

# Neurological Assessment

Howdy, y'all!

Neurological assessments tend to make nursing students second-guess themselves. I'll be the first to admit it. I think it's because neuro assessments are so nuanced – major changes can manifest in the most subtle ways.

I remember hovering over a patient with my pen light, doing sweep after sweep across their eyes because I couldn't tell if their pupil was fixed or constricting. I thought I could see a little movement... but maybe not?

Same with assessing movement. Did they move voluntarily? Did they move due to painful stimuli? Or did they involuntarily move due to an anoxic brain injury? Sometimes the difference is hard to spot, but clinically, it's huge.

But here's the thing I've discovered since those early days...yes, the neurological system is complex, but neuro checks aren't nearly as complicated as nursing school makes them seem. Once you understand what you're actually looking for (and why), they become much more manageable.

So, let's break down what actually matters at the bedside (at least to me).

## Beyond the Basics

We all know the routine check. Ask the patient their name, where they are, what day it is, and typically, why they're in the hospital or what happened to them. Then document "A&O×4", wipe your hands, and move on. But that's not a very good neuro assessment, is it?

A good neuro assessment picks up on things that might not make it into your charting. Is the patient's speech slower today? Are they taking longer to find words? Do they seem more lethargic? These subtle changes can signal developing issues long before more obvious symptoms appear.

## Level of Consciousness

What really matters here is how responsive and appropriate your patient is. Are they engaging naturally with you? Following the conversation? Answering questions appropriately? This matters because changes in responsiveness often happen before other measurable signs, giving you a critical early warning.

I had a patient once who was post-op from an uncomplicated surgery. During morning assessment, something felt off. She answered all my orientation questions correctly, but there was a noticeable delay – just a beat too long before each response. Nothing dramatic, but

different from her baseline. I mentioned it to her surgeon who decided to check her labs again. Turns out her sodium had dropped significantly overnight. We caught it early just because something didn't "feel right" in her responses.

Developing this awareness isn't something that happens overnight. I used to feel so awkward during those silences when I was assessing patients – now I realize those quiet moments of observation are when I notice the most important things.

## **Pupil Checks**

The textbooks give us PERRLA (pupils equal, round, reactive to light and accommodation), but here's what you're really looking for:

- Are both pupils the same size?
- Do they both constrict when you shine your light?
- Is the reaction prompt, or is it sluggish?

When I was a student, I found it helpful to practice pupil checks on my classmates in good lighting before trying in a dimly lit hospital room. The more normal pupils you see, the easier it becomes to spot when something's not right. If you're struggling to see if pupils are reacting, try dimming the room lights first before using your penlight - the contrast makes pupillary response much easier to observe.

For accommodation testing, have the patient focus on your finger as you move it from about 18 inches away toward their nose. You should see both pupils constrict as your finger gets closer. This checks the coordination between visual focus and pupillary response – a different neurological pathway than light response.

During my second week in the ICU, I noticed my sedated patient's right pupil was larger than the left. The night nurse had charted "PERRLA" just hours before. I called the provider, who ordered an immediate CT. Results showed early signs of increased intracranial pressure that wouldn't have shown up on regular vitals monitoring yet. Catching it early made a significant difference in the patient's outcome.

## **Motor Function**

When assessing motor function, we're looking for several key things: strength, symmetry, and coordination. Each gives us different information about neurological function.

Have your patient:

- Squeeze your fingers with both hands
- Push their feet against your palms
- Lift their arms and hold them there
- Raise their legs off the bed if they're able
- Follow simple commands like "touch your nose"

Beyond just strength, watch for subtle issues like:

- Tremors during movement
- Drift (when a raised arm slowly falls to one side)
- Coordination problems
- Differences between left and right sides

I've seen how early motor changes can signal serious issues. A slight left hand weakness in a patient became a full-blown stroke within hours. A subtle tremor turned out to be the first sign of medication toxicity. These small changes matter because they give us time to intervene before situations become critical.

One of my preceptors taught me to ask, "Could this person perform the same actions equally well with either side of their body?" It's a simple question that helps me focus on what matters.

## **Sensation**

For sensation checks, I ask patients to close their eyes, then touch different areas and have them tell me where they feel it. I keep it straightforward: "I'm going to touch you in a few places - just let me know when you feel it, and where."

When checking, I'll touch their shoulders, hands, thighs, and feet with my fingertips, comparing one side with the other. Differences between sides or changes from previous assessments are what I'm looking for.

For patients who have trouble giving clear feedback, try asking more specific questions. "Does this feel sharp, dull, or can you not feel it at all?" gives patients clear options rather than open-ended questions that might confuse them.

For unconscious patients, we're looking at responses to stimuli. A sternal rub might cause grimacing or movement away from the pressure. Nail bed pressure might cause withdrawal. These responses help us understand the level of neurological function when a patient can't communicate verbally.

Medications dramatically affect these responses. Sedatives and especially paralytics will alter or completely eliminate responses to stimuli. This doesn't invalidate your assessment – it just changes the context. A patient on propofol who doesn't respond to painful stimuli is expected; the same non-response in a patient without sedation is alarming.

## **When to Escalate Concerns**

Knowing when to get help is just as important as doing the assessment. Here are key situations that warrant immediate attention:

### **Neurological Red Flags:**

- New or worsening weakness on one side
- Unequal pupils (that weren't previously unequal)
- Decreasing level of consciousness
- Sudden confusion or change in mental status
- Slurred speech or difficulty finding words
- Any seizure activity
- Sudden severe headache described as "worst headache of my life"

When you see these changes, don't wait. Call your provider immediately and clearly communicate what you've found. The window for intervention in neurological emergencies is often measured in minutes, not hours.

## **What I Wish I'd Known Earlier**

These assessments become second nature with practice. At first, I was so focused on the technical parts – "Am I doing this right?" Now I find myself noticing subtle changes almost automatically.

I've learned that the value isn't in perfect technique or fancy terminology. It's in consistent assessment and recognizing changes from baseline. Your job isn't diagnosing – it's noticing the things that might matter and bringing them to the attention of the right people.

I once called a rapid response for a patient whose only change was a slight delay in responses and mild confusion. It felt like an overreaction at the time, but it led to catching a developing sepsis hours before it became obvious. Don't hesitate to speak up when something doesn't feel right, even if you can't put your finger on exactly why.

What part of neuro assessments do you find most challenging? Drop a comment below – I'd love to hear from you!