

RANJANA YOGA CLASS

Yoga Physiology

Nerves, Hormones and Breath

Plain-language basics of the nervous, endocrine and respiratory systems and yoga

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General education only. Not medical advice. Speak with your doctor before starting any new practice.

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1. What these systems is

The nervous system carries signals between the brain and body. The endocrine system uses hormones as chemical messengers. The respiratory system moves air in and out of the lungs. They work together all day.

Yoga practices such as slow breathing and relaxation involve all three. Research is still developing, and results vary between studies, so claims need care.

The short answer

Slow breathing and relaxation can shift the body toward a calmer state for many people. Yoga does not treat hormone or nerve disorders. If you have a medical condition, use yoga alongside your doctor's care.

2. Before you begin: safety first

General education only. Check with your doctor first if you are pregnant, have high blood pressure, a heart, lung, joint or spine condition, osteoporosis, an eye condition such as glaucoma, or have had recent surgery or injury.

Stop and rest if you feel:

- sharp, pinching or burning pain (a mild stretch is fine, pain is a stop sign);
- dizziness, nausea or breathlessness;
- numbness or tingling, or pressure in the head or neck.

Breathing practices can affect blood pressure and breathing. Avoid forceful breathing or breath holds if you have heart disease, high or low blood pressure, asthma, epilepsy or you are pregnant, unless your doctor agrees. Stop if you feel dizzy.

3. The three systems

System	Main role	Yoga link
Nervous	Sends signals; includes the calming (parasympathetic) and alerting (sympathetic) branches.	Slow breathing and rest may help many people feel calmer.
Endocrine	Hormones regulate growth, energy, mood and stress responses.	Stress-related hormones are affected by many lifestyle factors; yoga is one of them.
Respiratory	Lungs and diaphragm move air.	The diaphragm is the main breathing muscle; belly breathing uses it well.

4. A simple breathing practice

- Sit or lie comfortably and place a hand on the belly.
- Breathe in through the nose and feel the belly rise gently.
- Breathe out slowly, a little longer than the inhale.
- Do five minutes. Stop if you feel dizzy.

5. Your four-week plan

Week	Focus	Length	What to notice
1	Belly breathing	5 min	Does your breath feel smoother?
2	Add a slow exhale	7 min	Do you feel calmer?
3	Add a gentle yoga routine	15 min	How is your stress?
4	Practise most days	10-15 min	Keep a short log.

6. Choosing a class or teacher

Teachers should explain that yoga supports relaxation but does not treat disease. Be wary of claims about balancing hormones or healing the nervous system.

- Tell the teacher about any injury, surgery, pregnancy or health condition before class.
- Ask which poses are optional; a good teacher says most are.
- If a teacher dismisses pain as part of the process, find another class.

7. Practising at home

At home, short daily breathing is enough. Use a quiet spot and avoid forcing the breath. A short walk or rest can also help.

8. Honest expectations

Studies suggest slow breathing and relaxation can reduce feelings of stress for many people. Effects on hormones and disease are not proven. If you have an endocrine, nerve or lung condition, see your doctor.

9. Common mistakes and fixes

Mistake	Fix
Forcing the breath	Keep it easy.
Believing hormone-balancing claims	Check evidence and ask your doctor.
Chest breathing only	Practise belly breathing.
Overdoing breath holds	Skip them as a beginner.
Ignoring symptoms	See a doctor for persistent problems.

10. Questions people ask

Does yoga reduce stress hormones?

Some studies report small effects, but results vary. It is not a treatment.

What is the vagus nerve?

A long nerve that helps control the calming branch of the nervous system. Claims about "stimulating" it need care.

Can yoga help asthma?

Some people find breathing practice helpful, but it does not replace medicines. Ask your doctor.

Is belly breathing correct?

It is a gentle way to use the diaphragm and is widely taught.

11. A pre-session checklist

- Have I eaten lightly, at least two hours ago, and had some water?
- Is my space clear, warm and free from interruptions?
- Do I know what I will practise, and how long I have?
- Is there anything in my body today (pain, tiredness, illness) that means I should do less?
- Do I know my stop signs: sharp pain, dizziness, breathlessness?

Running through these five questions takes less than a minute and prevents most beginner problems.

12. Your first week, day by day

Day	Suggestion
1	Read this guide. Try just the warm-up and the final rest.
2	Rest, or a five-minute walk.
3	Repeat day 1 and add one new pose or step.
4	Rest.
5	Practise a short version. Notice how you feel afterwards.
6	Write a few lines in the practice log.
7	Rest. Plan next week from what you noticed.

Three short sessions a week are a good start. Regular, gentle practice builds confidence, and rest days let the body adapt.

13. Glossary

Term	Plain meaning
Diaphragm	Main breathing muscle.
Hormone	A chemical messenger.
Parasympathetic	The calming branch of the nervous system.

Reminder

This guide is general education and not medical advice. It does not diagnose, treat or cure any condition. If you have a health concern, speak with your doctor before starting a new practice.

Practice log

Print this page and keep a short record. Notes help you see patterns over time.

Day	Minutes	Practice done	How it felt	Notes
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				