

## Activities of Daily Living (ADL) Considerations in Cervical Acceleration/Deceleration (CAD) Trauma

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In the early stages of treatment of CAD injuries, patients should be seen at sufficient frequency to ensure adequate inflammation control and pain control. Naturally, this routine is a burden on the patient who then must make allowances for travel time and time in our offices. And, as the physician sees the patient frequently during this time, he will often falsely assume that the patient fully understands all of the implications of his injury and the subsequent healing process. An extension of this assumption of comprehension is that patients should know which activities at home or at work may be harmful or should be avoided, and which should be modified in some way. Not only are these assumptions incorrect; they are negligent. In fact, we should not even assume that patients will make logical inferences in all ADL situations after receiving only one or two examples from us. For example, we may caution our patients about working with a forward-head posture since this places unnecessary strain on the cervical musculature. Yet, the patient may then spend three hours reading War and Peace that evening in bed with the head flexed acutely against the headboard and wonder why his neck hurts so much the next morning.

We see our patients frequently during the early phases of treatment, but in fact we are with our patients for only a small fraction of the day. The remaining 23-1/2 hours are spent in pursuits of work, leisure, and in sleep that are beyond our view but not our influence. This is why ADL advice is so important. Patients can unknowingly nullify or undo all of our best therapeutic efforts in this period.

What ADL? The logical choice for ADL recommendations is within the first few treatments. Patients are usually so overwhelmed by their report of findings, initial treatment, and advice about ice, rest, etc., that it is wise to wait until their second or third visit to give them advice about ADL which, by itself, is a lot of information.

Who should give the advice? In our clinic it is given by our associate doctors. We arrange special nightly meetings once or twice a week where patients are encouraged to bring their family.

The associate doctor on duty that day gives the lecture to patients of all other doctors and associate doctors in our group.

If you are a solo practitioner it might be more practical to devote extra time to one or two treatment sessions and give advice on ADL at that time. Alternatively, it might suffice to make a videotape to give to patients or simply to give out a pamphlet outlining your recommendations.

Chiropractic assistants (CAs) can also provide ADL advice although patients are generally more compliant with the doctor's advice. This is especially true in cases where the CAs knowledge of biomechanics and healing is limited or when CAs appear young and inexperienced.

Contents: A good deal of information needs to be relayed to the patient. Naturally, sufficient time allowances need to be made for this and, since our retention rate is usually only a fraction of the material presented, reinforcement is important. This can be accomplished in part by the doctor and staff on subsequent visits, but it may also be helpful to provide the patient with a check-off list of "dos" and "don'ts" or some type of summary of your recommendations on ADL.

In general terms, we can describe the components of ADL advice by setting objectives or goals for the patient. By the end of the ADL session the goals are:

1. The patient understands (in broad terms) the forces of the trauma and the need for care. He has a feeling for how the tissues were injured. Much of this will reinforce information given in your report of findings (ROF).
2. The patient understands (very generally) the healing process and why your care and advice are fundamental to achieving the best possible outcome.
3. The patient has an understanding regarding the need for rest, ice, work restrictions, and ergonomic considerations at work.
4. The patient has an understanding of the need for adequate nutritional status to provide a suitable environment for all stages of injury -- acute, regenerative, and remodeling.
5. The patient understands the importance of stretching, exercise, and home traction.

Of these components, numbers one and two should be covered in the ROF. This is also true of number four. We shall concentrate then on numbers three and five here.

It is universally agreed that a certain amount of rest (to an injured area) is necessary during the immediate post-injury period. Unfortunately, patients are, more often than not, reluctant to heed advice about rest, especially when it translates into time loss from work. And, when patients are at work during this phase of injury, it is unusual that they will use ice as prescribed for obvious practical reasons. Even the wearing of a cervical collar will often engender enough teasing or attention to discourage its use: all the more reason to keep the patient at home for a few days. The therapeutic reality of this critical window of opportunity cannot be overstated to the patient. When patients are pursuing legal remedies it might do to remind them that their non-compliance will be evident in the medical records and will likely create more than just therapeutic difficulties! For example, when a patient does not heed their doctor's advice regarding work restrictions, appointment times or schedules, home traction, etc., an effective defense strategy would be to suggest that the patient who is truly in pain would indeed have been compliant.

I usually recommend two to three days off work to ensure adequate rest, immobilization, and the use of ice and supplements. Therefore this recommendation is not based on the strenuousness of the work. In more severe injuries, this period will be extended depending on the patient's progress and the physical demands of the job. When light duty is available at work, it is always preferable to have the

patient return as soon as possible. Work restrictions and ergonomic considerations include the following:

1. Patients should test the size of an object before lifting. They should use mechanical devices when possible.
2. Repetitive movements such as lifting, pushing, pulling, sweeping, digging, bending or twisting should be limited or avoided (depending on the severity of the patient's condition). When possible, patients should attempt to alternate their activity by switching hands, changing their position or the position of their work.
3. Loads should be lifted and carried as close to the body as possible.
4. Weights carried primarily on one shoulder or one hip should be periodically redistributed or a backpack or other method can be used.
5. Activities involving prolonged static positions of the head, particularly rotation, lateral flexion or extension, must be avoided. Flexion more than 10-15 degrees should also be avoided if it is to be prolonged.
6. Working in a seated position with elbows unsupported should be avoided as it places significant strain on trapezius, scalene, and other frequently injured muscle groups.
7. Seated posture is very important. Patients should sit straight up and the chair should support their backs. An adjustable back is best and should allow approximately 10 to 15 degrees inclination;<sup>2</sup> high backs are best. The arms should be supported at 90 degrees, as should the thighs. The feet should be flat on the floor. The upholstery should be porous to allow heat dissipation. Swivel chairs on casters are preferable. Aside from providing comfort, a good chair will significantly reduce spinal stress.
8. Video display terminals (VDTs) commonly trap patients in static positions for long periods. In addition to factors mentioned above (#7), the hands should be directly over the keyboard. The carpal tunnel must not be compressed; again, this is prevented by adequate arm rests. Both the top of the monitor display and keyboard should be visible without head movement. A stand for reference material prevents unnecessary neck postures but should be varied from side to side throughout the day if possible. Alternatively, where this is not feasible, the stand and monitor can be spaced equidistant left to right so as to reduce neck rotation.
9. Telephone speaker-phones can be used to avoid holding the receiver between ear and shoulder - a definite sin. Headsets are an alternative to this as are padded shoulder rests.

10. Using adequate light will prevent eye fatigue and craning the neck forward to see better. Also, if eyeglasses are necessary for close work they should be used. Bifocal glasses should not require excessive extension of the neck for close work.
11. Heavy headgear (helmets, etc.) should be replaced with lighter or more modern equipment when possible.
12. Posture must be stressed always. Any forward posture of the head results in an increased load on paraspinal muscles and spinal structure.

Home activities center on sleeping, relaxing, and recreation. With regard to the latter, every patient needs to be assessed based on their hobbies and sports. Usually these can be modified as needed. For example, with competitive racket sports, patients can spend a week or two just hitting balls for practice. More vigorous sports such as basketball, volleyball, soccer or rugby can't be modified, and some substitute activity can be suggested. Weight training can usually be modified by decreasing the intensity and exertion of the workouts (i.e., less weight).

Patients should be encouraged to sleep on a firm (but not too firm) mattress of sufficient size for two persons (king or queen). Cervical pillows are used in all cases. Stomach sleeping is to be discouraged, particularly in upper cervical involvement or when headache are a prominent complaint. To discourage this, patients can sew large bulky buttons on the fronts of nightgowns or pajamas. These are impossible to sleep on!

Many postures that patients are accustomed to assuming around the home -- slouching in the easy chair, lying on the couch with the head propped up by one arm, are comfortable but counterproductive. Patients must be advised to eliminate all cervical, thoracic and lumbar stress by maintaining good posture at all times -- even during relaxation.

Other activities placing undue strain on the neck or back should be curtailed -- carrying small children on the shoulders, for example. Last but not least are the instructions about home exercise, stretching, and traction.

### *References*

1. Croft AC: Whiplash: the Masters' Program. Module 3: Whiplash Treatment and an Introduction to TMJ. Coronado, Spine Research Institute of San Diego, 1992.
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Editor's Note:

You can get more of Dr. Croft's helpful and educational insights from the video (with Dr. Stephen M. Foreman) "Advances in Personal Injury Practice," #V-435 on the Preferred Reading and Viewing List.

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