FlintRehab
Tools to spark recovery

FREE EDUCATIONAL WEBINAR

Numbness, tingling & sensory changes after stroke

Why your arm or hand can feel strange after stroke — and practical sensory retraining you can start at home.

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TODAY

What we'll cover

01 What "sensation" actually means

02 Why numbness and tingling happen

03 Why sensation matters for movement

04 Can sensation come back?

05 Five sensory retraining exercises, demonstrated

06 Tingling, burning and hypersensitivity

07 Safety: what sensory loss can make you miss

08 Three takeaways, then your questions

Questions are welcome in the chat throughout — we'll answer them at the end.

IF THIS SOUNDS FAMILIAR

"Why does my arm feel so strange?"

Here's how survivors commonly describe it.

"My hand feels asleep."

"I can feel something, but it doesn't feel normal."

"I get pins and needles."

"My arm feels heavy or disconnected."

"Hot and cold feel different."

"I can move my hand, but I can't tell what I'm touching."

THE IDEA BEHIND TODAY

Recovery isn't only about teaching the brain how to move again. Sometimes we help the brain relearn how to interpret what the body is feeling.

"Sensation" is really six things

Numbness isn't a single problem. Each of these can be affected separately.

Light touch

Can you feel something touching your skin?

Pressure

Can you tell how firmly something is pressing?

Temperature

Can you distinguish warm from cool?

Pain

Does something painful feel appropriately painful — or too much, or not enough?

Proprioception

Can your brain tell where your arm or leg is without looking at it?

Sensory discrimination

Can you tell the difference between two textures, shapes or objects?



Why the signal changes

Your skin, muscles and joints constantly send information toward the brain. After a stroke the receptors themselves may still work well — but the brain's ability to receive, organize or interpret those signals can be disrupted.

Body → Sensory signal → Brain → **Interpretation**

A stroke can interfere at different points in that processing network.

What that can feel like

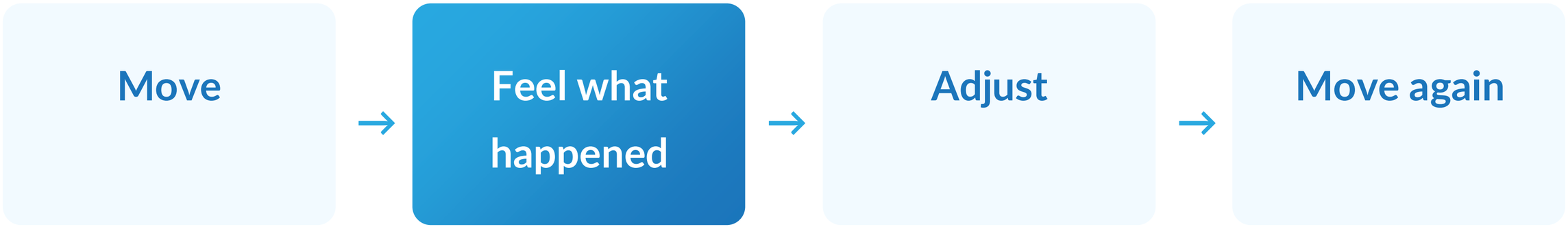
Any of these can follow a stroke — and more than one at a time.

- Reduced sensation or numbness
- Pins and needles
- Hypersensitivity
- Burning
- Altered temperature sensation
- A limb feeling heavy or foreign
- A limb feeling larger or smaller
- Not knowing where the limb is without looking

> **Strength asks, "Can I move it?" Sensation asks, "Can I accurately feel what is happening to it?" Those systems work together, but they aren't the same thing.**

Movement is a feedback loop

Every movement you make depends on feeling what just happened, then adjusting.

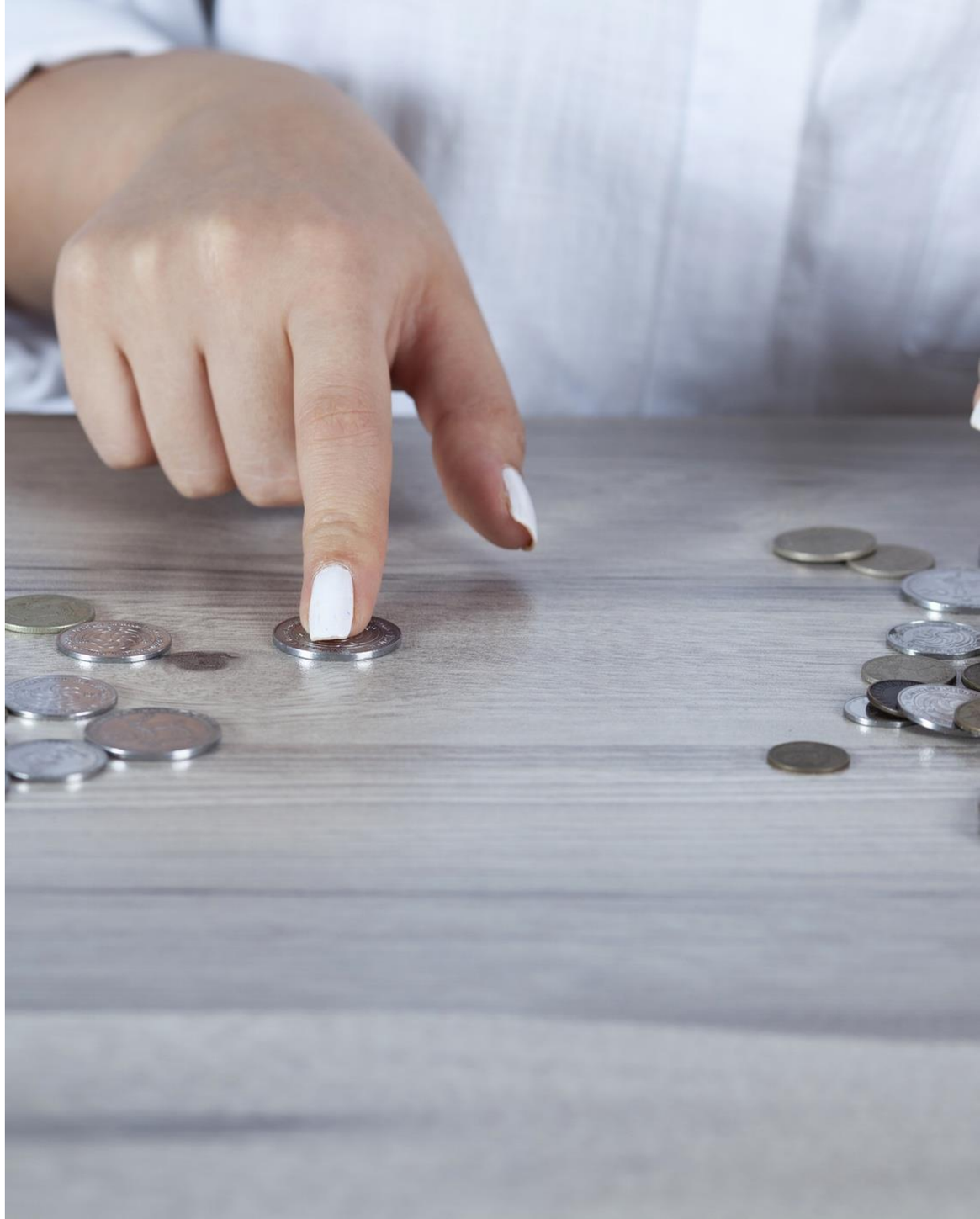


When sensory feedback is impaired, the loop can't close properly — and movement becomes harder even when strength is intact.

How impaired sensation shows up

Someone with reduced feedback may:

- Grip something too tightly, or not tightly enough
- Drop objects without realizing they're slipping
- Have difficulty placing the foot accurately
- Watch their hand or leg constantly while moving
- Struggle with fine motor control
- Have greater difficulty balancing
- Avoid using the affected side altogether



WHAT THE RESEARCH SUGGESTS

Sensory recovery and motor recovery often overlap.

Adding somatosensory discrimination training to task-oriented rehabilitation may improve some motor and functional outcomes.

The certainty of that evidence remains low — studies vary considerably, and we still need stronger research to know the best techniques and the right amount of practice.

"Can sensation come back?"

Sensory recovery can occur after stroke — but there isn't one predictable timeline.

Some people notice changes relatively quickly. Others experience gradual changes over months, or longer.

NEUROPLASTICITY

The brain adapts based on repeated experience. Sensory retraining gives it repeated, meaningful sensory information — and asks it to tell those inputs apart.



Stimulation is not training

This distinction changes how you practice at home.

STIMULATION

Something is touching the hand.

Passive. The brain isn't being asked to do anything with the information.

TRAINING

The person actively tries to identify, compare or interpret what they're feeling.

Active. This is what sensory retraining research actually involves.

LET'S PRACTICE TOGETHER

Five sensory retraining exercises

If you'd like to follow along, gather a towel, a cotton ball, a sponge, a few coins and a key.

EXERCISE ONE

Texture discrimination

GATHER

- Towel
- Cotton ball
- Sponge
- Velcro
- Smooth fabric

ASK

"Is this rough or smooth?"

"Which of these two feels rougher?"

"Are these the same, or different?"

> To progress: close the eyes.



EXERCISE TWO

Object recognition

Place a familiar object in the affected hand and try to identify it using touch rather than vision.

- Coin
- Key
- Spoon
- Ball

Identify by touch → Then look at it → Compare the two experiences



EXERCISE THREE

Touch localization

A caregiver touches different areas of the hand or arm — with the survivor's eyes closed.

"Where did I touch you?"

The survivor points to the location.

To progress: move from larger areas toward smaller, more precise ones.

EXERCISE FOUR

Position awareness

With the eyes closed, a caregiver moves a finger, wrist or arm slightly — and the survivor reports what happened.

VERSION ONE

"Did I move it up, or down?"

VERSION TWO

"Try to match this position with your other arm."

EXERCISE FIVE

Temperature discrimination

Practice telling warm from cool — carefully.

DO

Use mildly warm versus mildly cool.

DON'T

Never use extreme temperatures.

> **Impaired sensation increases the risk of burns and skin injury. If you can't reliably feel temperature, you can't reliably feel damage happening.**

THE KEY PROGRESSION

Combine sensation with real movement

- Pick up a cup
- Fold a towel
- Sort coins
- Button clothing
- Move objects of different weights
- Reach for household items

DON'T ONLY ASK

"Can you pick this up?"

ALSO ASK

"What does it feel like? How heavy does it feel? How much pressure are you using?"





When there's too much sensation

Some survivors don't experience numbness at all. Instead, normal sensory information can feel exaggerated or distorted.

- Tingling
- Burning
- Electrical sensations
- Pain from light touch
- Extreme sensitivity to temperature

More sensation isn't necessarily better sensation.

IMPORTANT

Painful sensory symptoms shouldn't be treated as something you push through.

Persistent burning, tingling, numbness or painful temperature sensations can be associated with central post-stroke pain — which occurs when stroke disrupts the pathways involved in processing pain and sensation.

Discuss these symptoms with your physician, neurologist or rehabilitation team. Treatment may be different from ordinary sensory retraining.

What sensory loss can make you miss

With reduced sensation, an injury can happen without a warning signal.

YOU MAY NOT NOTICE

- A burn or a cut
- Excessive pressure, or a blister
- Something caught underneath the foot
- An uncomfortable brace
- A hand resting against something hot

BUILD THESE HABITS

- Check the skin regularly
- Use vision to compensate when needed
- Be careful with hot water and heating pads
- Check water temperature with the unaffected side
- Wear appropriate footwear

> **If your brain isn't reliably warning you that something is dangerous, you have to use other systems — especially vision — to help protect yourself.**

Three things to take home

If you remember nothing else, remember these.

1

Sensory changes are different for everyone.

Numbness, tingling, altered temperature, poor position awareness and hypersensitivity can all occur.

2

Sensation and movement work together.

Improving how the brain interprets sensory feedback may support better movement and functional use.

3

Practice should be active and meaningful.

Touching textures is useful — but asking the brain to compare, identify and use that information during everyday movement matters more.

Where to learn more

Free stroke recovery education, exercise guides, and survivor stories.

RECOVERY BLOG

flintrehab.com/learn

QUESTIONS ABOUT RECOVERY

(909) 265-3070 · enrollment@flintrehab.com

This webinar is educational and isn't a substitute for individual medical advice. Talk with your care team about your own recovery plan.



YOUR QUESTIONS

What are you experiencing?

Sensory changes can look very different from person to person — so tell us what yours feel like.



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