Stroke Recovery Tips

Symptoms Worsening After Stroke

Many express concern about their loved one or themselves getting worse after their initial stroke. I often get the question, “Is this normal?”. The answer to this question can be complicated and may require some close observation. If the patient had a stroke and appears to be worsening in the first few hours, then this would not be atypical. There are complications that can include swelling and edema that will get worse before they get better. Also, medications may be given to the stroke patient that affect their level of consciousness. Sometimes an ischemic stroke can have secondary bleeding which is known as hemorrhagic conversion or transformation. This is not uncommon after thrombolytic therapy (e.g. administering of tPA to the patient). It is also more common after a massive cerebral stroke. Mild hemorrhagic conversion may not have a negative effect but moderate to severe hemorrhagic conversion could have severe consequences. To discover hemorrhagic conversion, CT and MRI should be performed timely and regularly.

If you notice changes that worsen at night or after a long day of activity, then this may be a result of fatigue. It is not uncommon for symptoms to vary in this way because stroke patients often have weakness and less endurance. When an already weak muscle has been working throughout the day, it simply can be overfatigued. Walking may be worse, speech may appear more slurred, and even cognition can appear more impaired as the stroke patient becomes fatigued. This may also appear when the person first wakes up and is still groggy. If the decline only appears at night or a certain portion of the day but is better the rest of the day, this is probably not cause for alarm but can be discussed with the physician.

Other reasons that may cause symptoms to worsen are illness, dehydration, and medications. It would not be uncommon for a stroke patient’s symptoms to worsen if they have the flu, pneumonia, infection, etc. I have also seen patients who appeared sleepy and very lethargic after stroke only to find out they were simply dehydrated. Of course these conditions would need to be treated just as they would in any population. Another factor to consider is medications. It is important to know all side effects of medication and to discuss any problems the patient may be having because of medication.

If deterioration occurs later such as in the following weeks or months after stroke that are not related to any of the above factors, then medical attention is needed. It is important to note the differences to the medical staff because sometimes they will play off the symptoms as signs of the initial stroke. If you are able to give specific changes, however, then they cannot “ignore” your concerns. An increase of paralysis; a decline of cognition; sudden changes in speech, swallowing, or eyesight would all be cause for concern. Effects such as these manifest within the first few hours or days after stroke not weeks, months, or years later. Gradual declines can occur as the patient ages, but sudden declines should always be addressed.
Knee Hyperextension

One problem that may be encountered after a stroke is the affected knee hyperextending during walking. Knee hyperextension can throw you off balance, cause you to exert more energy, and can cause damage to the knee joint. Some suggestions for helping with this problem include strengthening, taping, braces and other supportive measures such as using Theraband.

Interestingly, there has been some disagreement about what causes knee hyperextension in stroke patients. Knee hyperextension (genu recurvatum) has thought to be caused by weakness in certain muscle groups some of which include quadriceps, buttocks, hamstrings, ankle dorsiflexors, and ankle plantar flexors. Avoidance of painful pressure on the ball of the foot, muscle spasticity, and proprioceptive disorders have also been suggested as causes.

Determining the cause of hyperextension or areas of weakness will require muscle testing by a physical therapist, and then a plan can be developed to address the problems through. Various techniques are used including strengthening, proprioceptive work, stretching or through adaptive measures such as assistive devices, taping/wraps or orthoses.

Sometimes patients will say their therapist told them to take longer steps or walk with the knee flexed but will then report that they are unable to do it. Others report their therapist didn’t’ address the knee hyperextension. In these cases, I would advise to find a therapist who will address the issue (ask questions before setting up an appointment to see what the therapist’s approach is). If your therapy benefits have been exhausted, you could consider scheduling one self-pay consultation visit with a physical therapist for evaluation and suggestions.

Here is a quick summary of ways that knee hyperextension is addressed either through forms of bracing or strengthening exercises:

1. An ankle foot orthoses (AFO) may be beneficial - consult with an orthotist who specializes in working with neurological patients or with a physical therapist as there are many forms of AFOs. The pic to the side is an example. If plantar flexor spasticity is present, be sure to monitor for excessive pressure to the ball of the foot and pressure sores.

2. Knee brace - Again, there are many forms of knee braces, so consult with your PT or MD. The example to the left is a soft knee brace. There are braces with metal hinges as well for those that need more support.

3. Kinesiotaping - This is an elastic, adhesive tape that is wearable for days at a time. It can provide some stability to the knee joint to help prevent hyperextension. A physical therapist can train a caregiver in how to apply the tape to the patient. There are many videos online that show how to do the application as well. The tape is applied at various levels of stretch (e.g. 10% vs. 50% stretch, etc.), so it is important to learn the proper technique from someone skilled in using the tape.

4. Knee wraps - Ace bandage or similar wraps can be used to help support the knee. You can consult your PT or search online for wrapping techniques.
Stroke Rehab Exercises

There are many websites that demonstrate exercises for stroke. Here are a few of those websites:

- GRASP
- HOPE: A Stroke Recovery Guide
- Stroke-rehab.com
- Saebo.com
- Strokewise.info
- Livewellagewell.info (not specifically for stroke but demonstrates some good exercises)

Fatigue After Stroke

It is not uncommon to suffer fatigue after stroke even after mild strokes. Increased mortality has been identified in those that experience post stroke fatigue and depression especially in those who are single and don’t have a good support system. The following are suggestions to help combat fatigue due to stroke:

1. Examine all medications taken, and make sure fatigue is not a side effect. If it is, ask your MD if there is an alternative medicine that doesn’t cause fatigue.
2. If sleep is being disturbed, discuss medications or herbal remedies with your physician that might help improve sleep.
3. Make sure all medical conditions are being managed. A blood-work check might point to other factors that could contribute to fatigue (i.e. anemia, dehydration, problems with blood sugar, etc.)
4. Stay fit. According to studies, exercise helps improve depression/fatigue. Aquatic exercise or walking may be good alternatives. Find an activity you like that will promote improved fitness especially aerobic fitness. If you cannot stand, look into alternatives such as a recumbent bike or upper extremity bike. Weak extremities can be strapped in if needed or just use one side if using two is not an option.
5. Check with your MD to see if you have clinical depression which may need treatment with medication or counseling.

Knee Hyperextension Continued

5. Exercises to strengthen weak muscles. Since weakness may be present in various lower extremity muscles, one should consult with their therapist to determine weak areas and then perform strengthening exercises for those muscles. Joints may be stiff as well so the therapist can also teach stretching and range of motion exercises.

6. Some other solutions include special or more stable footwear, heel wedges/foot orthotics, or surgery.

Since knee hyperextension can be due to multiple causes, it is important to consult with your PT to address the problem. Knowing the types of solutions available will help you discuss options with your therapist. It is also important for you to have a home exercise program to address weakened muscles.

Make sure your therapist has shown you how to grade your exercise program (or make it more difficult over time) so that you don’t continue to do exercises that are too easy or that are not having much benefit. You can also ask to try less supportive measures such as taping/wraps before settling on a brace as you may find that you only need slight support to help prevent hyperextension. If you have a brace, you can also continue to do strengthening and ask your therapist about weaning from the brace to less supportive measures over time as you improve.

Unfortunately, many patients will receive a brace from the beginning and then never revisit the problem again. Therapy coverage may run out before the problem is solved. It is important to talk to your therapist about a long term plan for the problem before you discharge so you can continue working on it at home.
Fatigue After Stroke Continued

6. Socialization is important. Try to get involved in activities that require socialization with others.

7. Practice cognitive exercises that will help combat mental fatigue. This could be crossword puzzles or simply playing games with others.

8. Make sure you are taking rest breaks and naps as needed. If you are doing your own cleaning, cooking, driving, and shopping, it may be too much. The stroke victim may need help with these tasks even though they seem physically capable. You can search "energy conservation techniques" on the internet which will supply many ideas on making daily tasks easier.

9. Use adaptive devices as needed. If you are trying to walk unassisted but are struggling, you may find that you’ll have less fatigue if you use a cane or walker or an orthotic device such as an AFO (ankle foot orthosis). If you get fatigued from donning clothes, it may be beneficial to have assistive devices such as elastic shoelaces, sock aids, button hooks, or long handled shoehorns. For bathing, you can use a shower bench and long handled sponge. For cooking, you may benefit from electric openers, rolling carts and one handed cutting boards/rocker knives.

10. Home setup may need to be adapted. If your home is difficult to navigate such as narrow doorways, congested walkways (e.g. furniture in the way), multiple steps, items located too high/low, or you have poor flooring for using a wheelchair or walker, then home adaptations may need to be made to help decrease fatigue. Here is a checklist to help make a home more user friendly: www.sunlightsupport.com/wp-content/uploads/2015/08/sunlight-support-home-safety-and-aging-in-place-checklist.pdf

Caregivers Corner: Tips for Dealing with Daily Care

Here are some tips to deal with day to day care of stroke patients:

**Dealing with cognitive issues**
- Break up tasks into simple steps. Use simple one step commands
- Use repetition. Keep items used daily in the same place. Follow the same daily routine.
- Play games or use puzzles to help improve memory. Ask speech therapist for ideas.
- Use reminders and prompts (phone apps, visual notes, memory notebook, etc.)
- Use monitors or alarms if needed to help prevent falls

**Dealing with Incontinence**
- Implement a bowel/bladder schedule taking patient to bathroom every 2 hours
- Have patient practice Kegel exercises
- Limit fluid intake in the evening before bed to prevent accidents at night
- Have a bedside commode or urinal available
- Wear clothing that is easy to access or remove to save time
- Look online for adaptive clothing
- Help patient as soon as they feel the urge to go - do not wait
- Limit alcohol and caffeine

**Dealing with Limited Mobility**
- Turn patient in bed every 2 hours to prevent bed sores


Exercise photos included

Dealing with Limited Mobility continued
• Help patient perform range of motion exercises to prevent stiffness and contractures
• Make sure patient is performing exercises and walking if able (and with assistance if necessary)

Dealing with Sleep Problems
• Try to go to sleep and awake around the same time each day (establish a sleeping routine)
• Avoid long naps which may interfere with night time sleeping
• Limit fluids before bedtime so patient is not awakened by need to go to the bathroom frequently
• Request medications from MD if needed
• Look for signs of sleep apnea (loud breathing, snoring, episodes of no breathing) and consult MD for treatment

Dealing with Emotional or Behavior Disturbance
• Have the utmost patience
• Allow the patient to make decisions or be apart of the decision making process if able
• Attend stroke support groups
• Set up a neuropsychology consult for the stroke patient
• Do not take outbursts or reactions personally. Sometimes parts of the brain have been affected that control a person’s ability to regulate emotions.
• Familiarize yourself with the area of the brain that was damaged and look up the effects. This way you will know what to expect and will better understand what reactions are related to the stroke rather than directed at you.
• Monitor for depression and seek help if symptoms persist
• Talk to the MD regarding medicines that may help
• Do not be condescending to your love one. Treat them with respect and talk to them in an age appropriate way.
• Have your loved one do much as for themselves as possible so they feel more independent and do not become overly reliant on you.
• Have patient engage in any interests they have (art, reading, movies, crafts, fishing, etc.)

Dealing with Frequent Falls
• Check home for fall hazards—you can review a checklist at the following link: https://sdmg.com/wp-content/uploads/2017/02/Fall-Hazards-home-assessment-check-list.pdf
• Consult with physical therapist for balance exercises to do at home
• Make sure you have been appropriately trained by your PT and OT on transfers and getting your loved one off the floor
• Dry the bathroom floor and shower before patient gets out to prevent slipping
• When standing, have the stroke patient wait for a short time before taking steps as sometimes blood pressure will drop and cause patients to pass out (this is called orthostatic hypotension). Make sure the patient is not dizzy before taking steps.
• Use bed or chair alarms to alert you that your loved one is getting up (especially if they tend to get up without help and are unsafe)
• Make sure that your loved one can communicate with you when they need help (e.g. a cell phone for calling, a bell to ring, an intercom or monitor)
• Check that footwear is appropriate and not leading to falls
• Keep a fall journal, so you can determine what is causing falls and address it (e.g. wet surfaces, dizziness, rugs, getting up without help, falling outside on uneven surfaces, etc.)
• Make sure eyesight has been checked and is not a problem. Decrease in peripheral vision is not uncommon in stroke patients and can cause bumping into or tripping over things
• Use elevated seats or chair lifts if sit to stand is a problem
• Use night lights at night

Dealing with Pain
• Seek pain specialist for treatment as pain for some stroke patients can be unbearable
• Make sure medications for pain are given in timely manner and not missed
• Taping may help with shoulder pain—consult your therapist
• Consider massage therapy
• Ask therapist about mirror therapy