

# **RECORD SHEET: ADDITIONAL TESTS AND OBSERVATIONS OF THE NERVOUS SYSTEM**

These tests are often not needed but may sometimes be useful when you are not sure if a child has brain injury. For other signs of brain injury, see Chapter 9 on cerebral palsy. For tests of seeing and hearing, see p. 447 to 454.

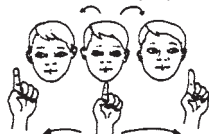
RECORD  
SHEET 3

## **Eye movement**

- eyes jerk, flutter, or roll up unexpectedly and repeatedly (brain damage, possible epilepsy—p. 233)
- one eye looks in a different direction or moves differently from the other (possible brain injury)

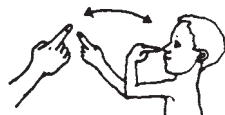
Move finger or toy in front of eyes from side to side and up and down.

- eyes follow smoothly (typical)
- eyes follow in jumps or jerks (possible brain injury)



## **Eye to hand coordination**

- moves finger from nose to object and back again almost without error—with eyes open, and also closed (typical)
- misses or has difficulty with eyes open (poor coordination, poor balance, or loss of position sense)



- has much more difficulty with eyes closed (loss of position sense)

## **Body movements**

- awkwardness or difficulty in controlling movements
- sudden or rhythmic uncontrolled movements
- parts of body twist or move strangely when child tries to move, reach, walk, speak, or do certain things

(All these may be signs of brain injury; see Chapter 9.)

Details of any of the above: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## **Seizures of different kinds (see Chapter 29)**

- sudden loss of consciousness with strange movements,
- brief periods of strange movements or positions,
- blank stares, \_\_\_ eye fluttering, \_\_\_ twitching.

**Developmental delay:** Is the child unable to do many different things that others her age can do? Which? (see Chapter 34)

- |                         |                           |
|-------------------------|---------------------------|
| — head control          | — sucking                 |
| — use of hands          | — eating                  |
| — rolling               | — playing                 |
| — creeping and crawling | — communication or speech |
| — sitting               | — behavior                |
| — standing and walking  | — self-care activities    |

## **Balance**

With the child in a sitting or standing position, gently rock or push him off balance.

- CHILD DOES NOT TRY TO KEEP FROM FALLING (poor balance—sign of brain injury in child over 1 year)
- CHILD TRIES NOT TO FALL by putting out his hands (fair balance)
- CHILD KEEPS FROM FALLING by correcting body position (good balance)



## **Balance test for the older, more stable child**

Have child stand with feet together.

- balance difficulty with eyes open—may be brain injury (or muscle-joint problem)
- balance difficulty much greater with eyes closed (probably nervous system injury)



## **Knee jerks and other “muscle jump” reflexes**

With the leg relaxed and partly bent, tap the cord just below the knee cap.

TYPICAL      REDUCED      OVER ACTIVE      KEEPS JUMPING



The knee jumps a little.



The leg moves **very little** or not at all. Typical of polio, muscular dystrophy, and other floppy paralyses.



A slight tap causes a **big jump**. Typical of spasticity from cerebral palsy, spinal cord injury, and other brain or spinal cord injury.



One tap causes the limb to jerk many times. Happens with spinal cord injury and some cerebral palsy.



You can also tap the heel cord and other cords near joint.

## **Great toe reflex**

Stroke the foot toward the toe with a somewhat pointed object (like a pen).

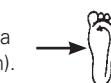
TYPICAL      NOT TYPICAL (in a child over 2)



toes bend down



toes bend up and spread



This is a sign of brain or spinal cord injury (Babinski's sign). May occur in any child under 2 years.