWAY



Strongest evidence for mental health (depression, anxiety) and metabolic risk factors (BP, glucose).



Consistent benefits for cancer-related fatigue and quality of life.



Effective as an adjunct therapy, not typically a standalone cure.



More high-quality, well-designed RCTs with long-term follow-up are needed.

How Yoga Works: Psychoneuroimmunological (PNI) Mechanisms

Yoga (postures, breathing, meditation) modulates interconnected pathways in the brain, nervous, endocrine, and immune systems to improve health.



1 Autonomic Nervous System (Vagal Pathway)



- Vagal tone ↑ (HRV ↑)
- Inflammatory reflex → cytokine production ↓
- Sympathetic activity ↓

2 HPA Axis Regulation



- Cortisol ↓
- Stress response dampened
- Immune suppression relieved

3 Inflammatory Pathway Modulation



- Pro-inflammatory cytokines (IL-6, TNF- α , CRP) ↓
- Anti-inflammatory cytokines (IL-10, TGF- β) ↑
- Treg cells ↑

4 Gene Expression & Epigenetic Changes



- NF- κ B and pro-inflammatory genes ↓
- Anti-inflammatory genes (TGF- β , IL-10, FoxP3) ↑
- Stress resilience & repair ↑

5 Neuroplasticity & Brain Changes



- Hippocampus preserved
- Prefrontal cortex activity ↑
- Amygdala reactivity ↓
- BDNF ↑

6 Endocrine-Immune Connections



- Cortisol, adrenaline ↓
- Serotonin, oxytocin, melatonin ↑
- Immune cell function ↑

Integrated PNI Pathway



Yoga
(Postures +
Breathing +
Meditation)



Autonomic Balance
Vagal ↑
Sympathetic ↓



HPA Axis
Cortisol ↓



Immune Modulation
Inflammation ↓
Treg & IL-10 ↑



Gene & Epigenetic Changes
NF- κ B ↓
Resilience ↑



Brain Function
PFC ↑ Amygdala ↓
BDNF ↑



Clinical Outcomes
Depression ↓ Anxiety ↓
Blood pressure ↓ Pain ↓
Fatigue ↓ Glycemic control ↑



KEY TAKEAWAY

Yoga acts through interconnected PNI pathways to reduce stress and inflammation, restore immune balance, and support brain health—leading to better physical and mental well-being.



Strongest evidence
Mental health (depression, anxiety) and cardiometabolic markers (blood pressure, glucose).



Best as an adjunct
Effective as complementary therapy alongside standard care.



Research needs
More high-quality RCTs with long-term follow-up to confirm mechanisms and outcomes.

Summary: Evidence that the Relaxation Response Improves Health

Relaxation techniques such as meditation, mindfulness, yoga and Tai Chi improve physical and mental health.



Relax the mind,
heal the body.

1 Better Blood Pressure & Greater Survival

4 RCTs (n=430) of Transcendental Meditation
15–20 min, twice daily



↓
Lowers
blood
pressure

Meditation	No meditation
100% alive	77% alive



23%
increase in
survival

Trials were small, but **consistent benefits** seen
with similar practices (yoga, Tai Chi).

2 Less Anxiety, Depression & Stress

Systematic review of 47 RCTs (n=3,515)



Stress
↓ 10%+



Anxiety
↓ 10%+



Depression
↓ 10%+



Improves
quality of life



Example:
Dementia caregivers
(n=78)

25%
less stress



Simple education
& support

Depression reduced 10% more (greater than many drugs).

3 Safe & Effective



- Similar to many common drugs
- Can be used together with medications
- No significant harmful side effects

Growing number of systematic reviews
show positive benefits across many
health conditions.

4 Improves Many Health Conditions



Anxiety & Stress
74 trials (n>5,000)
Reduces anxiety
by over 10%



Arthritis
11 trials
Reduces pain



Asthma
15 trials
Improves lung
function



Depression
12 trials
Reduces symptoms
Prevents relapse



Diabetes Mellitus
9 trials
Improves symptoms
in Type II diabetes
& blood glucose



Hypertension
107 studies
Lowers blood
pressure



Insomnia
112 studies
Improves sleep



IBS
8 trials
Reduces IBS
symptoms



Low Back Pain
10 RCTs (n=967)
Reduces pain &
improves function



Multiple Sclerosis
4 high-quality RCTs
Reduces MS
symptoms



Cancer Patients' Wellbeing
3 RCTs
Improves quality
of life



HIV/AIDS
6 trials
Lowers stress,
anxiety, depression

5 Additional Benefits



Boosts the immune system
Some studies show improved
immune function.



Helps you solve problems
Enhances creativity and
problem-solving.



Enhances overall wellbeing
More calm, better relationships,
and greater resilience.



**A calmer mind leads to
a healthier, happier life.**



KEY TAKEAWAY

Relaxation is not a luxury.
It is a powerful tool for better
health and a longer life.



Practice daily
15–20 minutes



Calm your mind



Strengthen
your body



Live longer,
live better

Acupuncture

Ancient practice. Modern scientific evaluation.

Acupuncture stimulates specific points on the body with fine needles to activate the body's natural healing ability.

With more than **2,000** years of clinical history, modern science explains its effects through multiple mechanisms across the nervous, immune, and endocrine systems.



Chronic pain



Headache



Neck pain

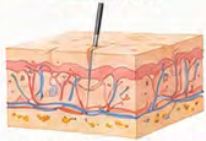


Some stress-related symptoms



HOW ACUPUNCTURE WORKS: MULTI-SYSTEM MECHANISMS

1 Peripheral Stimulation



- Needle stimulation at acupoints
- Activates local nerves, connective tissue and immune cells
- Releases adenosine, ATP and neuropeptides

2 Neural Pathways



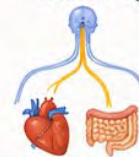
- Signals travel to spinal cord
- Gate control & DNIC inhibit pain signals
- Endogenous opioids released

3 Brain Regulation



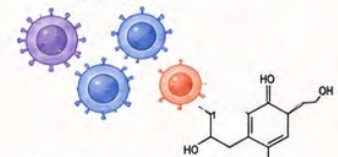
- Activates brain regions (PAG, limbic system, insula, thalamus)
- Modulates pain perception, emotion and cognition
- Normalizes brain networks (e.g., DMN↓)

4 Autonomic Nervous System



- Activates vagus nerve
- Triggers cholinergic anti-inflammatory pathway
- Balances sympathetic and parasympathetic activity

5 Immune & Endocrine Effects



- Regulates immune cells and cytokines (↓ inflammation)
- Modulates HPA axis (↓ cortisol, ↑ endorphins, serotonin, oxytocin)

Clinical Evidence for Acupuncture: Summary of Systematic Reviews

Evidence from systematic reviews (SR) and meta-analyses over the past decade



1 HIGHEST LEVEL EVIDENCE: CPG OVERVIEW (2025)

BMC Complement Med Ther, 2025



17 clinical practice guidelines (CPGs) from 9 databases (2014–2024)
35 recommendations extracted



60% recommended acupuncture use
17.1% recommended against



Manual acupuncture mentioned in 74.3% of recommendations

Top conditions covered



Shoulder pain/
Frozen shoulder 40%



Low back pain 31.4%



Knee osteoarthritis 22.9%



Neck pain 5.7%

3 SUMMARY OF EVIDENCE LEVELS

Condition	Evidence Strength	No. of SR/MA
Low back pain (chronic)	★★★★★	5+
Migraine prevention	★★★★☆	5+
Insomnia (chronic)	★★★☆☆	3+
Neck pain (chronic)	★★★☆☆	3+
Knee osteoarthritis	★★★☆☆	4+
Depression	★★★☆☆	3+
Cancer-related pain	★★★☆☆	2
Chronic urticaria	★★★☆☆	2
Post-stroke rehabilitation	★★★☆☆	3+ (China studies predominant)
IBS	★★★☆☆	2
Preoperative anxiety	★★★☆☆	2

★★★★★ Strong ★★★☆☆ Moderate ★★☆☆☆ Low ★☆☆☆☆ Very low

2 EVIDENCE BY CONDITION: KEY SR/META-ANALYSES



Low Back Pain (chronic)

- Umbrella review 2024: strong evidence for short-term pain relief
- Cochrane 2020: moderate quality—pain & function improvement
- Network meta-analysis 2025 (63 RCTs, n=9,454): individualized acupuncture and EA + exercise superior to sham

Evidence strength: Strong



Migraine Prevention

- SR+MA 2025 (23 RCTs): reduced attack frequency, days, and intensity
- SR+MA 2023: sustained effect up to 3 months
- Comparable or superior to medication prevention
- ≥16 sessions more effective than 6–12 sessions

Evidence strength: Strong



Neck Pain (chronic)

- SR+MA 2024 (18 RCTs): continuous pain reduction at 3 and 6 months
- Both immediate and mid-term durable effects

Evidence strength: Moderate



Knee Osteoarthritis

- Acupuncture: pain and function improvement (Cochrane included)
- Moxibustion: pain relief and function improvement
- Acupuncture + moxibustion may provide additional benefit

Evidence strength: Moderate



Depression

- SR+MA 2025 (66 studies): reduced depressive symptoms as adjunct
- Post-stroke depression: acupuncture + moxibustion effective

Evidence strength: Moderate



Insomnia (chronic)

- SR+MA+TSA 2025: shorter sleep onset, improved sleep efficiency vs sham
- Placebo effect separately analysed

Evidence strength: Moderate



Post-stroke Aphasia

- Meta-analysis 2024: acupuncture + moxibustion with rehabilitation improves language recovery

Evidence strength: Moderate



Chronic Urticaria

- SR+MA 2025 (22 RCTs): improved response rate, lower recurrence, lower activity score, better quality of life
- TSA confirms robustness

Evidence strength: Moderate



Cancer-related Pain

- SR+MA 2025 (GRADE): acupuncture as adjunct significantly reduces chronic cancer pain
- Good safety profile

Evidence strength: Moderate



Irritable Bowel Syndrome (IBS)

- SR+MA 2023: acupuncture + moxibustion improves IBS symptoms vs medication or sham

Evidence strength: Low–Moderate



Preoperative Anxiety (Gynecology)

- SR+MA 2024: acupuncture + moxibustion reduces preoperative anxiety
- Good safety profile

Evidence strength: Moderate

4 GUIDELINE RECOMMENDATIONS

ACP (2017)	NICE (UK)	German S3 Guideline	ASCO (2022)	Korean Medicine CPG (2024)
Recommends acupuncture as a non-pharmacologic option for chronic low back pain	Recommends acupuncture for chronic primary headache (up to 10 sessions)	Includes acupuncture for chronic low back pain and migraine	Mentions acupuncture as adjunct for cancer-related pain and nausea	Recommends acupuncture for musculoskeletal, neurological and mental disorders

5 CONCLUSION



Strongest evidence for chronic low back pain and migraine prevention.



Moderate evidence for insomnia, neck pain, knee osteoarthritis, depression, and cancer-related pain.



Methodological limits (sham control, heterogeneity) constrain the upper bound of evidence.



Acupuncture is recommended as an adjunct therapy in many major guidelines.



Acupuncture is a safe and effective adjunct therapy for a wide range of conditions. Individualised treatment and integration into standard care are key.

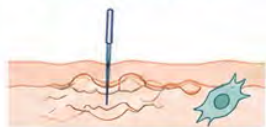
Mechanisms of Acupuncture and Moxibustion

Multi-system regulation from peripheral stimulation to clinical benefits



1 PERIPHERAL MECHANISMS

Tissue & Nerve Activation



- Needle insertion winds collagen and activates fibroblasts
- Releases ATP and neuropeptides
- Changes tissue tension and activates sensory nerves
- Related to De Qi sensation

Mast Cell Activation



- Acupuncture: TRPV2/4
- Moxibustion: TRPV1/3
- Degranulation → histamine, ATP, adenosine, prostaglandins
- Adenosine → A1 receptor → local analgesia

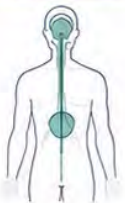
3 CENTRAL NERVOUS SYSTEM



Neuroimaging (fMRI) shows activation of multiple brain regions and networks

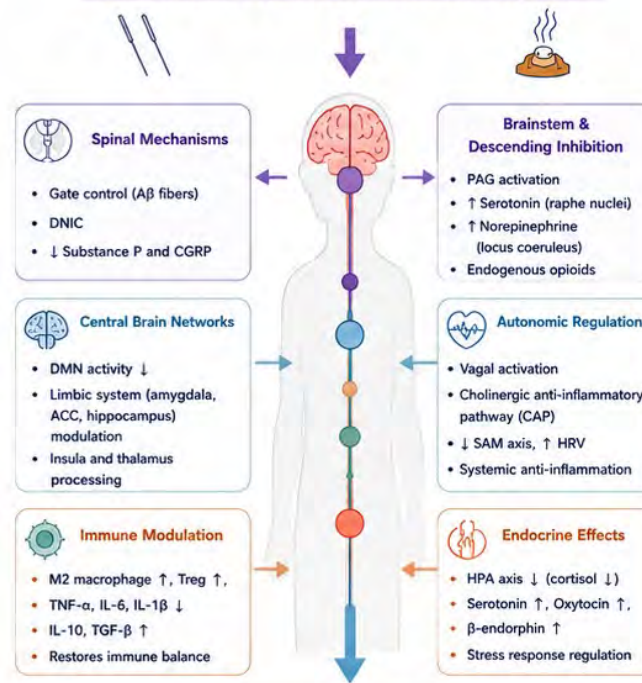
- DMN: self-referential thinking ↓
- Limbic system: emotion regulation
- Insula: interoception processing
- Thalamus: sensory filtering

5 AUTONOMIC NERVOUS SYSTEM



- Afferent signals → brainstem → vagus efferent activation
- Activates cholinergic anti-inflammatory pathway via spleen ($\alpha 7$ -nAChR)
- ↑ HRV, ↓ sympathetic activity and catecholamines
- Acupoint specificity (e.g., ST36 vs ST25) leads to different autonomic responses

ACUPUNCTURE (NEEDLE) / MOXIBUSTION (HEAT)



CLINICAL OUTCOMES



Pain relief



Reduced inflammation



Autonomic balance



Better mood & sleep



Improved function & quality of life

2 NEUROLOGICAL MECHANISMS



Spinal Level

- Gate Control Theory: $A\beta$ fibers inhibit pain signals (C fibers)
- DNIC: diffuse pain inhibition
- ↓ Substance P and CGRP in dorsal horn



Endogenous Opioid System

- Low frequency (2 Hz): β -endorphin, enkephalin (μ , δ)
- High frequency (100 Hz): dynorphin (κ)
- Mixed frequency: whole spectrum activation



Descending Inhibition

- PAG → raphe nuclei (serotonin ↑)
- PAG → locus coeruleus (norepinephrine ↑)
- Triple pathway inhibits pain transmission

4 THERAPEUTIC EVIDENCE (Strength of Evidence)

Strong	Moderate	Moderate	Moderate	Low-Moderate
Low back pain (chronic) Migraine prevention	Insomnia	Neck pain (chronic) Knee OA	Depression Cancer-related pain	IBS Urticaria Post-stroke rehabilitation

Overall: Strongest evidence for chronic low back pain and migraine prevention.

6 GUIDELINE RECOMMENDATIONS

ACP (2017)	NICE (UK)	German S3 Guideline	ASCO (2022)	Korean Medicine CPG (2024)
Recommends acupuncture for chronic low back pain	Recommends for chronic primary headache (up to 10 sessions)	Includes acupuncture for low back pain and migraine	Adjunct for cancer pain and nausea	Recommends for musculoskeletal, neurological, and mental disorders

Abbreviations: DNIC, diffuse noxious inhibitory control; PAG, periaqueductal gray; DMN, default mode network; OA, osteoarthritis; IBS, irritable bowel syndrome.

Updated: May 2025



Summary: Acupuncture and moxibustion act through interconnected peripheral, neurological, autonomic, immune, and endocrine mechanisms to reduce pain and inflammation, restore balance, and improve overall well-being.

Neuroplasticity: Your Brain Can Change

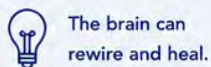
The brain is not hard-wired. It can **change**, **adapt**, and **heal**—at any age.



1 The Brain Can Recover



- Even after injury, the brain can regain lost functions.
- Recovery takes time, determination, and practice.



The brain can rewire and heal.

2 Science Proved It



- Studies of stroke patients and monkeys showed the brain can reorganise itself with experience.
- Disuse weakens connections; practice strengthens them.



Use it or lose it—use it to improve it.

3 How the Brain Changes



- Repeated behaviours form neural pathways (habits).
- Rewards reinforce these pathways.



Neural pathways are shaped by repetition and reward.

4 Change Is Possible (BUT Takes Effort)



- The brain can form new connections at any age.
- Habits and emotions are powerful and prefer the familiar.



Change happens—but it takes conscious effort and time.

5 How to Change a Habit

A. Change an Old Habit



Step 1
Identify the habit



Step 2
Interrupt the cycle



Step 3
Repeat & reinforce

B. Create a New Habit



Do something different and rewarding. Repeat until it becomes your new habit.



Small, consistent actions build new pathways.

6 Key Takeaway



The brain is flexible, not fixed.



Practice rewires your brain.



Better habits lead to better health and life.



It's never too late to change.



Small steps today, big changes tomorrow.



In Summary

Neuroplasticity is the brain's ability to adapt by forming and strengthening new connections throughout life.



Why It Matters

It underlies recovery from injury, learning, mental health, and healthy ageing.



Remember

Believe. Practice. Repeat.
Your brain can change!

Choosing the Right Doctor/Teacher for Better Health

The right professional—qualified, knowledgeable, and empathetic—helps you learn safely, apply correctly, and achieve the full benefits of care and mind–body practices.

1. Medical Care: Choose the Right Doctor



- Knows evidence and provides appropriate diagnosis and treatment
- Empathetic and cares about you
- Communicates well and respects your values
- Supports you in decisions and follow-up

Right doctor → Right care → Better outcomes

2. Mind–Body Practice Teachers: Choose Qualified, Safe, and Empathetic Teachers

For practices like Tai Chi, Qigong, Yoga, and Meditation, the right teacher is just as important as the right doctor.

Tai Chi



Qigong



Yoga



Meditation



Certified & Qualified



Safety First



Empathetic & Supportive



Individualized Guidance



Progressive Learning



Right teacher → Learn correctly & safely → Full benefits

A compassionate doctor or teacher who communicates well is vital when facing complex decisions, further treatment, or palliative care.



Emotional support



Shared decisions



Clear communication



Better quality of life

3. TCM Therapies: Choose Qualified TCM Doctors



Licensed TCM doctor with formal training and clinical experience



Individualized treatment based on your condition



Safe, evidence-informed, and appropriate care



Communicates well and supports your well-being



Right TCM doctor → Appropriate care → Better health

4. Why It Matters



Learn safely and avoid injury or complications



Learn correctly and build good habits



Experience the full benefits for body and mind



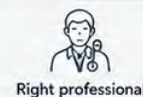
Stay motivated and supported on your journey

6. How to Choose

- Check certifications and credentials
- Look for relevant experience
- Ensure good communication and active listening
- Choose someone who understands your needs and respects your values
- Trust your intuition—feel safe, respected, and encouraged



The right doctor, teacher, or TCM doctor makes all the difference.
Choose professionals who are qualified, empathetic, and communicative.



Right professional



Right learning & care



Better health



Better life

5 Take-Home Messages

Small steps for your mind today, better health for your life tomorrow.



1 Your mind can change your body.

Your body is always listening.



- Stress, thoughts, and emotions affect your brain, hormones, and immune system.
- Mind and body are one integrated system.



KEY MESSAGE

The mind and body are one.

2 Breathe first.

Breathing is medicine you always carry.



- Slow, deep breathing quickly calms your body and mind.
- It lowers blood pressure, reduces anxiety, and improves focus.



KEY MESSAGE

Take a slow, deep breath before anything else.

3 Mind-body practices are evidence-based.

Ancient wisdom, validated by modern science.



- Proven benefits for stress, pain, sleep, mood, heart health, and quality of life.
- Safe, effective, and natural options for everyday health.



KEY MESSAGE

Ancient practices can be supported by science.

4 Small daily habits create lasting change.

Your brain can change and grow every day.



- Neuroplasticity means your brain can form new, healthy patterns.
- Just 10–20 minutes a day can lead to big, lasting changes.



KEY MESSAGE

Small daily practice leads to big, lifelong benefits.

5 Choose the right doctor and teacher.



Choose a doctor who knows evidence and is empathetic. Someone who listens, understands, and cares about you.



For Tai Chi, Qigong, Yoga, and Meditation, learn from certified and experienced teachers.



For acupuncture and TCM therapies, see a licensed TCM (Korean Medicine) doctor.



KEY MESSAGE

The right professional helps you heal better and live better.



Care for your mind,
care for your body.



Calm your mind
(Breathe)



Practice mind-body
techniques



Get the right care
and guidance



Better health



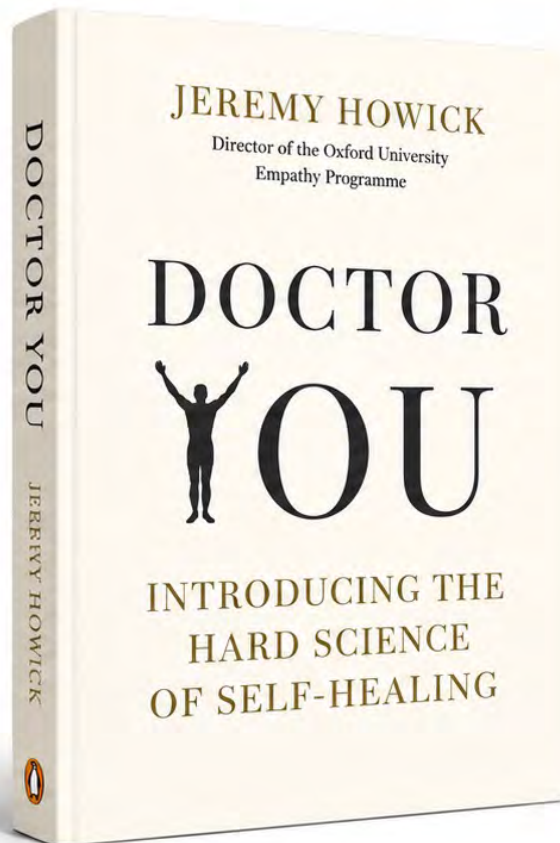
Better life

You have the power
to heal yourself.

Start today.



About the Book “Doctor You”



This book is based on the **author's own experiences and research**, and introduces practical ways to help you overcome illness by **activating the healing abilities within you.**



Some of the content in this lecture is based on and cites this book.

Its messages can support your journey toward better health and a more meaningful life.

Thank You!

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