

# Rehabilitation Nursing/School of Nursing (Nurse)

**Rehabilitation Nursing** is part of routine nursing care of the P/C (Patient/Client). This term encompasses a method of care where we use the P/K's learned movement patterns, thereby maintaining range of motion, restoring function and reinforcing their use. The aim is therefore to prevent secondary changes and complications arising from immobility - Immobilization Syndrome.

## Testing in rehabilitation nursing

A basic indicator of status is physiological function.

### Self-sufficiency assessment

#### Gordon test

The Gordon test assesses:

- general mobility,
- ability to eat,
- the ability to wash oneself,
- the ability to bathe,
- the ability to dress,
- the ability to go to the toilet,
- the ability to move around in bed,
- the ability to maintain a household,
- the ability to shop,
- the ability to cook.

- **Activities are scored 1-5**

**5 points**: Independent, self-sufficient patient.

**4 points**: Needs minimal assistance, uses equipment alone, manages 75% of activities of daily living.

**3 points**: Needs minor assistance, supervision, advice. Manages 50% of activities of daily living alone.

**2 points**: Needs a great deal of help (from another person or from a machine), can manage less than 25% of daily activities alone.

**1 point**: Completely dependent on the help of others, needs complete supervision. Absolute self-care deficit, no active participation. Needs complete assistance or is incapable of helping.

#### Barthel test

| Barthel Test                      |                  |       |                          |            |
|-----------------------------------|------------------|-------|--------------------------|------------|
| Activity                          | Activity         | Score | Evaluation on acceptance | On release |
| <b>1. Eating, drinking</b>        | unassisted       | 10    |                          |            |
|                                   | with help        | 5     |                          |            |
|                                   | will not         | 0     |                          |            |
| <b>2. Dressing</b>                | Self unassisted  | 10    |                          |            |
|                                   | With help        | 5     |                          |            |
|                                   | will not perform | 0     |                          |            |
| <b>3. Bathing</b>                 | Self unassisted  | 10    |                          |            |
|                                   | with help        | 5     |                          |            |
|                                   | will not         | 0     |                          |            |
| <b>4. Personal hygiene</b>        | unassisted       | 10    |                          |            |
|                                   | with help        | 5     |                          |            |
|                                   | not performing   | 0     |                          |            |
| <b>5. Continence of power</b>     | unassisted       | 10    |                          |            |
|                                   | with assistance  | 5     |                          |            |
|                                   | not performed    | 0     |                          |            |
| <b>6th continence stool</b>       | Self unassisted  | 10    |                          |            |
|                                   | With help        | 5     |                          |            |
|                                   | not performed    | 0     |                          |            |
| <b>7. Use of the toilet</b>       | Self unassisted  | 10    |                          |            |
|                                   | With help        | 5     |                          |            |
|                                   | will not work    | 0     |                          |            |
| <b>8. moving to the bed-chair</b> | Self unassisted  | 10    |                          |            |
|                                   | With assistance  | 5     |                          |            |
|                                   | unsuccessful     | 0     |                          |            |
| <b>9. walking on the flat</b>     | Self unassisted  | 10    |                          |            |
|                                   | With assistance  | 5     |                          |            |
|                                   | unassisted       | 0     |                          |            |
| <b>10. Walking up the stairs</b>  | Self unassisted  | 10    |                          |            |
|                                   | With assistance  | 5     |                          |            |
|                                   | unassisted       | 0     |                          |            |
| <b>Total Rating</b>               |                  |       |                          |            |

***Assessment of the degree of dependence in basic everyday activities.***

- 0-40 points = high degree of dependence
- 41-60 points = medium degree of dependence
- 61-95 points = light dependence
- 96-100 points = independent

**Modification of the test**

| Modification of the Barthel test                   |                            |                             |                    |                    |                        |
|--|----------------------------|-----------------------------|--------------------|--------------------|------------------------|
| Activities   | Unable to perform the task | Attempts the task but fails | Needs limited help | Needs minimal help | Completely independent |
| Personal hygiene                                   | 0                          | 1                           | 3                  | 4                  | 5                      |
| He bathes himself                                  | 0                          | 1                           | 3                  | 4                  | 5                      |
| Food   | 0                          | 2                           | 5                  | 8                  | 10                     |
| Toilet   | 0                          | 2                           | 5                  | 8                  | 10                     |
| Going up the stairs                                | 0                          | 2                           | 5                  | 8                  | 10                     |
| Fading   | 0                          | 2                           | 5                  | 8                  | 10                     |
| Fecal control                                      | 0                          | 2                           | 5                  | 8                  | 10                     |
| Urinary control                                    | 0                          | 2                           | 5                  | 8                  | 10                     |
| Walk   | 0                          | 3                           | 8                  | 12                 | 15                     |
| Cart (evaluated if P/C learns to control the cart) | 0                          | 1                           | 3                  | 4                  | 5                      |
| Trolley/Bed Move                                   |                            | 3                           | 8                  | 12                 | 15                     |
| Total  | 0                          |                             |                    |                    | 100                    |

### Rating by Norton

| Physical fitness (general) |   | Mental activity |   | Activity            |   | Mobility            |   | Incontinence    |   |
|----------------------------|---|-----------------|---|---------------------|---|---------------------|---|-----------------|---|
| Good                       | 4 | Alertness       | 4 | Walking             | 4 | Full                | 4 | Not             | 4 |
| Satisfying                 | 3 | Apathy          | 3 | Assisted walking    | 3 | Slightly restricted | 3 | Occasional      | 3 |
| Slight                     | 2 | Confusion       | 2 | Restricted to chair | 2 | Very restricted     | 2 | Only urine      | 2 |
| Very poor                  | 1 | Sopor and worse | 1 | Lying down          | 1 | Immobility          | 1 | Urine and stool | 1 |

### Functional self-sufficiency test = ADL

This test assesses motor skills and psychological function.

- Scoring according to the following parameters:

7 b = repeated full self-sufficiency,  
 6 p = partial self-sufficiency with aid,  
 5p = supervision required,  
 4 b = minimal assistance (75% of activity),  
 3 b = Moderate assistance (50% of activity),  
 2 b = Significant assistance (only 25% of activity),  
 1 b = full assistance.

| <b>Functional Self-Sufficiency Test = ADL</b> |                                       |  |
|---|---------------------------------------|--|
| <b>Body</b>                                   |                                       |  |
| <b>Personal Care</b>                          | Food                                  |  |
|   | Exterior care                         |  |
|   | Bathing                               |  |
|   | Swimming HK, hull                     |  |
|   | D.K. Drowning                         |  |
|   | Intimate hg.                          |  |
| <b>Continance</b>                             | Urinary bladder                       |  |
|   | The bladder                           |  |
| <b>Transfers</b>                              | Bed, chair, wheelchair                |  |
|   | WC                                    |  |
|   | Bath, shower                          |  |
| <b>Locomotion</b>                             | A walker - a wheelchair - both        |  |
|   | Stairs                                |  |
| <b>Communication</b>                          | Audio-video understanding - both      |  |
|   | Expression verbal - non-verbal - both |  |
| <b>Social Aspects</b>                         | Social contact                        |  |
|   | Problem solving                       |  |
|   | Memory                                |  |
| <b>Total Score'</b>                           |                                       |  |

### **Instrumental Activities of Daily Living Test**

Assessment:

- < 40 b dependent P/K;
- 45-75 points partially dependent P/K;
- > 80 points independent P/K.

| Activity                       | Evaluation                                 | Points |
|--------------------------------|--|--------|
| <b>telephoning</b>             | locates and dials a number                 | 10     |
|                                | answers the call                           | 5      |
|                                | cannot handle                              | 0      |
| <b>travel</b>                  | travels alone                              | 10     |
|                                | travels only with an escort                | 5      |
|                                | special assistance                         | 0      |
| <b>shopping</b>                | shopping alone                             | 10     |
|                                | Shopping with a companion                  | 5      |
|                                | unable to shop                             | 0      |
| <b>cooking</b>                 | cooks alone                                | 10     |
|                                | heats his own food                         | 5      |
|                                | food prepared by another person            | 0      |
| <b>housework</b>               | keeps house                                | 10     |
|                                | Doing only light chores, not keeping clean | 5      |
|                                | Incapable                                  | 0      |
| <b>chores around the house</b> | does them himself regularly                | 10     |
|                                | supervised                                 | 5      |
|                                | does not perform                           | 0      |
| <b>taking medication</b>       | independent                                | 10     |
|                                | must be prepared                           | 5      |
|                                | administered by another person             | 0      |
| <b>finance</b>                 | manages himself                            | 10     |
|                                | Handles only minor expenses                | 5      |
|                                | Incapacitated                              | 0      |
| <b>Total</b>                   |  |        |

## Katz Activity Test

### Part 1

|       | <b>A</b>   | <b>Independent at eating, able to move, go to the toilet, dress and bathe.</b> |
|-------|--|--|
| B     | Independent in all but one activity.   |  |
| C     | Independent except for bathing and one other area.   |  |
| D     | Independent in bathing, dressing and one other area.   |  |
| E     | Independent for bathing, dressing, toileting and one other area.                                 |  |
| F     | Dependent for bathing, dressing, toileting, transferring from place to place and one other area. |  |
| G     | Dependent in all areas.  |  |
| Other | Dependent in two areas not classified in the preceding items.                                    |  |

### Part 2

| Function               | Independence  | Dependence   |
|------------------------|---|--|
| <b>Bathing</b>         | Assist in washing only one part of the body or bathe completely alone.  | Assist in washing two or more parts, assist in getting in - out of the bath, cannot bathe alone. |
| <b>Getting dressed</b> | Takes clothes out of wardrobe or drawer, gets dressed, can fasten belt, buttons etc., does not require lacing shoes.                    | Does not dress himself, remains partially unclothed.   |
| <b>Toilet</b>          | Goes to toilet, uses toilet, undresses and dresses again, grooms self, cleans self/manages to put bedpan, urine bottle in bed at night. | Uses bedpan, urine bottle, help to use toilet.   |
| <b>Transfer</b>        | Gets in and out of bed on his own, moves to a wheelchair.   | Assisted to move in and out of bed, wheelchair, unable to transfer.                              |
| <b>Continence</b>      | Fully continent.  | Incontinence, catheter control of voiding.   |
| <b>Food intake</b>     | Eats with plate or bowl, can cut meat, spread bread.  | Needs help, does not feed himself/intake artificial nutrition (i.v., DS, LS, PEG).               |

## Activity test

With a maximum score of 92.

Right arm||Normal - near normal activity||4

| Mental abilities                      |   |                |
|---------------------------------------|---|----------------|
| 1. Consciousness level                | Fully awake   | 8              |
|                                       | Somnolent   | 6              |
|                                       | Precomatose   | 4              |
|                                       | Coma  | 1              |
| 2. Orientation in time, space, person | Orient. In all three dimensions   | 6              |
|                                       | Orient. in two dimensions   | 4              |
|                                       | Orient. In one dimension  | 3              |
|                                       | Disorientation  | 1              |
| 3. Verbal communication skills        | Normal verbal communication   | 12             |
|                                       | Slight communication difficulties   | 8              |
|                                       | Severe communication difficulties   | 4              |
|                                       | Verbal unable to communicate  | 1              |
| 4. Psychic Activities                 | Initiative, requesting information  | 6              |
|                                       | Sometimes proactive, talks to people in his environment                   | 4              |
|                                       | Not proactive, apathy   | 3              |
|                                       | Nelze pozorovat psychickou aktivitu                                       | 1              |
| Motor activity                        |   |                |
|                                       | Activity with functional value  | 3              |
|                                       | Activity without functional value   | No activity  0 |
| 2. Right hand                         | Normal - almost normal activity, independent grip, single finger movement | 4              |
|                                       | Uniform functional grip   | 3              |
|                                       | Activity without functional value   | 2              |
|                                       | No activity   | 1              |
| 3. Right lower limb                   | Normal - near normal activity   | 4              |
|                                       | Activity with functional value  | 3              |
|                                       | Activity without functional value   | 2              |
|                                       | No activity   | 0              |
| 4. Left arm                           | Normal - near normal activity   | 4              |
|                                       | Activity with functional value  | 3              |
|                                       | Activity without functional value   | 2              |
|                                       | No activity   | 0              |

|                                |   |                        |   |
|--------------------------------|---|------------------------|---|
| 5. Left hand                   | Normal - almost normal activity, independent grip, single finger movement | 4                      |   |
|                                | Uniform functional grip   | 3                      |   |
|                                | Activity without functional value   | 2                      |   |
|                                | No activity   | 1                      |   |
| 6. Left lower limb             | Normal - near normal activity   | 4                      |   |
|                                | Activity with functional value  | 3                      |   |
|                                | Activity without functional value   | 2                      |   |
|                                | No activity   | 0                      |   |
| <b>Daily activities</b>        |   |                        |   |
| 1. Walking                     | Able to walk  | 6                      |   |
|                                | Walking with support - assisted, independent movement in wheelchair       | 4                      |   |
|                                | Wheelchair bound, able to stand with support                              | 3                      |   |
|                                | Bedridden, wheelchair-bound, unable to stand                              | 1                      |   |
| 2. Personal hygiene            | Hg. care completely self-directed   | 6                      |   |
|                                | Needs help with lower toileting   | 4                      |   |
|                                | Helps with upper and lower toileting, but helps                           | 3                      |   |
|                                | Not helping with hg care  | 1                      |   |
| 3. Getting dressed             | He'll get dressed on his own  | 6                      |   |
|                                | He's dressing himself but needs a little help (putting on socks, etc.)    | 4                      |   |
|                                | Helps with minor dressing tasks   | 3                      |   |
|                                | He doesn't dress himself, he needs someone to dress him                   | 1                      |   |
| 4. Eating                      |   | He eats all by himself | 6 |
|                                | He eats with partial help   | 4                      |   |
|                                | He must be fed  | 3                      |   |
|                                | Nutrition by tube or parenteral   | 1                      |   |
| 5. Emptying - bladder function | Continent   | 6                      |   |
|                                | Sometimes urinates  | 4                      |   |
|                                | Urinal, toilet aid, bedpan  | 3                      |   |
|                                | Urinary catheter in place   | 1                      |   |
| 6. Defecation - bowel function | Continent   | 6                      |   |
|                                | Sometimes poop  | 4                      |   |
|                                | Colostomy, toilet aid, bedpan   | 3                      |   |
|                                | Incontinent   | 1                      |   |

## Cognitive testing

### Neurobehavioral Manifestations

Assessment of behavioral changes due to CNS damage.

|                              | Rating 1-7 points |
|------------------------------|-------------------|
| Inattention                  |                   |
| Physical manifestations      |                   |
| Disorientation               |                   |
| Anxiety                      |                   |
| Expression disorder          |                   |
| Citational detachment        |                   |
| Conceptual disorganization   |                   |
| Insufficient restraints      |                   |
| Guilt tripping               |                   |
| Memory impairment            |                   |
| Agitation                    |                   |
| Inaccurate view              |                   |
| Depressed mood               |                   |
| Unfriendly - uncooperative   |                   |
| Drop in motivation           |                   |
| Fear                         |                   |
| Hallucination                |                   |
| Motor slowness               |                   |
| Atypical thinking            |                   |
| Rude behavior                |                   |
| Irritability                 |                   |
| Poor planning                |                   |
| Unstable moods               |                   |
| Tension                      |                   |
| Misunderstandings            |                   |
| Speech articulation disorder |                   |
| Total                        |                   |

## MMSE

|                                   | Item   | Score |
|-----------------------------------|--|-------|
| 1. Orientation                    | What is the year/season/month/day of the week/date?  |       |
|                                   | Where are you now? Country/area/city/street/floor of building  | 0-5 b |
| 2. Repetition and memory          | Repeating three words for objects, number of repeated objects = points (3 objects)   | 0-3 b |
| 3. Attention and counting         | P/K subtract 7 from 100, stop after 5 answers (1p = 1 correct answer)  | 0-5p  |
| 4. Short-term memory              | P/K has to name 3 items from item 2 (each item 1b)   | 0-3 b |
| 5. Object recognition             | P/C has to name 2 objects (watch/pencil)   | 0-2 b |
| 6. Repetition                     | P/K to repeat the sentence   | 0-1 b |
| 7. Three-step instruction         | P/K has to perform the task in the order told by the paramedic according to the instructions<br>E.g. Take a paper in your hand, fold it in half and put it on the table (each stage 1 b) | 0-3 b |
| 8. Respond to written instruction | P/K should perform the task written on the paper. Read it and perform it.  | 0-1 b |
| 9. Writing                        | P/K should write a sentence that has both a stimulus and a preposition, a meaningful sentence, and tolerance of grammatical errors.  | 0-1 b |
| 10. Drawing from a model          | P/K should draw 2 intersecting pentagons according to a model  |       |

## Evaluation

< 10 points severe cognitive impairment;

11-20 points moderate cognitive impairment;  
21-23 points mild cognitive impairment;  
more than 24 points norm.

## **Clock Drawing Test**

P/K is presented with a solid circle representing a clock. P/K is asked to write/draw numbers and hour hands. The method of completion is assessed.

## **Blesed Dementia Scale**

This test assesses the P/K's ability to perform normal activities (ADL/IADL), memory and orientation.

## **Scaling in pediatrics**

In pediatrics, a child's motor development is assessed based on postural maturity. Postural functions are assessed **'according to Vojta** and are classified into 9 locomotor stages.

### **STAGE 0 - LACK OF LOCOMOTION - NEWBORN LEVEL.**

- Forward movement is not performed by upper or lower limbs, motor contact with the environment is completely absent - absence of grasping reflex, no support function is formed.

### **STAGE 1 - LACK OF LOCOMOTION - LEVEL 3-4. MONTHS OF DEVELOPMENT.**

- Does not move forward but is able to turn, functional grasping reflex, leans on elbows if on stomach, lifts lower limbs in supine position. Lacks neonatal reflexes.

### **STAGE 2 - UNDEVELOPED LOCOMOTION - END LEVEL 4. AND BEGINNING 5. MONTHS OF LIFE.**

- In the prone position, uses the upper limbs for support, grasps objects with the support of the other limb, muscular differentiation appears, in the supine position there is an effort to grasp the object. He is unable to move forward, but attempts to approach are evident.

### **STAGE 3 - PRIMITIVE LOCOMOTION, CRAWLING - LEVEL 7-8. MONTHS OF LIFE.**

- Movement around the room by crawling, rolling from stomach to back.

### **STAGE 4 - BOUNCING, LEVEL 9. MONTHS.**

- This stage does not occur in a healthy baby! Child leans on fist or wrist, support in upper limbs is abnormal. The so-called bouncing is a homologous movement, it does not proceed as normal crawling in a healthy child. They are able to kneel upright and can move into an oblique sitting position.

### **STAGE 5 - DEVELOPED CLIMBING - 11TH MONTH LEVEL.**

- Open arms are used as support for climbing, and a crossed (normal) pattern emerges.

### **STAGE 6 - QUADRUPEDAL LOCOMOTION IN THE FRONTAL PLANE - LEVEL 12-13. MONTHS.**

- Child can pull himself up to standing and hold it, thanks to holding he can move sideways.

### **STAGE 7 - INDEPENDENT WALKING - LEVEL 14TH MONTH - 3 YEARS.**

### **STAGE 8 - STANDING ON ONE LEG FOR 3SECONDS - 3 YEARS LEVEL.**

### **STAGE 9 - STANDING ON ONE LEG FOR MORE THAN 3 SECONDS - LEVEL 4 YEARS.**

## **Retardation Quotient**

Divide the motor age of development by the calendar age. This gives a figure against which progress in rehabilitation can be assessed.

## **References**

### **Related articles**

- FIM
- Positioning
- Patient Mobilization/School (Nurse)/Mobilization
- Basal Stimulation
- Rehabilitation
- Rehabilitation Plan
- Exercise unit composition

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