Brain Injury: Stages of Recovery

Recovery after brain injury is a process that occurs in stages. Some people move quickly through the stages, while others make slow, but steady gains.

The Rancho Los Amigos' Levels of Cognitive Functioning, called the Ranchos Scale, is one scale that measures improvement. There are 8 stages. You may find this scale helpful to follow your loved one’s progress.

Progress through the levels may not happen all at once. A person may return to a lower stage because of fatigue, frustration or other changes during the day. Watch for changes towards the next higher stage. It may be frustrating when you do not see changes from day to day. Remember, gradual progress over time is more important.

Ranchos Scale

Level I: No Response
The person is in a coma and may appear to be asleep. The person may be restless. He or she does not respond to sounds, sights, touch or movement.

Level II: Generalized Response
The person is semi-comatose. He or she begins to respond to sounds, sights, touch or movement. Response is slow, inconsistent or occurs after a delay. The person responds or mimics what is heard, seen or felt. Response may include: chewing, sweating, breathe faster, moaning, moving or increased blood pressure.

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How to Help during Level I and II Recovery:

- Talk to the person about familiar items (people, places, activities) in a normal, reassuring, calm voice. Do not talk about his or her condition.
- Do not talk in front of the person as if he or she were not there. He may be able to hear you, even in a coma.
- Keep messages short when talking to the person.
- Stimulate the person's senses. Use touch, smell, light, sound and temperature for 5 to 15 minutes. Play his or her favorite music, television show and taped messages from family members. Bring in familiar, favorite items such as cologne, flowers and scents from foods.
- Change the person's surroundings to prevent too much stimulation or too little stimulation. For example, when visiting, turn off the TV. When no visitors are present, request that the nursing staff play favorite music or turn on the TV for short periods of time.
- Touch the person gently when talking.
- Tell the person who you are every time you enter or leave the room.
- If the person’s eyes are opened, encourage eye contact.

Level III: Localized Response

The person appears more alert. He or she reacts to what is seen, heard or felt. For example, the person may follow you with his or her eyes or turn the head towards sound. When the person feels pain, an arm or leg may move, and he or she may cry out. The person may follow simple commands, like "close your eyes." The person may show signs of knowing family or friends.

How to Help during Level III Recovery:

- Try Levels I and II activities.
- Call the person by his or her first name. Always introduce yourself to help orient him or her.
- Keep interaction simple. Use short and simple sentences.
- Encourage the person to do simple tasks, such as nodding the head to mean “yes or no”. Allow enough time for a response. Check back to make sure you understood movements correctly if the person can not speak.

- Provide basic information. Keep the person oriented by stating the place, day of the week, time and daily activities.

- Give visual cues. Keep a clock and calendar nearby. Decorate the room with pictures of family, friends and pets.

- When interacting, reduce outside noise. Turn off the television or radio and pull the privacy curtain.

- Establish a routine for the person.

- Always give the person praise when progress is made.

- Allow the person rest periods.

**Responses may not always be the same in Level III recovery.** A person may be able to follow a command or voice a response one day, but not the next day. Be patient. The person may be as frustrated as you are.

**Level IV: Confused and Agitated**

This stage can be difficult for families and friends. The person may not understand what is happening (gets confused) and be scared. He or she may try to remove all restraints, kick, hit or bite others, pull out tubes and crawl out of bed. The person may overreact due to confusion by screaming or say things that are not appropriate. He or she may make up stories to overcome internal confusion and fear. Often, the person’s attention span is very short and he or she may lack short term recall. Memory may be limited only to past events. The person may be focused on basic needs like eating, going to the bathroom, or dressing and need help with these activities.

**How to Help during Level IV Recovery:**

- Provide a calm, orderly, structured and consistent environment. Tell them they are safe. Avoid bright lights, loud noises or too many visitors.

- Keep conversation and interaction simple. Keep messages short. The person’s ability to stay focused and keep attention may be short.
Frequently orient the person to place, date and time, and what is happening. Provide a written schedule of daily events, such as times for different therapies. Provide the person with a watch or clock. Hang a calendar in his or her room and keep it current. Decorate the room with familiar pictures.

Help the person to remember past events as they happened.

Help the person do simple self care tasks, like dressing or feeding him or herself. Provide help to complete tasks only if the person cannot do them because of disability, fatigue or agitation.

Allow the person simple choices, such as what clothing to wear.

If the person becomes upset or agitated, stop the interaction. If needed, change the subject or leave the room for a short time. If the person becomes aggressive, call the nurse for help.

If the person has a safety belt on, do not untie or remove it. Often safety belts are needed for the person's safety. Medicines may be used if the person is at risk of harming him or herself or others.

Avoid upsetting the person. Do not yell or raise your voice to get his or her attention.

Do not agree with confused statements. Direct the person back to reality. Give simple and clear information to aid in memory recall.

Provide positive feedback and support. Give praise for tasks finished.

Level V: Confused and Inappropriate

During this stage of recovery, the person is not as explosive or combative. The person is more alert and can follow simple commands most of the time. Complex or multiple step commands may lead to frustration and upset. Attention to any task may be limited. Long term memory of past events may be better than short term recall of daily events. To fill in the gaps of memory, the person may make up stories.

He or she may have confusion due to problems learning or organizing information. Most days, common activities of daily living, such as eating or dressing, can be done with few problems. However, the person may have difficulty starting an activity or get stuck on one step of a task. Step by step instructions for specific tasks are very helpful.
The person is also seldom aware of his or her limitations. As a result, a person may not understand the purpose of rehabilitation. He or she is better able to understand physical injury than problems with thinking or memory. It is not uncommon to hear requests to leave the hospital, or "go home."

**How to Help during Level V Recovery:**

- Therapists may provide the person with a memory book. Help the person to write down daily events and use the book to ask the person questions about what has happened during the day (activities, feelings).
- Practice new and old self care skills such as dressing and combing hair.
- Practice memory exercises, such as reviewing family pictures. Repeat information to reduce confusion. Encourage use of the memory aids.
- Use simple, short, concrete sentences and directions. Help to get organized for each activity. Avoid treating the person like a child.
- Encourage the person to make choices, especially with grooming, dressing and food.
- Limit the number of visitors and noise to reduce confusion and help with attention to interactions.
- Encourage the person to participate in simple recreational activities.

**Level VI: Confused and Appropriate**

At this stage, a person's behavior is more functional. He or she can remember time, events of the day and major life events. There is improvement in the care of basic needs. The person can follow simple commands more consistently and can keep attention for 30 minutes on a task. It is easier to learn information at this stage, but details may be forgotten. For example, the person may remember talking with a family member, but forget what was said. Response time to finish activities may still be slow. May have trouble connecting thoughts with specific words or say things without thinking.

**How to Help during Level VI Recovery:**

- Encourage independence in tasks. Limit the amount of help you give.
- Keep your conversation simple and short. Use clear directions for tasks.
• Continue to use memory aids such as a daily schedule, memory book and pictures. Use current events, such as the news or favorite TV shows to help with memory. Give help with memory as needed.

• Problem solving may be a challenge. New situations or information can be stressful. Give positive support to encourage participation.

• Follow a routine every day. If you take him or her home for visits, follow a schedule similar to the one in the hospital. For example, have meals and rest periods about the same time every day.

• Before taking the person home for a visit, ask the staff about any restrictions or special instructions.

• Encourage the person to be active in rehabilitation. If the person does not understand limitations or problems, he or she may not participate.

Level VII: Automatic and Appropriate
At this stage, most daily activities are done automatically when tasks have structure. Concentration, judgment and problem solving may be difficult. Safety is a concern. The person may feel “better” but lacks judgment for some activities. For example, driving a car is not recommended. When something is new, complex or different from the normal routine, it can lead to upset. Learning new information is possible, but it takes time and practice to retain. During this stage, counseling for work or school may be appropriate.

How to Help during Level VII Recovery:
• When home, provide a safe environment. Supervision up to 24 hours a day may be needed. Discuss ways to help the person stay safe.

• Discuss with the doctor any restrictions such as driving, drinking, working or being left alone.

• Encourage independence in all of his or her self care tasks. Practice simple household chores and tasks with structure and routine. Slowly add more tasks, allowing the person to make choices and decisions.

• Interaction will be more normal, and encourage social events that are less stressful. Be careful with slang or jokes as meaning can be missed.
• Encourage participation in a rehabilitation program. Problems with behavior, memory and judgment may continue for several months or years after a brain injury.

Level VIII: Purposeful and Appropriate
At this stage, the person has purpose in daily living. He or she can recall and integrate past and present. Carryover for new learning is evident. The person needs no supervision once activities are learned and can be independent at home and in the community. The person may continue to show decreased abilities, reasoning, judgment, stress tolerance, and emotional and intellectual capacity compared to pre-injury, yet be functional in society.

How to Help during Level VIII Recovery:
• Encourage note taking or other self-help to improve daily function.
• Encourage decision making. Give help when needed but treat choices made as functional adult decisions.
• Talk with community resources or social workers about long term adjustment and lifestyle needs.
• Promote rehabilitation treatment as part of recovery, even after he or she feels able to function normally. It may benefit memory, thinking and judgment skills.
• Continue to give positive feedback and support.

Talk to your doctor or others on your health care team if you have questions. You may request more written information from the Library for Health Information at (614) 293-3707 or email: health-info@osu.edu.