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Focal neurologic deficits

A focal neurologic deficit is a problem with nerve, spinal cord, or brain function. It affects a specific location, such as the left side of the face, right arm, or even a small area such as the tongue. Speech, vision, and hearing problems are also considered focal neurological deficits.

The type, location, and severity of the problem can indicate which area of the brain or nervous system is affected.

In contrast, a non-focal problem is not specific to a certain area of the brain. It may include a general loss of consciousness or emotional problem.

Sometimes, your health care provider may find a focal neurological deficit even if you don't have any symptoms.

Considerations

A focal neurologic problem can affect any of these functions:

- Movement changes, including paralysis, weakness, loss of muscle control, increased muscle tone, loss of muscle tone, or movements a person cannot control (involuntary movements, such as a tremor)
- Sensation changes, including paresthesia (abnormal sensations), numbness, or decreases in sensation

Other examples of focal loss of function include:

- Horner syndrome: small pupil on one side, one-sided eyelid drooping, lack of sweating on one side of the face, and sinking of one eye into its socket
- Not paying attention to your surroundings or a part of the body (neglect)
- Loss of coordination or loss of fine motor control (ability to perform complex movements)
- Poor gag reflex, swallowing difficulty, and frequent choking
- Speech or language difficulties, such as aphasia (a problem understanding or producing words) or dysarthria (a problem making the sounds of words), poor enunciation, poor understanding of speech, difficulty writing, lack of ability to read or understand writing, inability to name objects (anomia)
- Loss of a tendon reflex
- Vision changes, such as reduced vision, decreased visual field, sudden vision loss, double vision (diplopia)
- Hearing loss

Causes

Anything that damages or disrupts any part of the nervous system can cause a focal neurologic deficit. Examples include:

- Abnormal blood vessels (vascular malformation)
- Brain tumor
- Cerebral palsy
- Degenerative nerve illness (such as multiple sclerosis)
- Disorders of a single nerve or nerve group (for example, carpal tunnel syndrome)
- Infection of the brain (such as meningitis or encephalitis)
- Injury
- Stroke
- Transient ischemic attack (TIA)

Home Care

Home care depends on the type and cause of the problem.

When to Contact a Medical Professional

If you have any loss of movement, sensation, or function, contact your provider.

What to Expect at Your Office Visit

Your provider will take your medical history and perform a physical exam.

The physical exam will include a detailed examination of your nervous system function.

Which tests are done depends on your other symptoms and the possible cause of the nerve function loss. Tests are used to try to locate the part of the nervous system that is involved. Common examples are:

- CT scan of the back, neck, or head
- Electromyogram (EMG), nerve conduction velocities (NCV)
- MRI of the back, neck, or head
- Spinal tap

Alternative Names

Neurological deficits - focal

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