



Section 1

NECK PAIN

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1

Introduction

Human Neck—God's Wondrous Creation

Human neck is an imposing structure standing majestically between the head and trunk (Fig. 1.1). While women pride in displaying their choicest jewellery over their long necks, men stamp their class by their elegant neckties and bows. Apart from its aesthetic qualities, it has many vital structures like the spinal cord, windpipe, foodpipe and important blood vessels passing through it. These qualities of the neck have left the connoisseur of English vastly impressed. The following are some of the most popular English phrases concerning the neck in everyday use today:

- To catch hold by the scruff of ones neck.
- It has come to my neck.

- I am neck-deep in trouble.
- I was outplayed neck and crop!
- To hang by neck till death!
- An imposing Adam's apple in front of the neck!
- To chop off the neck!
- To neck yourself out of the trouble!
- To drive at break-neck speed!
- The competition that is neck to neck!
- There is a neck-throat (or cut-throat) competition!

The neck plays a dual role of both a 'life-saver' and a 'life extinguisher'. Let me explain. When you are gasping for breath in an emergency situation, that too after the failure of all emergency life saving measures, your neck comes to the rescue.

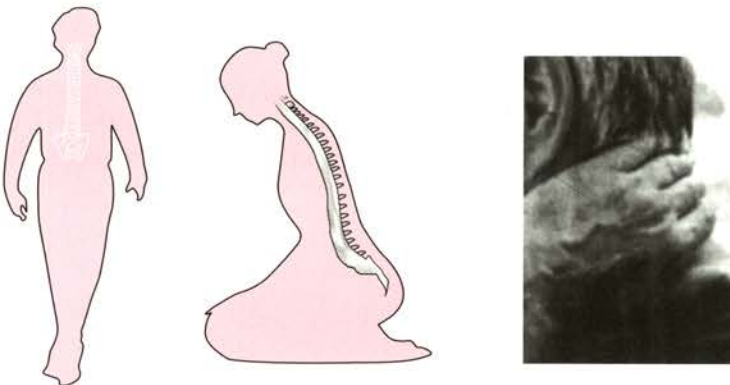


Fig. 1.1: Your neck and the arrangement of your entire spinal column and the common malady, the neck pain (extreme right)

A small opening made through the front of the neck (called the tracheostomy) beneath the Adams apple could provide you with a fresh lease of life.

The same neck, ironically, can also provide an instant death. When the upper neck bones are forcibly broken, say as in the case of judicial hanging, the resulting cord compression brings an instant death. It can make you or break you! Thus your neck is a versatile structure that plays a myriad role in your life. Human beings are afflicted with many diseases, some of which are common and some are uncommon. The common maladies tormenting the humans the world over are headache, low-backache, common cold, fever, cough, toothache and neck pains. These common maladies though not life threatening, certainly are life frustrating! A sizeable chunk of the global population is a victim of these common neck pains. The dawn of the modern era and the lifestyles take a heavy toll of your neck leading to aches and pains.

This book takes you through a roller-coaster journey of common neck pains. It tries to educate you about your neck, its common afflictions and what you need to do to stem the rot. My motto is to root out these common neck pains from the face of the world. Hope you will join hands with me in this noble endeavour of mine.

Common Neck Complaints

I have been contemplating to write a book on neck pain for some time now. In my clinic, this

is one of the very common complaints I come across. What has intrigued me is that the reasons for this neck pain are the common day-to-day events in our lives. Here are some of the typical complaints of my patients:

Neck pain due to everyday common events in ones life (Figs 1.2a to e)

I am now going to enumerate certain real life situations with which patients come to me day in and day out. Some of these complaints could be your experience too. Now read on:

- Good morning doctor, this morning is certainly not good for me. I have severe pain in the sides of my neck after I got up from my sleep yesterday night. I guess I might have overslept on one side. This was what my wife told me in the morning. Ouch this pain is unbearable! In fact, I never knew I had a neck till I suddenly realised its importance. I am unable to bear this pain. I am finding it difficult to even brush my teeth or go to the toilet. In fact, I need to support my head with my hands without which I am even unable to look at you! Please relieve me instantly from this agony doctor!
- Doctor, you know what, till yesterday night I was perfectly fine. I went to my relative's house in the evening and stayed there overnight. I had to adjust with whatever pillow was available. The pillow I used was hard and slightly bigger in size than the one I use at home. When I woke up in the morning, I had a severe ache in my neck!



Fig. 1.2a: Awkward neck postures. Are you guilty of these? If so, you are a sitting duck for neck pain!

- Somebody told me doctor, that using a hard and large pillow is not good for our neck. Hence I am not using any pillows now, but still my neck pains a lot. Why is this so doctor?
- I stay in a rented house. In my bathroom, the mirror is fitted slightly higher over the washbasin. Today morning while shaving I had to stretch my neck slightly up to look into the mirror. Ever since I have done that, the pain in my neck is unbearable.
- Today morning I was bending over the washbasin to brush my teeth and I have developed severe pain in the neck doctor (see Fig. 4.4).
- Doctor uncle, my board exams are approaching very fast. I am taking my CET tests in a week's time. Suddenly I have developed severe pain in my neck. (On further querying he revealed that he indeed studies with his neck tilted to one side and he supports it with his hand). A very common cause of neck pain in young students (See Fig. 1.2).
- Doctor uncle, I need to carry a heavy school bag everyday to school. I do not know, today I have suddenly developed a lot of pain in my neck! (see Fig. 8.1).
- Doctor, I am a software professional. I need to work in front of the computers for over 12 to 14 hours a day. I have to keep looking at it everyday with my head tilted to one side. And moreover, I have not been provided with a proper chair to sit either. I am having severe neck pain since two days. I do not know what is wrong with me. Can you help me? (see Fig. 4.6).
- Doctor, today morning I had gone for my monthly haircut. My hairdresser after the customary cut and shave suddenly twisted my neck once here and next there. He told me that he needs to do this to relax my neck and relieve the stiffness. But, I have developed unbearable pain after this action of his. Can you tell me why? (see Fig. 4.7).
- Doctor, I work for a call centre. I need to take plenty of phone calls everyday. Of late I am developing pain in my neck, which is bothering me a lot. Can you help me to find a remedy? (see Fig. 8.3).
- Doctor, I am a coolie by profession. Everyday I need to carry lots of weight over my head in the railway stations and the market yard. Today, suddenly I have developed severe pain in my neck.
- Doctor, I am a traffic policeman. Everyday I work for eight to ten hours controlling the gruelling traffic on the road. I need to look continuously in all directions to control this maddening traffic. I am developing severe pain in my neck of late. Please help me.

Some Horrifying Complaints

There are other instances where neck pain is not brought about by day-to-day activities but are due to irrational or accidental events in one's life.

- Doctor, today morning I was going to my office on the motorbike. Suddenly I received a call on my mobile. I could not stop my vehicle because of the sea of vehicles all around me. I pulled out my mobile from my shirt pocket and tucked it between my chin and shoulder. I could manage to attend the call and still continued driving my two-wheeler. My acrobatics and skills thrilled me. But you know this irritating neck pain on the left side has spoiled my day (see Fig. 4.3).
- I was driving my car. I received a call on my mobile from my little daughter. I could not resist speaking to her. I did manage to talk to her driving by holding the steering in one hand and the mobile in the other hand (see Fig. 4.3). A growling traffic policeman stopped me promptly and pulled out a slip and fined me Rs. 300. Worse I developed neck pain in the evening. Can you rid me of this menace?

- Doctor, yesterday I was driving down on the highway with my family. I was returning from a holiday from Goa. I was driving between 80–100 km/hr when I suddenly noticed a speed breaker. I had no option but to apply sudden breaks. My neck was jolted violently first forwards and then backwards (whiplash) (Fig 1.2b). Though I succeeded in warding off the speed breaker, I developed an excruciating pain in my neck. I could not drive further. My neck had to be wrapped around with a wet towel and had to be supported on either side. I somehow managed to reach Bangalore and headed straight to you. I think there is something terribly wrong with my neck. Can you tell me what is wrong?
- Doctor, I am a professional sportsperson. I play hockey. During a match I fell down with the neck stretched towards one side. I have developed severe neck pain. Is the problem serious? (see Fig. 4.2a).
- I was riding a bike. My vehicle suddenly skidded and I fell on the ground and injured my neck. Please let me know what is the problem? (see Fig. 4.2a).
- Doctor, ever since I injured my neck while diving in my swimming pool, my neck is hurting a lot. It appears there is something very seriously wrong with it. Please let me know what is it all about? (see Fig. 4.2a).



Fig. 1.2b: Whiplash injury: Due to sudden deceleration forceful hyperextension is followed by flexion of the neck

Neck Pain in the Elderly

If the above instances of serious neck problems are a rarity, there is another common variety of neck pain, which I commonly encounter in my practice. This is the neck pain in elderly patients supposedly due to cervical spondylosis. They normally present with the following complaints:

- Doctor, I am 50 years old. I am having neck pain for the past 2–3 years. It is more in the morning and gradually subsides as the day progresses. I am a known diabetic and hypertensive. I have neck stiffness also and find it difficult to move my neck freely. Can you help me?
- I am 62 years old, and I have neck pain, which radiates towards my shoulder, elbow and the tips of the little and ring fingers. I have a tingling and numbness sensation over the tips of these fingers. Is it due to spondylosis as people say? (see Fig. 4.11).
- I am diagnosed to have cervical spondylosis two years back and I am taking regular treatment. Of late, I am developing weakness in the shoulder and hand muscles. I have impaired sensation over the tips of the two inner fingers. I am having neck pain too. What could have lead to this situation?
- Doctor, I have a dull aching pain over the back of my neck and the mobility of my neck has reduced considerably. When I turn my



Fig. 1.2c: Sudden results to your back and neck: Common methods of back and neck abuse while sitting



Fig. 1.2d: Sudden insults to the back occur while lifting weight, getting up from bed, skid and fall



Fig. 1.2e: Sudden insults while bending, playing sports, etc.

face towards one side, I suddenly feel giddy and develop a sense of nausea and vomiting. Why is this so?

- I am having frequent headaches. I have no complaints pertaining to my eyes, nose or ears. I am not hypertensive. I am a happy-go-lucky person with no stress or tension. But I have neck pain along with my headache. Is there any relation between the neck pain and headache doctor?

All these are instances of people suffering from the common neck disorder in old age, the cervical spondylosis.

My Own Experiences

Apart from my patients, I have seen neck pain at close quarters at my own household:

- My daughter who is in class XII, frequently complains of neck pain after studying for a long time. I have witnessed personally the posture she adopts while reading. It is the characteristic student's sideways neck tilting posture. In spite of my repeated instructions to her to adopt proper neck postures while reading she does not heed my advice and ends up with a stiff neck. I end up treating her after a strict warning. But nothing seems to work.

- My wife, Dr. Parimala, who is a gynaecologist, sometimes, complains of neck pain after a marathon surgical procedure. I explain to her that it is due to the abnormal posture of the neck she might have adopted while operating that might have given rise to this problem.
- I have myself personally suffered pain in the neck sometimes after a night's sleep or after reading for some time or after a surgery. I understand now that it is all because of the incorrect neck postures adopted during these activities.
- Most of my neighbours' come to my house with complaints of neck pain and stiffness, due to the same reasons I have enumerated above. I end up treating them and also counselling them.

Thus the plight of so many patients including my own family, and myself made me ponder over this menace. I decided that I would put all my experience in the form of a book, so that countless number of patients could benefit from my knowledge. So, let us begin our journey into the mystery of neck pain by first understanding the basics about our neck.

2

Know Your Neck before You Know its Aches and Pains

Introduction

Neck pain would never have been an issue with we human beings, if our forefathers had decided not to resort to the two-legged stance from our four-legged stance. The moment the two-legged stance was adopted, certain structures in our body were under instant and constant pressure. These structures are:

1. Our neck.
2. Our entire back.
3. Our hip joints.
4. Our knee joints.
5. Our ankle joints.
6. Our heels and feet.

This additional burden of pressure was due to the fact that in the erect posture which we

human beings adopt when we change over from the crawling stage as an infant to the standing and walking stage as a child, the entire weight of our body has now to be carried through the neck, spine, and lower limbs, instead of all the four limbs as in the case of the animals and infants. Now let us see how the two legged stance has affected our neck.

Your Neck's Forward Curve

The erect posture altered the configuration of our spine from C-curve to the S-curve (Fig. 2.1). The neck adopted the forward bent attitude. This is due to the pull of the antigravity muscles situated at the back of the neck. The weight of the head and the earth's gravitational forces tend to pull the head and neck down. This is

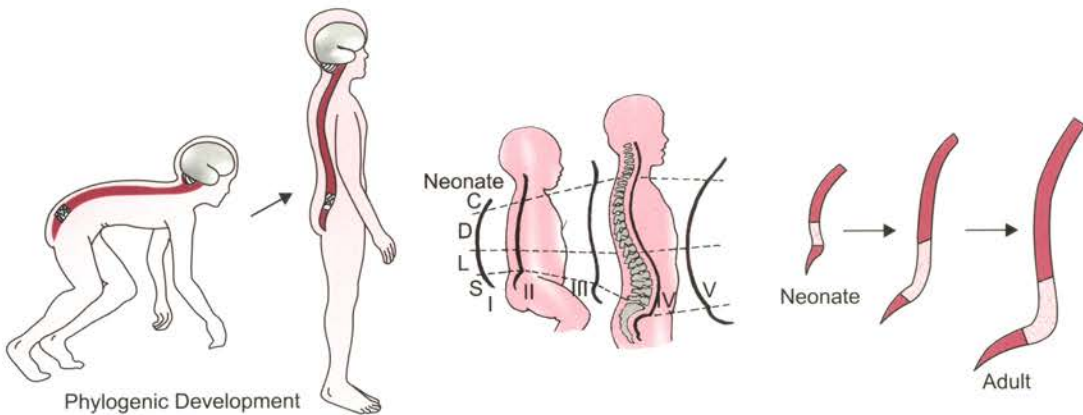


Fig. 2.1: The evolution of the S-curve of our spine—phylogenetic development

countered by the powerful back muscles of the neck, which due to their powerful contractions continue to resist the above two forces and keep your neck erect. In the process of your neck adopting the erect position, the neck bones, called the cervical vertebra, had to assume a forward bent curve (called the cervical lordosis) as a compensatory mechanism (Fig. 2.2).

Note: Though your neck appears straight, the bones inside assume a forward curve!

Advantages of Forward Neck Curve

Now recollect all the functions your neck performs in the erect posture. You need to look straight while walking. At the same time you need to look down and also sideways. This means your neck needs to be extremely flexible so as to enable your head and face to point in all the directions mentioned above during locomotion. You can also rotate your neck fully in both clockwise and anti-clockwise directions.

Another important role your neck needs to play is to enable you to lift your head and look upward. Various day-to-day activities like eating, sleeping, climbing, walking, running, reading, turning, bending, rising from the sleeping and recumbent positions, driving, etc require your neck to move in all directions.

Now if your neck bones were to be arranged in a straight manner or in the manner of a C-curve, as in the case of the animals, it would have been impossible for you to carry out all these activities of day-to-day life. In other words it is due to the arrangement of the forward curve your neck gets

- Its incredible force to lift your head.
- The flexibility and the mobility your neck enjoys, which are required for most of your day-to-day activities.

Anatomy of the vertebral column

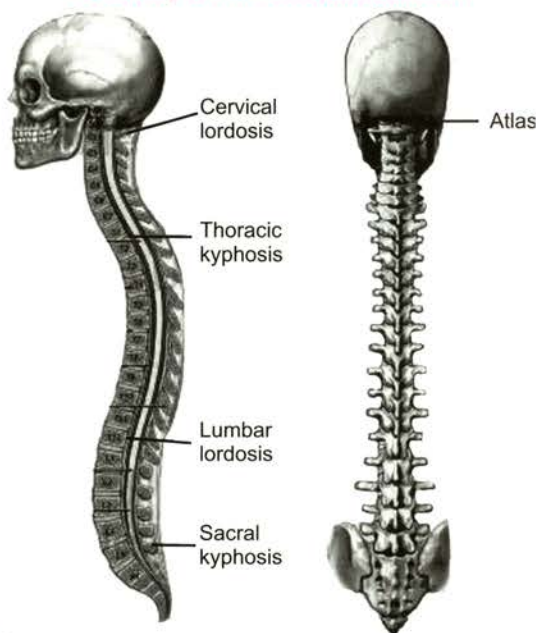


Fig. 2.2: Your head perched on top of the neck and the arrangement of your spine

Here is a simple test to make you realise the importance of your neck. I call this as the 'collar test':

If you want to know the importance of your neck or the role played by it in your day-to-day life, try wearing a neck collar for a day or two. Suddenly you will feel the difference. You will not be able to look up or down or turn your neck sideways freely. You will be distinctly uncomfortable while sitting, walking, sleeping, driving and other day-to-day routine activities. All these activities you were able to perform with utmost ease. The collar makes all these tasks suddenly look difficult and uneasy.

Now remove the collar and you will suddenly experience the difference and the freeness with which your neck now performs. This way you get to know the role-played by your neck in your day-to-day life and you will learn to respect and take proper care of it.

Structure of Neck

Anatomical Arrangements

Your neck is made up of bones, muscles, nerves, ligaments, disc, etc. Now let us try to know how your neck is structured:

Bones: Your neck is made of seven irregular bones called the cervical vertebra. The first neck bone is called the *atlas* (Fig. 2.2). The head is perched on this bone. The second neck bone is called the *axis*. It is around this bone that the first bone rotates. The front portion of the bone is drum shaped and is called the *body*. It is bounded on front and the back by strong ligaments, which hold them together. The neck bones project backward on either side and forms a tunnel called the *spinal canal* (Figs 2.3a and b). The all-important spinal cord is placed in this canal. The nerves emerging from this cord leave the neck through holes called the intervertebral foramen. From each bone there are two sideward projections called the *transverse processes* that give attachment to important muscles of your neck and one backward projection called the *spinous process*. These are felt prominently when you bend your neck forwards. The most prominent is that of the 7th neck bone (Fig. 2.3a). Important blood vessels go, to and fro, towards the head from the heart, through bony canals, formed by these neck bones at the sides.

Discs: The neck bones are arranged one over the other with intervening cushion-like structures called the *discs*. The discs are tough elastic structures, which apart from functioning as shock absorbers provide mobility in between the bones. This is the culprit in the old age bugbear, the cervical spondylosis.

Facet joints: All these bones unite with each other at the back through the hinge joints called the *facet joints*. Most of the neck movements take place here. This is the culprit in the degenerative disease of the elderly, the osteoarthritis (Fig. 2.3b).

Muscles and ligaments: Providing stability and mobility to these bones are the tough muscles and ligaments of the neck. The back muscles of the neck are very powerful and are antigravity muscles. These are the culprit in the common day-to-day postural neck pains (Fig. 2.4).

Forward curve: The neck bones are not arranged in a straight line but form a forward curve called the *lordosis*. This gives your neck its beautiful shape and certain advantages that have already been enumerated (Fig. 2.2).

Rapid recall about the structure of your neck

Your neck is made of:

- Seven irregular bones.
- The first neck bone is called the atlas. It holds the head atop it.
- The second bone is called the axis. This gives the neck its rotatory movements.
- Tough elastic structures called the discs intervene between the two neck bones. However, it is absent between the first and second neck bones.
- The neck bones are united at the back through the facet joints where the forward bending and backward bending takes place.
- There are powerful muscles and ligaments in the neck, which provide mobility and stability.

Functions of the Neck: Physiological Role

I am sure you are in awe with your master craftsman "God" for creating a neck as beautiful as yours. You will be dumb-founded when you look at the myriad functions your neck performs:

1. It has to carry the weight of your head, which is approx 11–13 lbs., whenever you are erect, for the rest of your life. This is no mean a task as it places enormous burden on your neck (Fig. 2.5).

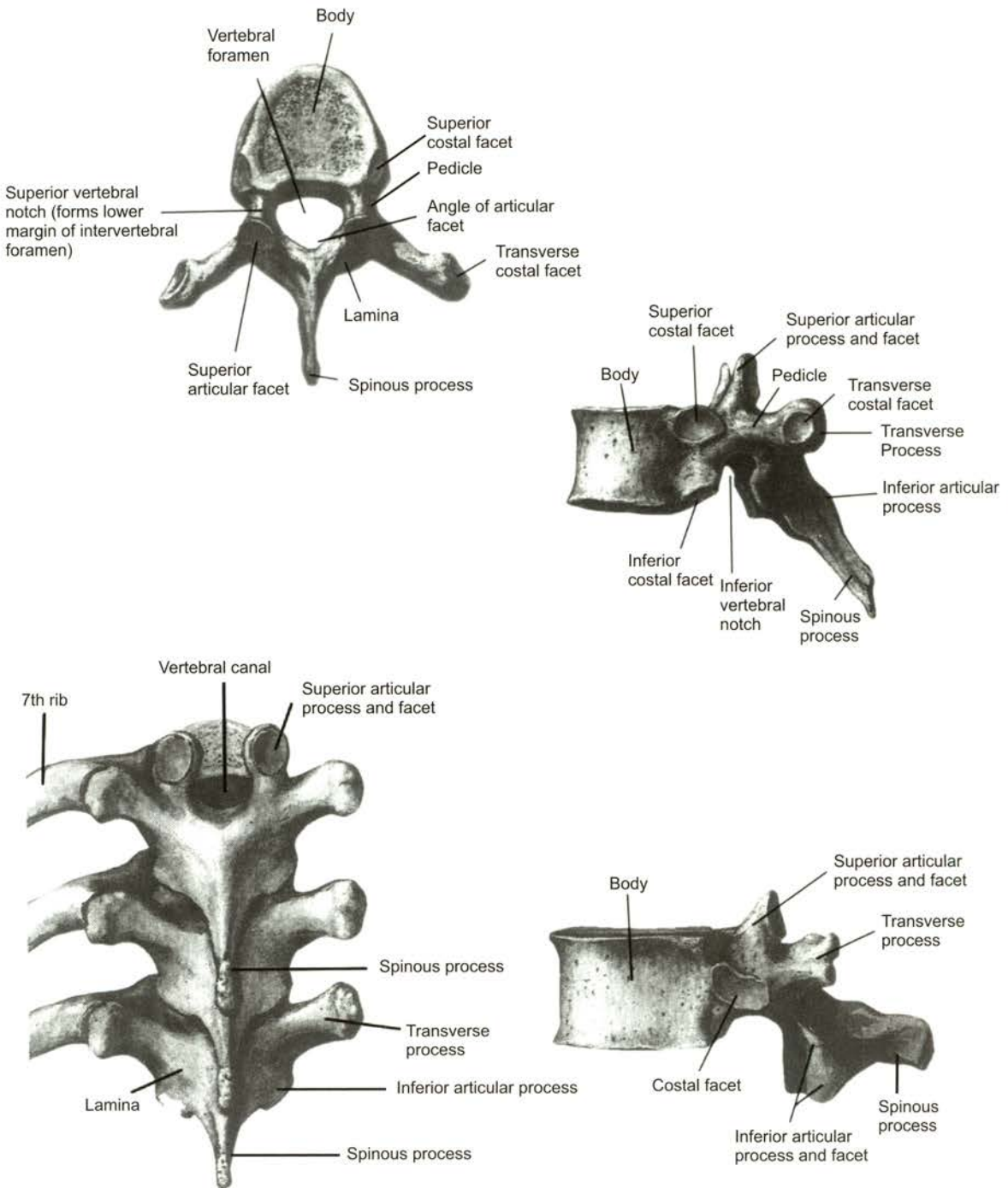


Fig. 2.3a: The bony structure of your neck bones (cervical vertebrae)

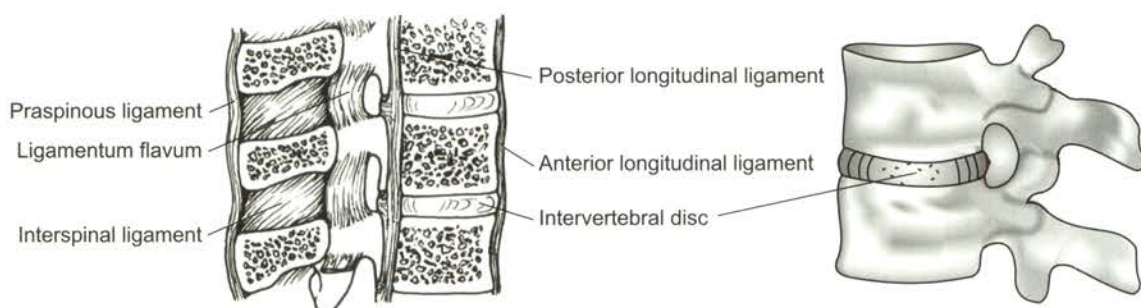


Fig. 2.3b: Note how your discs are placed in between the vertebral bones. Figure on the left shows various ligaments of the neck



Fig. 2.4: Various powerful neck muscles (antigravity muscles)

- Other than carrying the weight of your head, your neck performs various movements like forward bending, back bending, side bending, and rotations on either side and complete rotation (circumduction) (Fig. 2.5).
- Apart from these functions your neck houses and protects the all-important spinal cord, which is a direct extension from your brain (Fig. 2.6).
- Important blood vessels going towards the head and brain pass through the bony tunnels formed by these bones. They protect these vessels (Fig. 2.5).
- Vital structures like the windpipe (called the trachea), the foodpipe (called the oesophagus), major blood vessels, thyroid gland (called the Adam's apple), your voice box (called the larynx) are all situated within your neck.

Rapid recall of your neck functions

- It carries your head.
- It protects the spinal cord.
- It provides movements like forward, backward, sideward bending and also neck rotations.
- It protects the important blood vessels going towards the head.

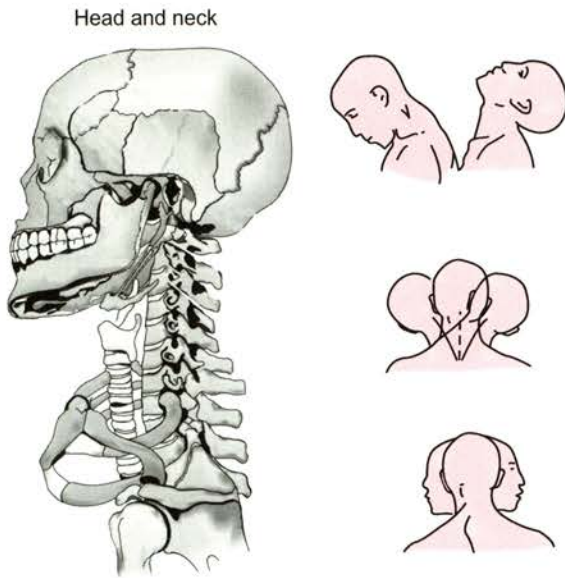


Fig. 2.5: On the left showing the neck's inevitable role of supporting the weight of your head and on the right showing various neck movements, top figure flexion and extension, centre showing sideward bend and the bottom figure showing the side rotations

Mechanism of Weight Transmission of Neck

There is a well-planned nature's mechanism of weight transmission through your neck. Most of the weight of your head is borne by

the front structures of your neck like the body of the neck bones, the intervening discs and the ligaments. Weight transmission is minimal through the back structures like the transverse process, facet joints, spinous process, lamina and the pedicles. Your neck muscles apart from maintaining the forward curve help in weight transmission. Optimum pressure and force is applied to all these above-mentioned structures during weight transmission in the nature's devised forward curve arrangement of the neck bones.

This forward curve is maintained by continuous low contractions of few fibres of your neck muscles at the back and is called the postural tone. So, as long as your neck is in this position, there is optimum pressure on all the neck structures.

Remarkable unity is shown by all your neck structures in transmitting the weight of your head and also other loads you place on your head. We by our sheer apathy and negligence disturb this well-orchestrated function by adopting neck postures, which are far from correct.

Note: Weight transmission of the head through your neck starts from the day you stand erect on your two legs, as a child and proceeds till death.

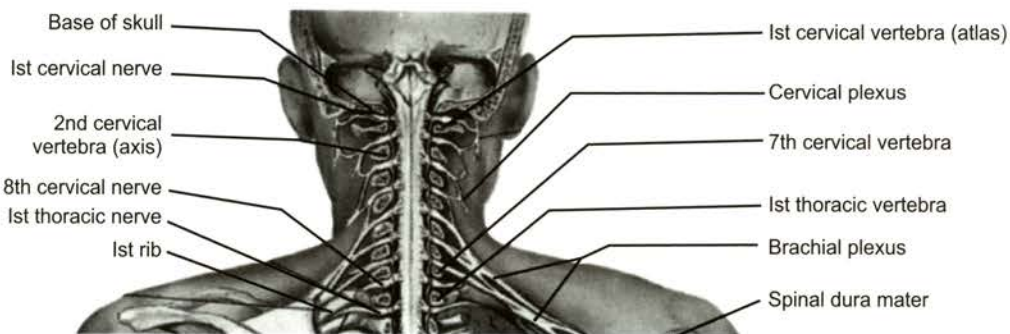


Fig. 2.6a: The situation of the spinal cord within your neck bones (protective function)



Fig. 2.6b: Posture: (a) Normal posture, and (b) bad posture due to protruding belly altering the neck and back curves

Bad Posture and Neck Pain

Habitual poor posture we adopt in our lives due to our faulty life styles and protruding belly due to obesity can distort the spinal curvatures altering the alignment of the neck, shoulders and back. This could result in acute and chronic neck pains (Fig. 2.6b).

3

What Makes Neck Pain Call on You

Common neck pains are a result of a combination of factors. Some of the factors could be your own undoing and some could be for reasons that are beyond your control. Now let us explore these factors one by one beginning with the 'risk factors' that could lead you to painful neck

RISK FACTORS FOR COMMON NECK PAINS

The three important risk factors, which lead to the genesis of the common neck pains are:

1. Altered neck mechanics.
2. Advancing age related changes.
3. Additional loads through the neck.

Now let us analyse each one in greater detail:

Altered Neck Mechanics

If the neck curve is altered by too forward a curve, too backward a curve, or by a sideward curve, by the improper neck postures we adopt in our daily lives, then abnormal pressure is exerted on the structures and the muscles due to the altered neck mechanics. This leads to muscle fatigue and the pain develops. In fact, the neck pain is a cry of anguish emanating from your beleaguered muscles seeking attention from your side to spare it from the agony.

Note: Altered weight transmission is due to the altered neck mechanics following improper neck postures.

Misadventures of Neck

Look how you blissfully indulge in neck misadventure everyday which results in altered neck mechanics:

- During sleep, you either use too thick a pillow, or too thin or no pillow at all during sleep. This disturbs the normal forward curve. Thus you are guilty of not providing respite to your neck even at sleep! (Fig. 3.2 and see Figs 4.2b and c).
- You lean over the washbasin or stretch or bend your neck while brushing, shaving, taking bath, etc. (see Fig. 4.4).
- If during your morning chores, you receive a phone call, you promptly tuck it between your tilted neck and shoulder (see Fig. 1.2a).
- You lean over or side-tilt your neck while reading your morning newspaper, eating your breakfast, drinking, dressing, wearing your shoes, etc. (see Fig. 7.19).
- Modern day travelling imposes greater stress on your neck as you lean over the windows, rails, or even over fellow passengers!
- Worse still, mobile maniacs exhibit heights of their foolhardiness and recklessness by speaking over their mobile phones while driving two wheelers or their cars. A despicable situation bordering on insanity! (Fig. 3.1 and see Fig. 4.3).
- Your neck has no respite even after you reach your place of work. You work for 8–10 hours sitting awkwardly on ill-designed

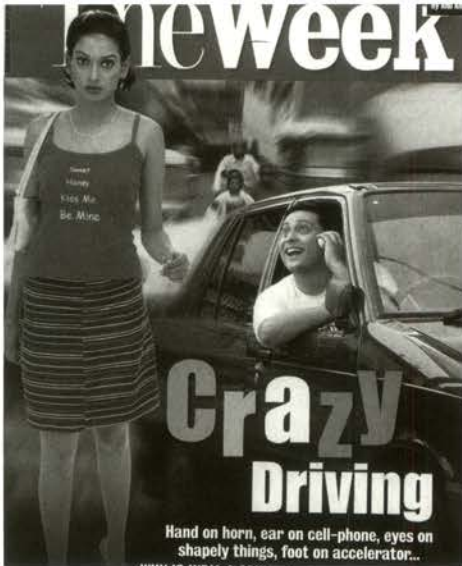


Fig. 3.1: The vulgar display of the mobile mania on roads

chairs with your neck assuming all possible odd combinations (Figs 3.2 and 3.3).

- Children with their heavy school bags and wrong postures at school harm the interest of the neck more than adults. What is more, this may even lead to permanent deformities of the neck (see Fig. 8.1).
- Returning back home, you ensure that your neck is made to undergo the same ordeal all over again.
- You relax and recline at home after returning from home in the same stressful manner.
- And when you ultimately lie down, your neck is awaiting a greater ordeal in the form

of improper pillows and neck postures at sleep! (Fig. 3.2).

Thus you will be astonished to know that you are subjecting your neck for a 24-hour harassment day after day. In fact, your neck, is the only structure in your body, which is a victim of a round-the-clock harassment? (also see box below).

Disturbing trends due to the improper postures

Your neck is subjected to 24-hour misadventures by you as it has:

- No respite during sleep.
- No respite during your day-to-day activities.
- No respites while you drive or travel in a bus, auto, etc.
- No respite while going to school.
- No respite at school or office.
- No respite at place of work.
- No respite after returning home.

Thus there is no respite for your neck at sleep, at home, on road, at work, school or even at rest! Truly a mind-boggling tragedy your neck is forced into by your neck misadventures! Unmindful of these insults, your neck valiantly attempts to serve you but succumbs when your tyranny exceeds limits!



Fig. 3.2: The improper postures during sleep and while sitting



Fig. 3.3: The improper and proper posture during standing, sitting and turning

All the above mentioned neck misadventures result in painful muscles, which go into a spasm and the neck becomes rigid and loses its customary free movements. But, the weight of the head has to be still carried. This further exacerbates the pressure and the pain becomes more. If these malpostures are practiced for a number of years, then there will be abnormal degeneration of the bones, joints, discs and other structures leading to a condition called the *cervical spondylosis*.

How Advancing Age Contributes for the Problem

The matter is further complicated by the normal age related changes in the bones and discs like, decreasing hardness in the bones (due to depletion of calcium), loss of elasticity in the muscles and ligaments, loss of water in the discs, narrowing of the facet joint spaces, etc. So you now realise that in people who habitually practice improper neck postures the degeneration of the neck structures sets in quite early.

Rapid recall of the age related changes in your neck

- The neck bones lose their customary hardness due to depletion of the calcium stores.
- The muscles and ligaments lose their elasticity.
- The discs lose their water content and become hard and brittle.
- The facet joints show degenerative changes.

Additional Load Transmission through your Neck

Now imagine the load on your neck structures when you carry additional weight on your head like the coolies, construction workers, manual labourer's, etc. Apart from the normal weight of your head this additional burden has to be carried by your neck. And in case, if the neck posture adopted is improper, then the abnormal load on your neck is multiplied many times. Degeneration sets in the neck at a very rapid pace. This explains the common occurrence of neck pain in workers mentioned above.

Rapid recall of the neck's weight transmission mechanism

- Your neck has to carry weight of your head for the rest of your life.
- The neck is thus under continued stress.
- The stress of weight bearing is shared evenly by all the structures of your neck.
- Weight transmission creates less pressure as long as you maintain the normal forward curve of the neck.
- Improper neck postures disturb this forward curve creating abnormal stress on the neck and hasten the degeneration.

Neck Postures Gone Wrong

Among all the risk factors mentioned so far, the one which is a major contributor for the problem of common neck pains (CNPs) is the altered neck mechanics, and hope you have now realised that this is due to the various malpostures you adopt day in and day out. Hence prudence lies in knowing and adopting proper neck postures.

First let us try to know what is the definition of posture? Posture is defined as the proper relationship of the body parts with respect to each other. Due to our erect stance, posture assumes lots of importance in the human



Fig. 3.4: The proper neck posture left and extreme right, improper neck postures (centre and below)

beings. Improper postures lead to a variety of disorders like neck pain, shoulder pain, low

backache, osteoarthritis of the hip and knee joints, etc. Hence it is of paramount importance that we maintain a proper posture throughout our lives. Now let us try to know about the neck postures and its importance.

First a look at the proper neck postures, which each one of us should try to adopt (Fig. 3.4).

- Hold the head erect and evenly balanced on your neck.
- Hold the neck upright.
- Shoulder should be braced backwards and must be level with each other.
- Both the eyes and the ears should be level, and the nose should be placed exactly in the centre.

Improper neck postures, which one should avoid like a taboo, as it is the cause of a majority of common neck pains. Are you guilty of the following? (Fig. 3.4)

- Head and neck tilted to one side.
- Excessive forward curve of the neck.
- Excessive backward curve of the neck.
- Eyes and the ears not being level.
- The shoulder drooped towards one side.
- The sideward rotation of the head and neck.

4

Types of Neck Pain

There are many causes of neck pain, some are uncommon causes but a majority are due to common causes. The common neck pains are due to problems in the neck muscles, ligaments and discs resulting from faulty neck postures, daily neck misadventures, etc. These account for more than 80% of the neck pains around the globe. Let us first know about uncommon neck pains.

Note: There are many types of neck pains, but you account for the common ones!

Uncommon Neck Pains (UCNPs)

Like any other structure in the body, your neck can also be a seat of various diseases. Uncommon neck pains are due to diseases of the neck like:

1. **Congenital conditions:** The child has a tilted neck from early newborn days. This is called congenital torticollis or Wryneck (Fig. 4.1).
2. **Infective conditions:** Tuberculosis of the bones, acute infections like acute osteomyelitis, enlarged lymph nodes in the sides



Fig. 4.1: Wryneck

of the neck can all lead to very painful conditions.

3. **Inflammatory conditions:** Notable ones among these are rheumatoid arthritis, ankylosing spondylitis, etc.
4. **Metabolic disorders:** Osteoporosis in old age can cause considerable weakness of the neck bones resulting in pain, and deformity leading to hunchback.
5. **Trauma:** Various fractures and dislocations and major neck ligament injuries due to road traffic accidents or violent falls on the head, etc. can lead to very severe neck pains (Fig. 4.2a).

Uncommon neck pains are usually severe in nature and have to be managed by a professional. A detailed discussion about the uncommon neck pains is outside the scope of this book and is hence avoided. Our discussion mainly centres on the common neck pains wherein you play an important part in its causation. Consequently, you should play an important role in its termination too with active support from the doctors.

Common Neck Pains (CNP)

From a child to a professional, to a student, to an athlete, or an elderly, anybody can become a victim of common neck pain (CNP). It can be categorically stated that there is nobody on this planet who have not experienced neck pain in his or her lifetime!



Fig. 4.2a: Various mechanisms of acute traumatic neck injuries

Common neck pains are so called because they are very common. Depending on the intensity and severity of neck pain they are divided into two categories—acute and chronic.

Acute Variety of CNP

In this variety, patient experiences severe pain and neck muscle stiffness. This includes myalgia (muscular pain due to spasm), muscular strains (tear in the muscle fibers) and

ligament sprains (excessive stretching or tear in the ligaments). These acute varieties are due to:

- Incorrect postures of the neck we adopt during our day-to-day activities (Figs 4.2 to 4.7). This insults the structures of your neck (Fig. 4.8) and muscles (Fig. 4.9) leading to neck pains.

Note: This is the most common cause of common neck pains

- Unaccustomed neck activities.
- Improper sleeping neck postures (Fig. 4.2) due to faulty sleeping habits.
- Improper choice of sagging beds and oversized or undersized or crude pillows could all result in acute neck pains (Fig. 4.2b).
- Occupational hazards (e.g. computer professionals, call centre workers, teachers, doctor's, etc.) (Fig. 4.6).
- Sudden violent jerking injuries to the neck as in a whiplash injury or during sporting activities, etc.
- Due to diving injuries to the neck (Fig. 4.2a).
- Due to fall with the neck in extension or side or forward flexion (Fig. 4.2a).

Note: The latter three causes lead to various serious neck pains.



Fig. 4.2b: Faulty sleeping habits: Due to this, neck pain will come looking for you with acute common neck pain



Fig. 4.2c: The sagging effect over the spine due to improper beds. Figure on the right shows the proper choice of bed which supports the spine

How does a Patient with Acute Neck Pain present and why is it such a Troublesome Problem?

If you have ever been a victim of acute neck pain, then there is no need to answer this



Fig. 4.3: Look at the mobile mania on the road. Little wonder you are rewarded with acute common neck pain

question. You will have experienced the unpleasantness all by yourself. It is certainly not a happy situation to be in. Neck pain makes you feel and look miserable. This is how a victim of neck pain looks and behaves:



Fig. 4.4: Are you guilty of abusing your neck like this during your early morning shave! Beware neck pain may strike you with vengeance



Fig. 4.6: Look at the neck misadventure of a software professional! No wonder neck pain comes calling on them very frequently



Fig. 4.5: Do your study like this? Well it is a sure prescription for acute neck pain in children

Note: Any neck pain that is of sudden onset and is of less than 3 weeks duration is said to be acute.

- Neck is stiff and the head and neck appears still.
- The head and neck may be tilted to one side (wry neck) (Fig. 4.1).



Fig. 4.7: Look at the mauling your hairdresser subject's your neck to! Beware of him, he is out to harm your neck

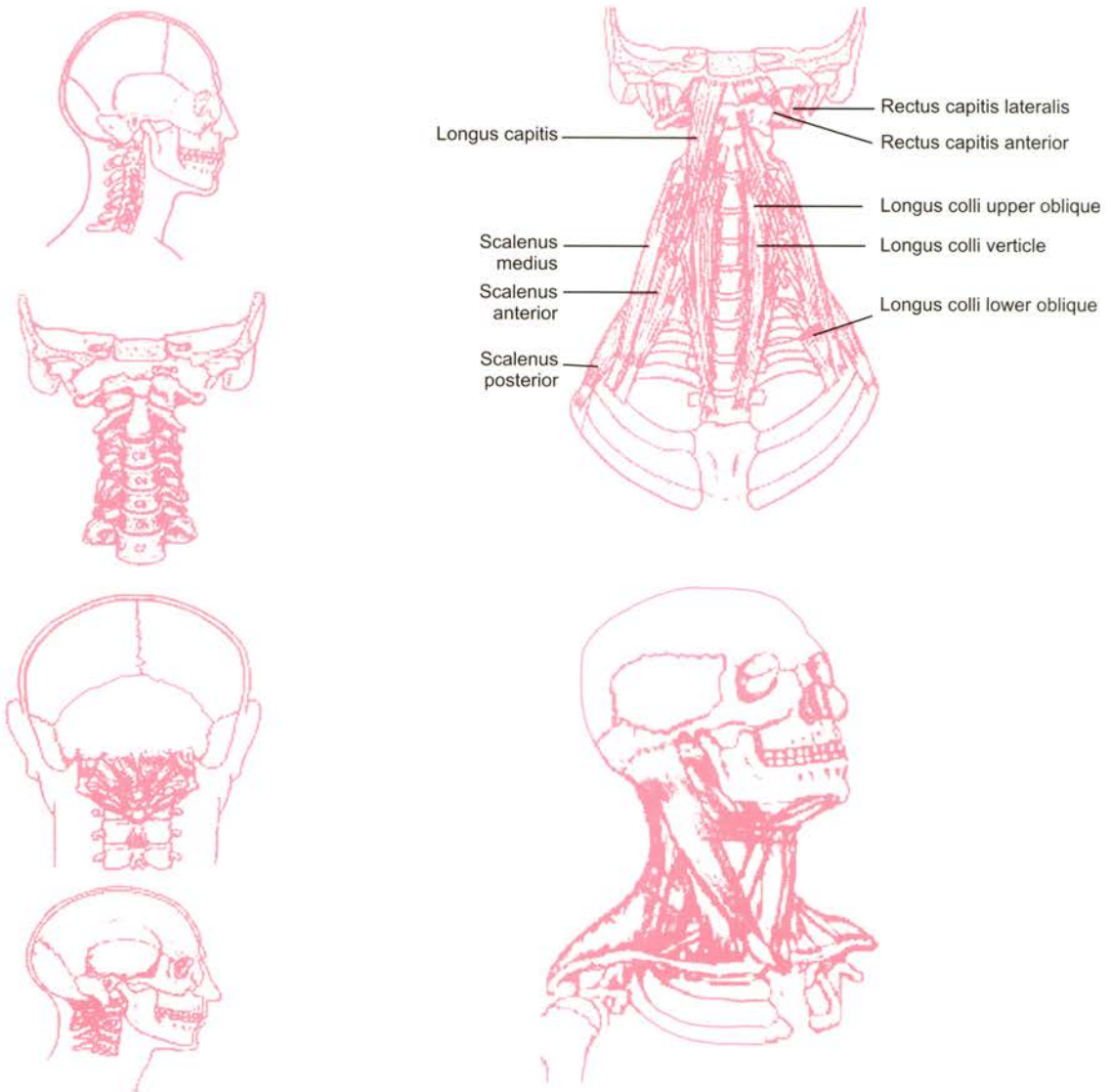


Fig. 4.8: Do you know what happens when you subject your neck to the insults mentioned so far? Well your neck is a delicate structure carrying the load of your head and is balanced by strong muscles on all sides as shown in the diagram. Awkard postures put abnormal load on the neck muscles giving rise to acute neck pain

- He is clutching the neck with his one or both the hands.
- There is agony lit all over his eyes and face.
- He is unable to move the neck freely and he is unable to look upwards.
- To look back, he is unable to turn his head and neck but has to turn his entire body.
- He appears stiff like a robot.
- He experiences excruciating pain and has a haggard look.



Fig. 4.9: Look at the fan-like trapezius muscle at the back of the neck and see the enormous extension it has from neck to almost mid-back. Now you know why the neck pain radiates to the shoulder and upper back



Fig. 4.10: Presentation of acute neck pains

All in all it is pathetic sight to watch. Worse still, unlike other painful conditions, it does not go away on lying down or reclining. And with each passing minute the neck pain becomes more and unbearable due to the continued function of carrying the weight of your head. There is no escape for the hapless sufferer from the agony.

There is a sickening feeling and a very harassed experience. I have seen some patients

crying unable to bear the agonizing pain and torture!

Rapid recall of the presentation of the acute neck pain

The tilt of the neck, the agony in the face, stiff neck, and hands clutching the neck is unmistakable feature. You might yourself have experienced this situation or you might have seen your family members or friends. The diagnosis is fairly simple and even a novice can identify the acute variety of common neck pain.

Chronic variety of CNP

Neck pain persisting for more than three weeks is termed as *chronic*. Here the patient suffers *less* than severe pain but suffers for a *longer* duration! This is due to the effects of degeneration as a consequence of the advancing age and is called the *Cervical Disc Syndromes* popularly known to the general public as cervical spondylosis. Three different presentations can be encountered in this group:

1. ***Predominantly neck pain.*** This may be due to an abnormal bulge or local rupture of the cervical disc within the confines of the vertebra (Fig. 4.11).
2. ***Neck pain associated with shooting pain in the shoulder and the arm,*** and the feeling of pins and needles sensation in the hand. This may be due to compression on the exiting nerve



Fig. 4.11: Cervical disc herniation compressing the nerve root

roots due to disc bulge or minor slip of the disc (Fig. 4.12).

3. *The second variety mentioned above with associated neurological deficits* like weakness of the upper limbs and loss of sensations in the hand. This is due to compression on the spinal cord and the exiting nerve roots due to a slipped disc in the neck region.

Note: Cervical spondylosis is an age-related disorder seen in the elderly groups. It is more common in those who abuse their necks continuously. The discs either rupture locally or escape from its normal position causing compression on the nerves or the cord. (see box).

Know what happens to your neck structures in cervical spondylosis

- As the age advances the neck muscles become weak and flabby.
- The ligaments lose their elasticity.
- The bones will be soft and irregular, due to the loss of its calcium and proteins.
- The disc spaces will be narrowed out, and the disks become hard and brittle.
- In more severe cases, the discs may slip out of its normal position and impinge on the cord or the nerve roots.
- There will be new bone formations (trying to replace the dying bones) called osteophytes.
- These osteophytes or the slipped disc mentioned above, might block the exit

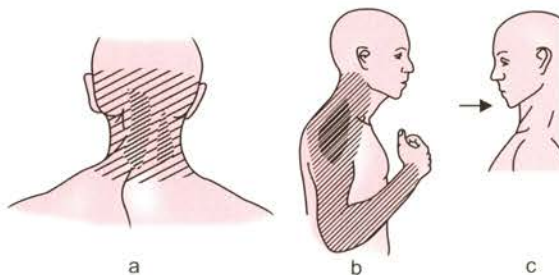


Fig. 4.12: Various presentations in chronic neck pain (cervical spondylosis). See text for details

roots of the nerves causing compression on them or may even compress the all-important spinal cord.

- If this happens there will be numbness, weakness, and loss of sensation in your arm, forearm or hands (Fig. 4.13).
- In severe cases, there will be weakness and loss of power in the *hand muscles, sometimes even the leg* (Fig. 4.14).

Note: Due to aging, degeneration sets in resulting in this condition.

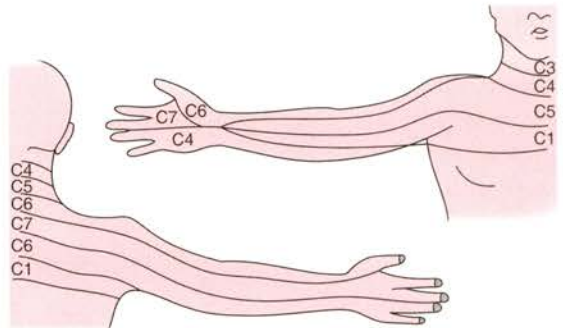


Fig. 4.13: Distribution of sensation of nerves

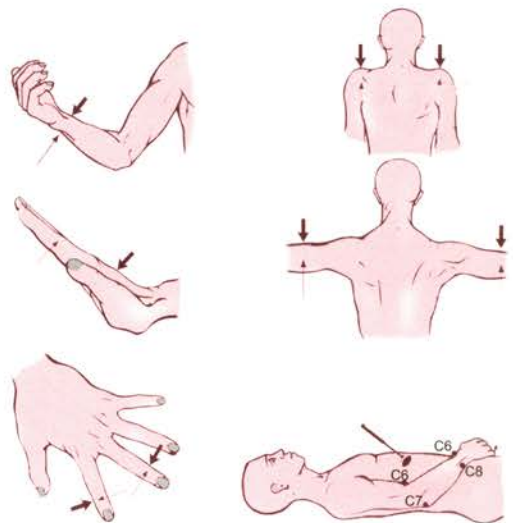


Fig. 4.14: Various tests conducted by your doctor to confirm nerve or cord damage

Table 4.1 helps you to identify correctly the acute or chronic type of common neck pain you may be suffering from:

Table 4.1: Differences between the common neck pains

Features	Acute	Chronic
Onset	Sudden	Gradual
Age	Any age	Elderly
Intensity of pain	Severe	Mild/Moderate
Duration of pain	Short	Long
Characteristic (pain)	Localised	Local/radiating
Neurological	None	Deficits may be seen
Investigations (X-ray)	Normal	May show changes
Treatment	Simple	Complex
Sequelae	Rarely chronic	Associated with complications
Prevention	Entirely	Preventable preventable to certain extent

Rapid recall: Types of neck pains

I. Common Neck Pains

Acute

- Neck muscle spasms (called Myalgia).
- Neck muscle strain.
- Neck ligament sprain.

Chronic: Cervical disc syndromes consisting of

- Neck pain only.
- Neck pain with radiating pain in the arm.
- The second variety with neurological deficits.

II. Uncommon Neck Pains

- *Birth disorders:* For example, congenital torticollis.
- *Infective conditions:* For example, tuberculosis.
- *Inflammatory conditions:* For example, Rheumatoid arthritis, ankylosing spondylitis.

- *Metabolic disorders:* For example, Osteoporosis.
- *Traumatic conditions:* For example, Various fractures and dislocations of the neck.

From Table 4.1 I am sure, you will have no difficulty in identifying yourself, the types of common neck pain you may be suffering from. Once you identify the 'culprit', remedy lies at your beck and call.

Why should common neck pain be attended to immediately? What will happen if it is ignored? You will come to know about this, if you know the sequelae of the common neck pains if left unattended or if it is not treated properly (see box).

Important facts: Sequelae of common neck pains

A. Acute neck pains

Why are acute neck pains, such a troublesome problem? The answer lies in the trail of its devastating after effects, the notable ones among these are:

- During the period of the acute attack, a person is totally out of action till it resolves. This leads to absenteeism and loss of productivity at the place of work.
- Recurrent attacks of neck pain may follow.
- After many attacks it may become a permanent chronic problem.
- Chronicity may lead to permanent neck deformities like the wryneck.
- Over the years it may predispose to the formation of cervical spondylosis.
- Anxiety and depression.

B. Chronic neck pains

- Prolonged pain and suffering.
- Permanent neurological damage resulting in weakness and loss of sensations in the upper limbs.
- A common neck pain patient may become a victim of depression and anxiety neurosis.
- Rising medical costs.

Before exploring the remedial options, it is imperative to have 'know-how' about the

various investigation choices your doctor has in diagnosing the cause of your neck pain.

Clinical presentation of cervical spondylosis



Fig. 4.15: (a to d) In cervical spondylosis all your neck movements are restricted, (e) Loss of the neck curve, (f) Pain can be elicited on pressing hard, (g, h) This is how your X-rays will look

5

Investigations for Common Neck Pains

There are many but a few are required! They help to rule out major causes of neck pains!

Before dwelling into the various investigation options, it is worthwhile to remember that most of the investigations in acute common neck pains, due to muscular strains and ligament sprains, appear normal. It is only in the chronic variety of common neck pains and the uncommon neck pains do the investigations play a significant role in the identification of the causative factors and subsequent treatment. The following are some of the important investigations your doctor orders for neck pains.

Laboratory Tests

These play an important role in identifying diseases like rheumatoid arthritis (positive RA test), ankylosing spondylitis (positive HLA B27) and tuberculosis (raised ESR), etc. They are more useful in diagnosing uncommon neck pains due to diseases like these.

X-ray of the Neck

X-ray of the neck helps to study the various changes in cervical spondylosis (see box). It is also very useful in detecting fractures and dislocations of the neck bones.

About X-rays changes in cervical spondylosis (Fig. 5.1)

- Bones have lost their normal contours.
- Loss of normal bone density.
- Narrowing of the intervertebral disc spaces.
- Abnormal bony projections (called the osteophytes) can be seen in advanced cases.
- The facet joints appear dense.
- There may be loss of the normal forward contour of your neck bones.

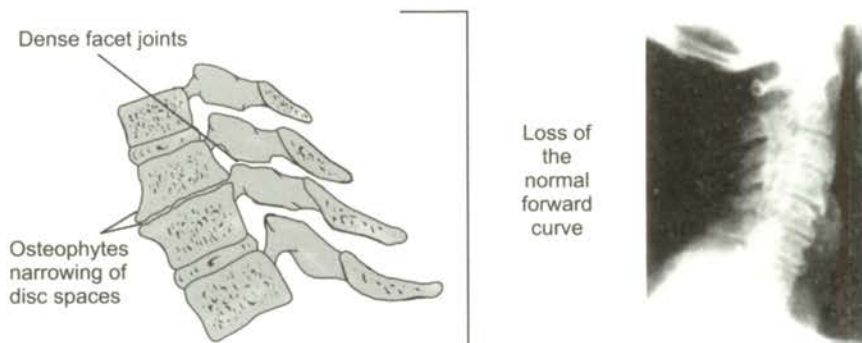


Fig. 5.1: X-ray changes in cervical spondylosis

Note: In neck sprain or strain, the only radiological clue is the 'straightening' of the forward curve due to neck muscle spasm.

CT Scan of the Neck

This helps to study the cross sections of your neck bones. The encroachment of the slipped disc on the cord or the emerging nerve roots can be identified with certainty in the CT Scan. It is not required in common neck pain.

MRI

This is the 'gold standard' as far as investigation of the neck is concerned. It is the only investigation available till date which helps your doctor to study all the structures within

your neck namely the bones, muscles, ligaments, spinal cord, nerve roots, etc. with reasonable accuracy. But wait, before exploding with glee, remember it comes with a cost that is not too much comfortable for most!

Note: Beware of the doctors who suggest MRI scan for ordinary neck pains. If in a dilemma, take a second opinion!

Though there are many investigation methods at our disposal, not many are required to diagnose a common neck pain. X-ray of the neck is the 'poor man's' investigative method and is quite adequate in most cases. However, in more severe neck pains, higher investigations are called for.

6

Managing Acute Common Neck Pains: Preventive and Curative Measures

Like in all other diseases, management of common neck pains essentially consists of two major approaches namely:

- Preventive measures.
- Curative measures.

Now again as per the popular adage, *prevention is always better than cure* applies even to common neck pain. Let us analyse each approach in greater detail.

Preventive Measures for Acute Common Neck Pains

Note: It wholly depends on you, stop abusing your neck so that it does not abuse you!

The best way of tackling a common neck pain is to prevent it from happening in the first place. I would like to instil into your minds very clearly that, these common muscular strains and ligament sprains are entirely preventable and it is upto you to take up the initiative to keep the tormenting neck pain at a comfortable distance.

The preventive measures are simple and can be enforced very easily by you. Today, make the choice between experiencing the 'horrendous' neck pain or the 'comfort' of a neck pain free existence! If your choice is the latter, then read on to know the nitty-gritty of the preventive measures. In previous chapters, your neck misadventures have been dealt in great detail. Among the various causes, improper neck postures take the cake. Hence

a mere practice of proper neck postures is enough to prevent most of the common neck pains. Adopt and practice proper postures throughout your life in the manner given below.

During Sleep

Be careful about the choice of your pillows while you go to sleep in the night. Remember the wrong choice of pillows may turn your 'blissful' sleep into a 'nightmarish' day! (Fig. 6.1). For the role and right choice of pillows see box.

Why are Pillows Needed?

They provide cushion and support needed by the back of the head and neck while at rest. Due to the forward curve at the neck when the person lies on his back the head does not lie flat on the ground. If left unsupported, the vertebral column of the neck will be sprained. A pillow ensures that the head lies in level with the back of the neck and reduces undue stretching of the neck and thus prevents the muscle spasm.

If too thick a pillow is used it may still result in neck stress due to the increased forward bending of your neck. Sometimes you may get neck pain inspite of the right sized pillows. This is due to the abnormal pressure by the pillows due to oversleeping on one side for too long.

Remember the pillow facts (Fig. 6.1)

- Do not use too thick a pillow as it may exaggerate the neck curve and cause pain.
- Do not use too thin a pillow, for it may obliterate the neck curve and this too may cause pain.
- Do not place the pillow beneath the head for it may lead to the same situation of the loss of curve mentioned above.
- Do not sleep without a pillow as your neck may get abnormally arched forwards.
- Do not sleep for too long on the sides.
- Do not sleep in the prone position with pillows beneath your face.

Now counter the above don'ts with the following do's:

- Use an optimum sized pillow preferably 2 inches thick.
- Choose soft pillows.
- Place the pillow beneath your neck when you lie supine.
- When you lie on the sides, place the pillow beneath your face.

Know what a pillow is supposed to do to your neck when you lie down. It should just maintain the normal physiological forward curve of your neck while you are at sleep.

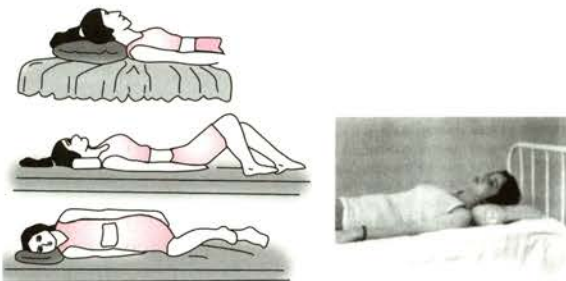


Fig. 6.1: On the left top showing improper pillow. Figure below showing proper pillow and sleeping posture. Figure on the right showing commercially available cervical pillows

Following the do's scrupulously mentioned above will precisely do this. A pillow should never increase; decrease or side tilt the normal neck curve while you are at sleep.

Everyday Morning Activities

- Do not lean over the washbasin when you brush your teeth and wash your face in the morning or in the night.
- Do not stretch or twist your neck while shaving. Place the mirror at the correct height or use a footstool.
- Do not read your morning newspaper crouched awkwardly in your bed or sofa or chair.

At Home and Work

- Sit erect and sit correct! Never, never, sit with a tilting neck, as it is a sure invitation for the niggardly neck pain.
- Do not lean over the table while reading. Sit close and erect near the table and use a prop up board to place the book in the most comfortable position (see Fig. 8.5).
- Do not lean over the computers or work on the computer with your head and neck tilted to the sides.
- Do not watch TV with your neck in a crooked position (Fig. 6.2).

While Driving

Switch off your mobile while driving. Never, never, attempt to speak over your mobile while dangerously perched on your two-wheeler or even in the safe confines of your car. Neck pain is a certainty and so may be even death for you or the unsuspecting commuters on the road. It is foolhardy to talk on your mobile while you drive.

While Travelling

- Do not lean on the windows or railings with your neck tilted to the sides while travelling in a bus or a train.



Fig. 6.2: Do you watch TV like this? This is a sure prescription for neck pain

- Do not sleep with your head and neck tilted and resting over your fellow travellers shoulder. This may turn your pleasure trip into a pain trip and you may be found alighting clutching your neck in agony. As far as possible try to reserve the tickets in advance and travel by a sleeper class. If you have to travel by sitting, try to prop up your neck with a small support and lean back. Do not tilt your neck sideways.
- Do not carry an airbag or carry bag with heavy weight on your shoulder or arms. Instead keep your handbag as light as possible. And if you have to carry weight, distribute it equally and carry it in both the hands (Fig. 6.3).
- Do not carry the suitcase over your head. Spare a thought for the poor porter. Do not



Fig. 6.3: Improper (left) and a sensible way of carrying luggage (right)

hoard your luggage over his head and shoulder. Instruct him to use a trolley instead (Fig. 6.3) and you try to use a carry bag.

While Working (Fig. 6.4)

- As far as possible use ergonomically designed chairs for sitting at your office.
- Do not lean forward over your computer or the table.
- Strictly avoid the side tilting neck posture.
- After every 45 minutes, get up from your seat, take a few steps, do the neck stretches and sit back for work. This will help you to rejuvenate your neck and back muscles. This is called the health break and is more useful than the coffee breaks (see Fig. 8.4a).

While Studying

- Instruct your children to sit close to the table.
- Leaning over the table or chair while reading should be avoided.
- Tilting of the neck sideways while reading should be strictly avoided (Fig. 6.5).
- Children should be discouraged from reading in a supine or prone position over the bed or the sofa.
- Some children are in the habit of reading by sitting on the ground and leaning over the books with their head, neck and upper trunk

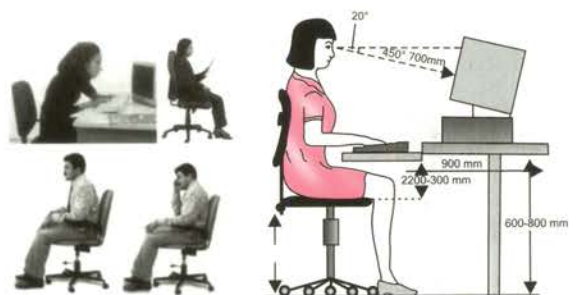


Fig. 6.4: Improper (left) and proper (right) postures over computers

completely bent. This may lead to severe neck pains and even growth abnormalities in few (Fig. 6.5).

- Carrying heavy school bags on one side of the shoulder will excessively stretch the neck muscles on one side, giving rise to excruciating pain in the neck and shoulders.

Remedy: Help your child by buying an ergonomically designed school bag. Carry *light* and carry *right* should be the watchword. It is desirable that a child carries the school bag equally balanced between the two shoulder blades (see Fig. 8.1).

At a Beauty Parlor or Saloon

Be vary of your hairdresser, for he may play havoc with your neck if you let him have his way!

- Do not excessively bend forward or side-wards during a haircut.
- Do not allow your hairdresser to massage your neck or worse still to violently jerk your neck sideways (see Fig. 4.7).

Note: Likewise in all other routine activities like eating, working at kitchen, watching a TV or while speaking to a guest, while combing, wearing a dress please avoid the sideward neck-tilting attitude to prevent neck pains.

Payoffs for your Neck Discipline

By following these simple preventive measures, majority of common neck pains can be totally prevented. You can thus enjoy a pain free neck performance and save hefty medical bills.



Fig. 6.5: Do you adopt neck postures like these? Well neck pain may be around the corner. Avoid these

Rapid recall

Replace 'neck misadventures' with the more desirable 'neck discipline', to prevent the common neck pains from raising its ugly painful head. Take proper care of your neck:

- While sleeping.
- During your everyday morning activities.
- While driving.
- While travelling.
- While reading.
- While at place of work.
- While going to the school and in the school.
- While playing sports.
- While carrying weights.
- During all the routine daily activities.

Note: Remember the slogan 'proper neck care' is the mantra for preventing the 'common neck pains'.

Curative Measures to Combat Acute Common Neck Pains

Unlike in other diseases, you get a chance to play a doctor yourself in treating some of the acute common neck pains. Accordingly the curative regimen consists of two important measures:

- I. Self help measures.
- II. Definitive treatment measures by professionals.

Now let us try to acquaint with these measures in greater detail. More so the self help techniques as you get to play a more important role here.

Self Help Measures: How to exorcise the ghost of acute common neck pains yourself?

Now if you find yourself in an unfortunate situation of a face-to-face confrontation with the acute common neck pains, pick up your gauntlet and do not despair but fight, lest it force you into a painful submission. You can

do this yourself in acute situations and take the help of professionals in chronic situations.

Managing Common Acute Neck Pains

Yourselves: You as your own doctor

Note: Remedial measures of the acute variety of neck pains are fortunately simple!

If you are a victim of common neck pains due to any of the reasons enumerated previously, you can attempt to treat yourself with simple treatment measures. Seeing a doctor at this stage may be deferred. To overcome the acute pain and neck muscle spasms undertake to treat yourself as follows:

- While at pain, rest your neck. This is the most important and effective treatment method.
- Apply ice compression with wet towels or hankies with ice cubes during the first 24–48 hours of developing pain in the neck.
- Apply hot water compression with towels or heating pads after 48 hours.
- Take over the counter painkillers (called the OCPs) and muscle relaxants preferably over a prescription from a doctor.
- Practice simple acupressure techniques for immediate pain relief. (Discussed later) (see Fig. 7.2).
- Do neck massage with moderate force using pain killing ointments or gel or oils (see Fig. 7.1).
- It is advisable to wear a neck collar to keep your neck still (see Fig. 7.18).

During the period of acute pain (Dont's)

- Avoid all neck movements.
- Do not undertake any travel.

- Avoid upright postures and adopt reclining postures.
- Do not attempt to do any neck exercises.
- Avoid vigorous neck massage and neck manipulation by quacks.

When to See Your Doctor

Note: It is very important to know when to approach your doctor for professional helps in acute neck pains.

You can manage not all cases of acute common neck pains effectively. You need professional help if you find yourself in any of the following situations:

- Unrelenting neck pain.
- Failures of all your self help techniques.
- If your neck pain persists for more than 24–48 hours.
- Any feeling of tingling and numbness in your fingers.
- Weakness or loss of the strength in your muscles or sensations of the hand and forearm.
- If your neck pain has developed after a vigorous or violent force (e.g. whiplash injury) or after a fall.

What is this whiplash injury?

This is a severe ligament injury of the neck that makes your neck very unstable. When you suddenly break a speeding car, your neck is violently thrown first forwards and then backwards, severely disrupting the supporting ligaments of the neck. X-rays of the neck are usually normal and this injury is difficult to treat even for a professional.

7

Managing Chronic Common Neck Pains

Sorry this condition cannot be entirely managed by you!

See what the Doctor can do for you?

If you are in any of the situations of acute neck pains wherein you need to see a doctor as mentioned previously or if you are suffering from common neck pain due to cervical disc syndrome, following cervical spondylosis, then you definitely need professional help.

Conventional Treatment

Most of the orthopedic surgeons across the world treat this condition with drugs (pain-killers muscle relaxants, etc.) physiotherapy, neck and shoulder exercises. Surgery is advised when all these measures fail or if there is neurological damage.

EIH Therapy

While different orthopedic surgeons treat these conditions differently, I have evolved my own strategy and I call this as the EIHT (Ebnezar's Integrated Holistic Therapy). This is based on my long years of experience in treating various types of neck pains. I have found to my chagrin that sticking steadfastly to one or two principles of treatment yields less desirable results. An integrated approach works wonders with even intractable neck pains and the patients stand to gain. Now let us dwell into this method of treatment.

Introduction

There is a lopsided nature's law according to which if there is a fight between two elements,

the deleterious effects will be borne by the third element. Let me explain. When a husband and wife fight, it is the child, who suffers the most. Similarly when India and Pakistan fight, citizens of Kashmir suffer. Likewise when two systems of medicine quarrel over the supremacy in treating an ailment, the sufferer is the hapless patient!

In treating diseases afflicting mankind, including the common neck pains, there is a fight between various systems of medicine like the allopathy, homeopathy, ayurveda, unani, naturopathy, etc.

Each claim his system to be the best and downplays the other system, even though it has got many positive things to offer. Thus vanity overrules wisdom! There is an urgent need to shun this partisan outlook of being blind not only to our faults but also to the virtues of others! The truth is that no one system of medicine is ideal in treating the diseases suffered by humans. Each has its own plus and minus points. Instead of just sticking on to our own system of medicine, just for the sake of it, it is better to open up our mind to the positive effects of others too.

For example, let me illustrate. I am a surgeon practising allopathic science. How can I, with my system, ensure a long-term complication and side effect free treatment for chronic common neck pain? How will I be successful in preventing recurrence of the problem in

future by steadfastly sticking on to my own system of medicine, which woefully falls short in these arenas? And so are the other systems of medicine.

No one system is perfect and complete on its own. A look at the following observations will illustrate my point of view better.

When a patient is suffering from acute intense neck pain, it is the allopathic drugs, next only to accupressure and acupuncture, which works faster to relieve the pain and agony. Similarly, when there is a mechanical compression, due to a slipped disc, over the spinal cord and the exiting nerve roots, it is only surgery, which can remove the local compression and reverse the neurological damage.

But when treating chronic neck pains, due to the longer duration of treatment, allopathic drugs are fraught with dangerous side effects and complications. Here homeopathy, ayurveda and other alternative therapies distinctly score over allopathy. Similarly physiotherapy helps to alleviate immediate pain and suffering but fails to prevent recurrence. Exercises on the other hand are very effective in preventing future recurrence but fail miserably to relieve the present pain.

I can go on and on explaining the fallacies and shortcomings and positive effects of one system of medicine over the other.

Thus prudence lies in treading the *middle path* wherein, one graciously accepts the positive effects of other system and inculcates those treatment methodologies without any qualms. When you combine the positive effects of various medical sciences we get a heady cocktail of sorts, which will enormously benefit the ailing human population. Thus, I call this an *Integrated Medical Approach* or in other word the *Holistic approach*. In this approach everybody is the winner and no one the loser, and in the bargain, patient stands to benefit the most. I have thus unhesitatingly embraced this

methodology of treatment and tried to popularise the method far and wide.

This approach is an amalgamation of various tried and tested methods in different therapeutic modalities. It takes all the 'positives' of various health systems and ignores the 'negatives'. The result is a powerful combination of effective therapeutic options for effective pain relief and cure. Believe me it works best and I have not seen even a single failure so far. Now let me take you through the various stages of my approach:

1. Interrogative session.
2. Therapeutic session.
3. Educative session.

Interrogative Session

In this session, I thoroughly interrogate the patient about his lifestyle, occupation, travelling modalities, driving habits, exercise routines, his various day-to-day postures, his sleeping habits, etc. This gives me an insight into the genesis of his problem. It is very vital to get to the root of the patient's problem and weed it out. A mere symptomatic treatment, kills the pain, but leaves the cause behind and thus paves way for future recurrence. Hence, this is a very important session, which enables one to know the cause of pain, choose the most appropriate treatment required and execute it to perfection

Therapeutic Session

Having ascertained the cause in the first session, I now proceed to make the right choice of treatment methodology for his problem. In the backdrop of the several treatment options, I tailor-make the treatment plan that is most appropriate for the given patient. Here are the various treatment options I make the choice from:

1. **Self-therapy:** I encourage self-help therapy in the initial painful stages. This has already been explained before.

2. **Conservative allopathic regimen:** I am extremely cautious and choosy about the medications. However, they do have a role and place in treating very painful conditions. The optimum choice of the drugs are as follows:

- **NSAIDs:** These are the common pain killer drugs used by most of the doctors. I prefer to use these drugs for a short duration of 3–5 days. For example, rofecoxib (25 mg BD), valedoxorib (10–20 mg D) and diclofenac sodium (50–100 mg), nime-sulide (50–100 mg). These drugs help to relieve pain and inflammation (see box).
- **Muscle relaxants:** This helps to relieve the painful muscle spasms. For example tizanidine/diazepam, etc. There are a combination of NSAIDs and muscle relaxants available in the market. For example rofact MR, etc. This is a two-in-one drug and is better than taking two separate drugs.

NSAIDs facts you need to know

- NSAIDs are safe when taken for a short duration.
- They need to be taken only over a prescription from a qualified allopathic doctor.
- Long-term usage is associated with severe complication like nausea, vomiting, gastric bleeding and ulcer, drug allergies, etc.
- Never attempt to self medicate with these drugs.
- Never attempt to self repeat these drugs over an old prescription.
- Beware of the chemist who plays a doctor. He may give you outdated, spurious, and wrong medicines. He may not know the proper dosages and side effects of these drugs. I am sure you certainly do not wish

to have another problem on hand to tackle.

- Worse still, do not use somebody else's neck pain prescriptions. What works for others need to not work for you ?

Note: Remember the slogan: NSAID is a good servant but bad master!

- **Anxiolytics and antidepressants:** These drugs help to relieve anxiety and tension so often associated with patients suffering from chronic neck pains. For example alprazolam available as 0.25, 0.5 and 1 mg tabs. One tablet at bedtime usually suffices.
- **Vitamin E caps:** This helps to relieve the painful muscular spasms. For example Bio-E 400 mg once a day.
- **Calcium supplements:** This is particularly useful in elderly patients who have associated osteoporosis rendering the neck bones weak and brittle. Calcium carbonates are preferred over other combinations.

3. **Physiotherapy measures:** Physiotherapy has a very important role to play in the treatment of both the acute and chronic varieties of common neck pains.

The following are some of the important physiotherapy measures:

- a. **Cryotherapy:** During the first 24–48 hours, cryotherapy with ice is ideally suited to relieve the pain and spasm.
- b. **Heat therapy:** This is used after 48 hours and consists of the following methods:
 - **Ultrasound massage:** Massaging the painful areas with ultrasound relaxes deeper structures like the muscles and the ligaments and relieves pain.
 - **Short wave diathermy:** This also helps to heat the deeper structures but is not as popular as the ultrasound massage.

- **TENS:** Transcutaneous electrical nerve stimulation is another very useful modality to relieve pain.
 - **IFT:** Interferential therapy also gives good results.
- c. **Massaging techniques:** Slow rhythmic massage using oils or gels helps to relieve muscular pain and spasm. Avoid vigorous massages that too by quacks.
- d. **Cervical neck traction:** In this method, a pulling force is applied to the neck through an apparatus either continuously or intermittently for a brief period of seven to ten days depending on the severity of the problem. Several home traction kits are also available commercially (Fig. 7.1). Consult your doctor before you decide to buy one. (see box for the role of cervical traction).

It is important to know how cervical traction helps you in overcoming chronic neck pain:

- The sustained or intermittent pulling effect stretches your inelastic muscles and ligaments and makes them supple.



Fig. 7.1: Various methods of neck traction and the massage technique

- It helps to distract your neck bones and recreate the lost intervertebral space.
- The pressure over the spinal cord or the exiting nerve roots may be relieved atleast temporarily.
- It helps to open up the narrowed intervertebral foramen.
- **Precaution:** Traction should never be attempted if there is pain in the neck or in acute painful neck conditions.

Rapid recall of the various physiotherapy measures:

- Cryotherapy for the first 24–48 hours.
- Ultrasound massage.
- Short wave diathermy.
- TENS.
- IFT.
- Massage.
- Traction.

4. **Acupressure techniques:** This method of treatment in treating the common neck pains is simply magical. It works faster than the most common drugs, rather it works instantly. Unbelievable yet true. To relieve the neck pain, I stimulate the following acupoints:

- a. Tip of the thumbs, index and middle fingers.
- b. Tips of both the great toe, the second and the third toes. Tying a rubber band around the root of the great toe for 15–20 minutes also helps relieve neck pain (Fig. 7.2).

Note: 5–10 minutes of acupressure by compressing the relevant reflex points, once or twice a day provides a quick and effective pain relief.

To relieve the neck stiffness, so commonly associated with cervical spondylosis, I follow this simple technique. Holding the big toe or the thumb of the patient, which corresponds to the root of the neck, I rotate them, first, clockwise and later anti-clockwise, for few

minutes. This effectively relieves the neck muscle spasm in minutes (Fig. 7.2).

Advantages of acupressure therapy:

- Simple to perform.
- Relieves the pain instantly.
- Can be learnt by the patient himself and practiced at home.
- Very cheap.
- Painkillers and other drugs can be totally avoided.

5. **Magnet therapy:** Gadgets required are a moderately strong magnet or a magnetic neck belt. The south pole is applied to the painful part of the neck for 15–30 minutes, 2–3 times a day. The north pole of a small magnet is stuck on the outer edge of the wrist joint, in line with the thumb (Fig. 7.3).
6. **Relaxation therapy:** I advise my patient to practice Yoga or Reiki for mental relaxation. Shavasanas, pranayamas, and chanting OM mantras greatly help in mind relaxation and can safely be done by patients suffering from common neck pains. This helps to relieve the physical, mental and emotional stresses that are very commonly associated with chronic common neck pains (Fig. 7.4). This is an integral part of IAYT which is discussed next.

Exercise Therapy

Neck exercises should be preferably done once there is complete cessation of pain. The pain is

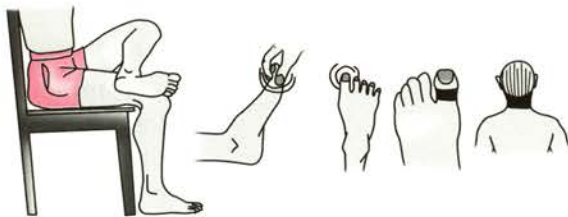


Fig. 7.2: Techniques of acupressure for neck pains

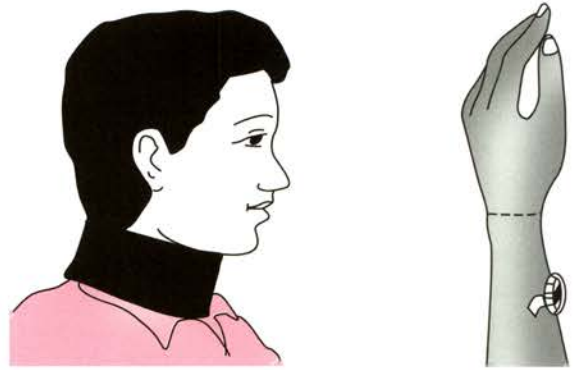


Fig. 7.3: Technique of magnet therapy

likely to be exaggerated if exercises are begun prematurely.

Role of exercises: It helps to improve the mobility of the neck and also strengthens the neck muscles. Strong neck muscles provide better support and stability to the neck. It also helps in weight transmission of the head and spares the discs and bones.

Indications: It is useful in chronic neck conditions like cervical spondylosis and to prevent recurrent attacks of neck pains.

Types of neck exercises: There are two distinct sets of neck exercises namely:



Fig. 7.4: The meditation technique to relieve stress so essential in patients with neck pain

- a. **Loosening exercises:** These exercises help to loosen the entire body before commencing the concerned neck exercises. This helps to prepare the body for the rigors of the regular exercises.
- b. **Mobility exercises:** These exercises help to improve the mobility of the stiff neck and consists of forward and backward bending, side tilting and rotation of the neck (Figs 7.6 and 7.8).
- c. **Strengthening exercises:** Resistive exercises help to develop and strengthen the neck muscles, that will provide better and firm stability to the bones and joints of the necks in carrying out the functions and also during the weight transmission process. Offering self-resistance by the patient himself to various neck movements with the opposite hand helps to strengthen the neck muscles (Fig. 7.7).
- d. **Stretching exercises:** Mild stretching exercises help to improve the mobility by over-

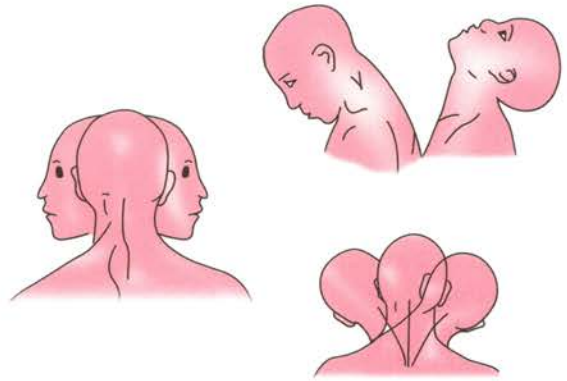


Fig. 7.6: Various neck mobilisations exercises

coming the stiffness in the neck muscles and ligaments (Fig. 7.5).

Duration: Each exercise should be done for 1–2 minutes once or twice a day.

- e. **IAYT (Integrated Arthritis Yoga Therapy):** This is the mainstay of the exercise therapy as it has triple benefits of physical, mental and emotional relaxations. It consists of a series of loosening and strengthening exercise involving all the joints in the body. The resulting alternate stimulation and relaxations relieve all the deep seated physical, mental and emotional stress and relieve pain. This is followed by few specific

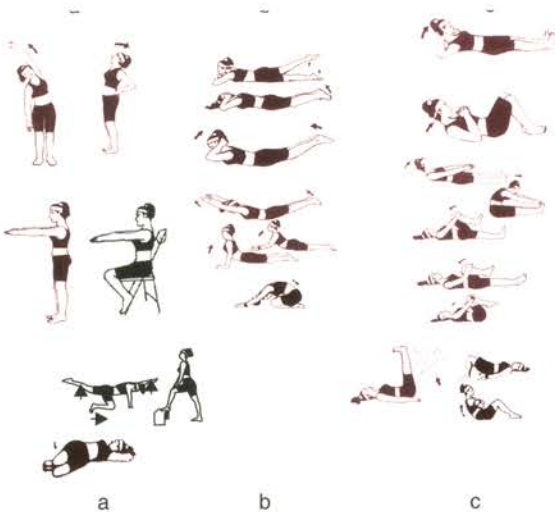


Fig. 7.5: Various general exercises for neck pains: (a) Free hands technique, (b) Showing neck extension exercises, (c) Showing various neck flexion and abdomen stretching exercises

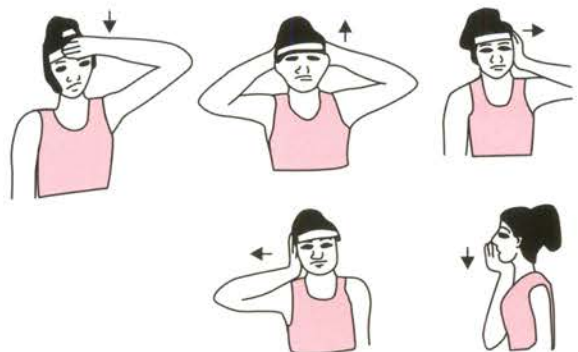


Fig. 7.7: Various neck muscles strengthening exercises (by self-resistance)

yogasanas. The recommended yogasanas for chronic common neck pains are:

- **Standing postures:** This includes ardhakati chakrasana, ardha chakrasana and pada hastasana (Fig. 7.5a).
- **Prone postures:** This includes ardha shalabasana, poorna shalabasana, makarasana, bhujangasana (Fig. 7.5b).
- **Supine postures:** This includes uttana padasana, shasankasana, ushtasana and vakrasana (Fig. 7.5c).

f. **Neck specific stretching and strengthening exercises:** These help to improve the mobility of the neck apart from stretching the stiff muscles and strengthening them (Figs 7.8 to 7.16).

g. **Randlov's special exercise program for women with chronic neck and shoulder pain** (Fig. 7.17): This exercise program designed specially for women by Randlov can be given in two groups, namely light and intensive. It is found that the long term results are better with the intensive group. *In the light exercise group the program is as follows:*

- Begin with hot packs for 14 minutes.
- 15 minutes stationary bicycling.
- Stretching exercises (six exercises for the neck and shoulder as shown in the figure) to be done for 20 repetitions for each exercise.

Note: 36 sessions to be done for one and half hours, three times a week for 6 weeks.

In the Intensive Exercise Group

- Cycling and stretching for 10 minutes.
- Carry out the seven exercises shown in the figure with 20 repetitions each series with five series per session.
- Do the shoulder exercises with increasing resistance.

You can either do the light exercises or the intensive exercises for 6 weeks. Though the improvement is good with both the series, the

dependence on pain killing drugs and the long term improvement is better with the intensive group.

Beneficial facts about neck exercises which you need to know

- Exercises need to be done regularly everyday.
- The beneficial effects of the exercises are seen over a period of time and not immediately.
- The neck exercises can be combined with general exercises like aerobic exercises, walking, yoga, etc.
- Exercises should not be done if there is pain.
- Stop the exercises if you develop pain while doing it.
- Do not overdo or underdo the exercises, but do it properly.

Remember: Exercises have a futuristic role to play in preventing recurrence of common neck pains!

Recap of neck specific exercises

- Loosening exercises.
- Mobility exercises.
- Strengthening exercises.
- Stretching exercises.
- IAYT.
- Specific stretching exercises.
- Randlov's exercises (for females).

Music therapy: I advise my patients to listen to soft, lilting instrumental music (violin, sitar, etc.) while doing these exercises, physiotherapy, acupressure, magnet therapy, etc. Music helps to relax the mind and body. It also enhances the effectiveness of other forms of therapy described so far.

Supportive therapy: This is best given by the neck collars. I personally prefer magnetic neck collars as it helps in supporting the painful neck structures and also helps in active pain

Exercises to improve the mobility of the neck

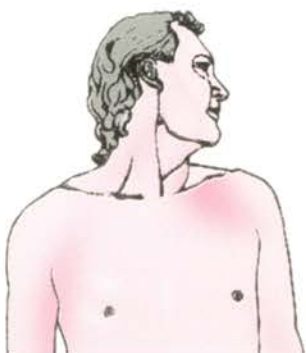


Fig. 7.8: To improve the neck rotation, rotate the head from one side to the other 10 times holding for 5 secs each



Fig. 7.11: To improve the forward and backward bending of the neck, in the side tilted position roll the head and neck forwards and backwards. In each position hold for 5 secs. Repeat the exercise 5 times on each side

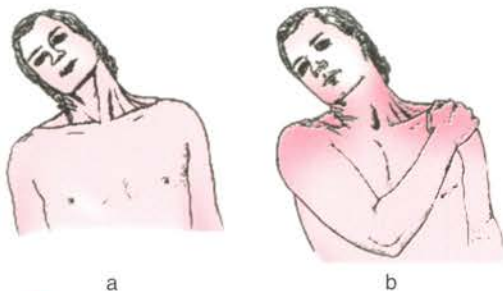


Fig. 7.9: (a) To improve the side bending of the neck, bend the ear towards the shoulder, keep the nose and chin in the centre. Hold for 5 secs. Do this 5 times alternatively on each side. (b) To improve the effect of stretching do the above exercise pulling the opposite shoulder down with the other hand



Fig. 7.12: To stretch the upper neck extensors, use the fingers of the hands to tilt the head down and backward by gently pushing down on the chin



Fig. 7.10: To stretch the neck muscles that are on the back of the neck (cervical extensors), keep the head and neck gently flexed. Keeping the chin the midline, rhythmically roll the head from side to side. Do this 5 times on each side



Fig. 7.13: Lie down with the back of your head supported on a 5 cm support. This is the gravity assisted method of relaxing the upper part of your neck extensor muscles especially after doing the neck extensor exercises. Keep this position for 5 to 10 minutes. Breathing exercises in this position gives an added effect

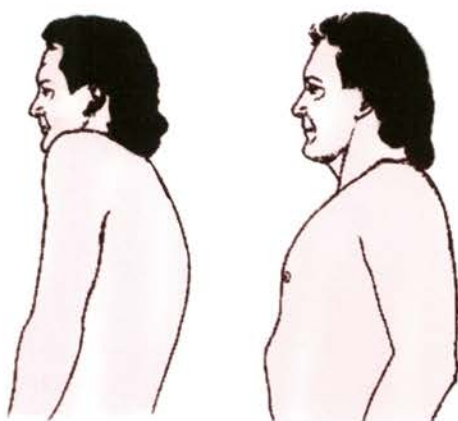


Fig. 7.14: The method of doing the shoulder circumduction exercises. Rhythmically rotate (circumduction) the shoulder both in the clockwise and anti-clockwise direction for 5 times each. This stretches the shoulder and scapular exercises

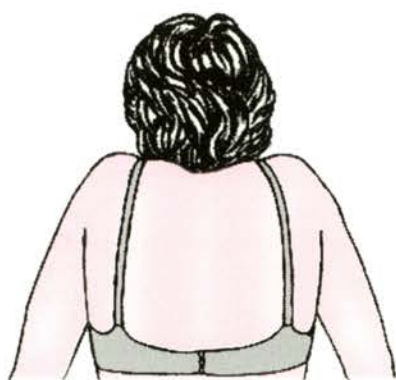


Fig. 7.15: Shrug your shoulders and then quickly drop it with expiration. This creates a contraction and relaxation cycle. Do this 3–5 times everyday

relief. The conventional neck collars only play a supportive role in immobilising the neck (Fig. 7.18).

Indications: Neck collars have a role in acute painful situations or during acute exacerbation of chronic neck pains.

Duration: It should be used in short durations like 15–30 minutes.

Neck strengthening exercises (Isometrics)



Fig. 7.16: This exercise helps to strengthen the neck flexors. Keep an airbag beneath the head and inflate it to 20 mmhg. Now gently flex the head and raise the pressure by 10 mmhg by holding for 10 secs. Do 10 times

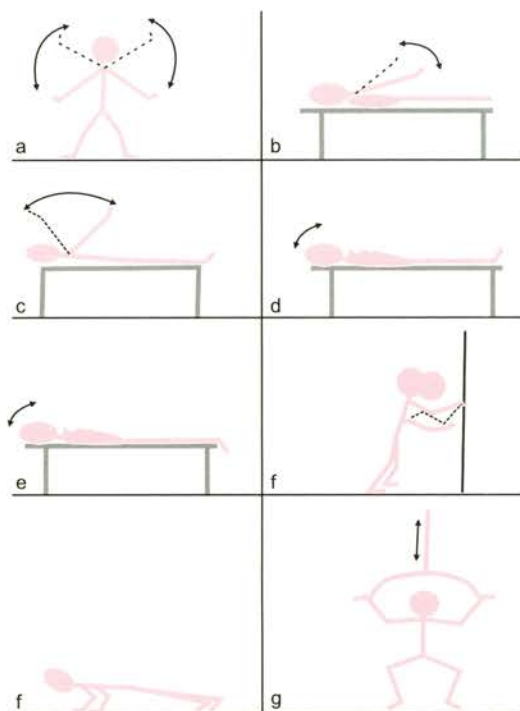


Fig. 7.17: Randlov exercise programme for chronic neck and shoulder pain in females (a) Arm abduction (with increasing load) (b) shoulder retraction (with increasing load), (c) arm swing with increasing load (d) neck extension (e) neck flexion (f) push away (g) pull up (h) lateral pull down

Mode of Action

- It immobilises the neck and provide rest to the painful muscles.
- It helps to transfer the weight of the head by sharing this function with the neck structures.
- Psychological satisfaction as the patient feels that there is something supporting the painful neck.

Advantages

- It helps to relieve pain.
- It provides support to the neck.
- It helps in the weight transmission of the head.
- It is simple and cheap.

Disadvantages

- Not a corrective treatment.
- Prolonged use may weaken the neck muscles.
- It is not useful in chronic painful neck conditions.
- It may give pseudosatisfaction to the patients.

Collar facts: *What you need to know about collars:*

- It is imperative to choose the right sized collar. Oversized collar extends the neck, while an undersized collar, bends the neck leading to undesirable effects.
- Soft collars are preferred over harder ones.
- It should not be worn during sleep.
- Wearing it is a must during travel or commutation.
- Collar acts by immobilising and providing rest to the painful muscles of your neck. If you overdo, it makes the muscles weak. Thus for all practical purposes, collar acts in a way that is opposite to the neck exercises.

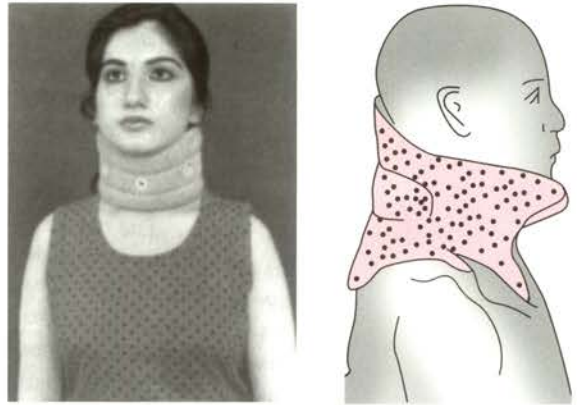


Fig. 7.18: Cervical collar treatment for common neck pains

Role of surgery: You may be surprised that so far I have not discussed the role of surgery in treating chronic common neck pains. This is because the role of surgery is limited to a minuscule of cases. There are specific indications when a patient with chronic neck pain needs surgery. The following are some of the common surgical indications:

- Failure of all the treatment measures mentioned above.
- Neurological deficits like weakness in the forearm and hand muscles.
- Loss of sensation in the fingers and forearm and unrelenting neck pains.
- Massive disc prolapse pressing on the nerve roots and spinal cord.

Surgery for common neck pains should be done only if there are absolute indications. It works best when done in specific indications like the neurological deficits. If done only for neck pain, it may be a failure, as surgery will not help in relieving pain. Failed neck surgeries are more difficult to manage later.

Rehabilitation after surgery should proceed on the same lines discussed in the management of chronic common neck pains.

Note: Only 5% of the cases of chronic common neck pains require surgical treatment.

Healthy Life Style for Active life

सक्रिय जीवन के लिये स्वस्थ जीवन शैली

Exercise regularly.
नियमित रूप से व्यायाम करें।



Do not bend on your hips to collect objects.

किसी भी वस्तु को कमर से नीचे झुककर न उठावें।



Do not stretch your neck excessively upward while shaving.

दाढ़ी बनाने समय गर्दन को बहुत ज्यादा ऊपर की ओर न खींचें।



Always use footstool while wearing shoes and tying shoelaces.

जूते पहनते समय या डोरी बाँधते समय छोटे मेज़ (footstool) का इस्तेमाल करें।

Avoid using high-heeled shoes.

ऊँची एड़ी के जूते / चप्पल न पहनें।



Sit on a chair that supports your back without straining.

पीठ को सही एवं सीधा रखकर सहारा देने वाली कुर्सी का उपयोग करें।

Always carry shopping bags in both hands.

खरीददारी करते समय दोनों हाथों में संतुलित वजन के झोले का उपयोग करें।



Eat balanced diet and maintain correct weight for your age.

संतुलित आहार लें एवं उमर के अनुसार शरीर का वज़न रखें।

Take five minutes relaxation break from your work.

काम के समय बीच-बीच में पाँच मिनट का विश्राम करें।



Practice meditation every day.

नियमित रूप से "ध्यान" करें।

Fig. 7.19: The various proper and improper techniques of carrying out day-to-day activities

Educative Session

I do not take any pride in ridding the patient of his current problem, collect my fee and bundle him out of my clinic, only to see him coming back to me with the same or worsen

problem in the near future. This happens because I have failed to equip him with the necessary knowledge so essential to prevent future recurrence. Interrogation helps to know the 'genesis' of the problem, therapy helps to

'treat' the problem and neck education helps to prevent the future 'recurrence'. In this session, care is taken to educate the patient about his neck, importance of correct neck postures, role of neck exercises, etc. All this has been dealt in great details in the earlier sections.

These two diagrams (Fig. 7.19) clearly shows the various improper postures we adopt in our daily lives. They are responsible for majority of the common neck pains, lower backpain, etc. The proper postural techniques are also shown in these diagrams. By scrupulously following these correct techniques it is possible to prevent the occurrence of most of the common neck and back pains. And hope you will agree with me that prevention is any time better than taking recourse to the cumbersome treatment methods.

Thus through this holistic approach of mine, I dwell into the 'past', act in the 'present' and 'plan' for the future. It is this past, present and futuristic approach, which sets this treatment regimen apart from other conventional and lackadaisical approaches practiced by many doctors thus the treatment is wholesome. It aims to 'cure' the ailment and not 'control' it. I believe this is the right way to 'right' the wrong that has happened to the patient.

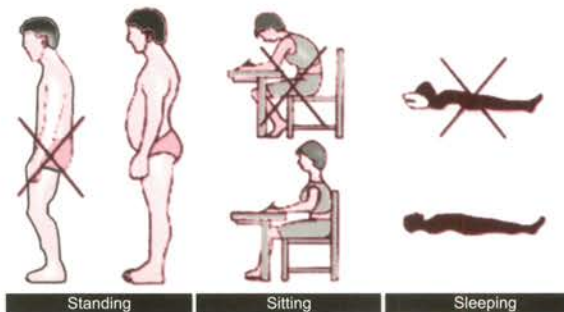


Fig. 7.20: What you should do and not do to keep neck and backache away

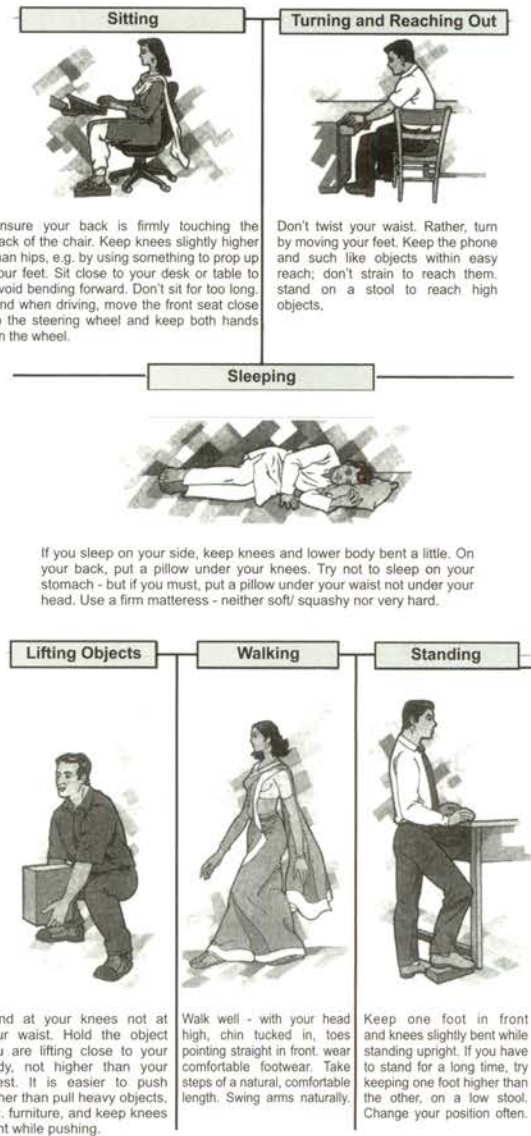


Fig. 7.21a: Proper postural practices in our day-to-day lives that is essential to prevent back and neck pains

How to put your Neck Trouble behind you

Ways to protect your neck. Practise these proper postural habits in your day-to-day lives, I promise you that you will never be a victim of neck and back pain (Figs 7.20 and 7.21a and b).



Fig. 7.21b: From top, first bend one knee, then both knees, turn to the sides, leaning over your hand push your body up, sit erect for few seconds and then stand up

Rapid recall of Dr. Ebnezar's holistic approach (EIH Therapy) for common chronic neck pains:

a. Interrogative session

b. Therapeutic session

- **Self help:** To prevent and tackle acute common neck pains
- **Drug therapy:** To relieve pain and suffering
- **Physiotherapy:** To relieve pain and stiffness
- **Acupressure:** To relieve pain and stiffness
- **Magnet therapy:** To relieve pain and stiffness IAYT
- **Relaxation therapy:** To relax the mind and the muscles
- **Music therapy:** For mind relaxation
- **Supportive therapy:** To provide rest and immobilisation
- **Specific neck and Aerobic exercises**
- **Surgery:** This is to correct the neurological defects

c. Educative session

Neck education: To prevent recurrence.



Fig. 7.21c: Maintaining proper posture

Get up correctly (Fig. 7.21b)

This will prevent the occurrence of acute neck and backpains.

8

Neck Pain in Special Situations

Neck Pain in School Children

It is very common sight in cities, young children carrying heavy school bags, which leads to abnormal stress on their tender neck, shoulder and backbones. This is known as the School Bag Syndrome.

Presentation: A child suffering from this malady presents with the following complaints:

- Pain in the neck, shoulder and upper back.
- Tingling sensation in the arms, wrist and hands especially in the nights.
- Due to postural imbalance, head and neck tilted to one side.
- An uneven gait and frequent headaches.

Remedies: Here also prevention is better than cure. Some of the measures suggested are to use ergonomically designed school bags (orthofit or ortho grip bags) as

- They are easy on the shoulder and back.
- They sit against the curve of the back.
- They are provided with good padding for the bag straps so that it does not burrow the skin.

Measures a child needs to follow (Fig. 8.1):

- To use ergonomically designed school bags.
- To use both straps to carry the bag.
- The knapsack should have several compartments for equal weight distribution.

Note: Ideally a child should not carry a school bag greater than 10% of its body weight.

- Heavy items are packed at the top so that weight is borne on the legs instead of the spine.
- Both the straps should be worn across the shoulders and upper back to equalise the weight.

Measures suggested for the schools:

- To reduce the number of books and the homework.
- To provide lockers at the schools.
- To replace the 200 pages notebooks with 100 pages.
- Insisting children not to carry all the textbooks to school.
- Making use of computers to reduce dependence on books.
- Teaching children the value of good exercises and sports.

Neck Pain in Computer Professionals

Computer related injuries (CRI) also called repetitive stress injuries (RSI)

This is a new epidemic seen across the globe. Computers have no doubt revolutionised our lives in many ways, so much so that it is hard to imagine our lives without them. But it has its darker sides too. *Working extensively on computers in a improper way for a long time* can cause an overuse injury affecting the soft tissues like the muscles, tendons, ligaments, nerves of the neck, shoulder, upper and lower back, arms and hands.

BACKPACK SAFETY 101

Sending them packing

Back-to-school shopping is here again. Need help choosing a backpack? The American Academy of Orthopaedic Surgeons would like to remind parents about backpack safety and offer some suggestions to keep their children's back healthy.

Padded shoulder straps

Helps keep straps from causing nerve injury

Chest straps

Helps distribute weight evenly across the chest

Proper posture

Wear the backpack as designed - with both shoulder straps.

Padded back

Protects your child's back from any poking objects.



Waist belt

Helps distribute weight evenly

When lifting

Bend with both knees when picking up a heavy backpack.



Packed and ready to wear

- The pack should weigh not more than 10 percent to 15 percent of the child's body weight.
- Make sure the straps are wide and padded. This will lower the risk of Shoulder nerve injury.
- Wear the packs up high and with a waistband similar to a hiker's pack. This takes some pressure off the shoulder and distributes it to the pelvis.

Sources : American Academy of Orthopedic Surgeons; Hospital for Special Surgeries.

Fig. 8.1: Proper and improper school bag carrying techniques

Who is at risk? This is a moot point. Generally, any one who uses computers for more than one hour per day are at risk and this includes the following groups:

- Software professionals.
- Bank employees.
- Call centre workers.
- Children and elderly.
- Musicians, barbers, butchers.
- Clerks, stenotypists, assembly line workers.

Incidence: About 15–25% of computer users across the globe are at risk of developing this problem. About 75% of the IT Professionals are affected with RSI at some stage of their career (Fig. 8.2a).

Presentation: RSI can affect one or more of the following structures:

Neck: It can cause acute and chronic neck pains. In the long run it may predispose to cervical spondylosis.

Eyes: It may affect the vision and cause irritation and blurring. This is called computer vision syndrome (CVS).

Shoulder: Shoulder pain is a very common complaint.

Elbow: It can lead to tennis elbow, golfers elbow, pain within the elbow joint, etc.

Forearm: Forearm muscle cramps, fatigue, etc.

Wrist: It can lead to carpal tunnel syndrome, wrist pain, etc.

Fingers: It can cause pain in the fingers. There could be a feeling of tingling and numbness of the fingers.

Backache: This is a frequent complaint and can affect the upper, middle or lower back.

So looking at the long list of complaints makes one weary of this problem and calls for effective, preventive and curative measures to tackle this ugly menace.



Fig. 8.2a: Incidences of various problems due to faulty sitting at office

Why does RSI happen?

A look at the list provides the answer:

- Improper use of the computers.
- The mouse and the keyboard placed at uncomfortable heights and positions.
- Very hard keyboards or forceful typing over them.
- Height of the monitors kept at uncomfortable levels.
- Improper postures of the neck and back while working (Fig. 8.3).
- Poorly designed unscientific working chairs.
- Extreme mental and physical stress.

Stages: This disease runs through the following stages:

First Stage: Here symptoms are seen only at work.



Fig. 8.2b: An ergonomically designed chair



Fig. 8.3: Causes for RSI (faulty postures at office)

Second Stage: Here symptoms persist even after work but disappear with rest.

Third Stage: Here the symptoms are permanent.

Remedies: In this condition too, prevention is better than cure. The recommended preventive and awareness measures are:

- Awareness about this problem.
- Proper postures during work.
- Using ergonomically designed chairs (Fig. 8.2b).
- The neck, elbow and shoulder should be placed at a comfortable height.
- The height of the computer monitor should be just above the eye level.
- Taking breaks from typing at every five minutes, fifteen and half an hour of typing.

- Taking a short health break at office after every half an hour. Getting up, taking a short walk and sitting against for work is a good practice. (Fig. 8.4a)
- Neck, shoulder, back, elbow and fingers stretch help to relieve pain and stress.
- Yoga and meditation helps to combat mental and physical stress.
- Keeping realistic goals and philosophical attitude defuses mental tension and prevents burn out.

Curative measures: Treatment of problems like neck pain, shoulder pain, elbow problems like tennis elbow, wrist problems like compartment syndrome have been dealt in relevant sections in my new book. (I suggest you to read my book on Common shoulder, Elbow and Wrist Pains). However, in the event of neck pain your doctor suggests the following treatment measures:

- **Drugs:** Painkillers like NSAIDs are the drugs of choice. The more popular ones belong to nimesulides, rofecoxib, valedicoxib, diclofenac sodium, etc. They are preferably taken for short spells and that too after consultation and recommendation from the doctor.
- **Physiotherapy:** This consists of gentle massage, heat therapies like hot water packs, TENS, ultrasound, short wave diathermy, etc.
- **Exercises:** Once the pain subsides, patient is instructed to carry out suitable neck,



Fig. 8.4a: Taking health break at office

shoulder, elbow and finger exercises as discussed previously.

- **Surgery:** This is rarely required.

Health education: This is the most important aspect of tackling this highly preventable problem. The aspects mentioned in the above columns have to be scrupulously enforced to keep this problem at bay.

Role of the insititutions: Institutions should provide good working conditions and facilities to all its workers. Good illumination, recreation facilities, and realistic workloads go a long way in helping the employees cope with this problem.

Ergonomic Advice

The primary goal of good ergonomics (both at work and home) are aimed at maintaining correct:

1. Head and neck postures.
2. Arm postures.
3. Relaxing neck postures.
4. Sleeping postures.

Now let us try to analyse these more elaborately:

1. **Head and Neck postures** (Figs 8.5 and 8.6)

- These should be as close to the centre of gravity as possible.
- Visual angle should be at 0–30 degrees from horizontal.
- Reading angle should be 45 degrees.
- Writing angle should be maintained at 15 degrees, 4–6 cms above the elbow height.
- When the visual requirements is below the eye level, backward leaning is advisable rather than poking the neck forward.

Avoid these:

- Do not turn abruptly (Fig. 8.4b) but turn your entire body towards an object.
- Side bending.
- Forward bending.
- Twisting.



Fig. 8.4b: Improper (left) and proper (right) methods of twisting and turning



Fig. 8.5: Optimum reading angle is 45 degrees and writing angle is 15 degrees

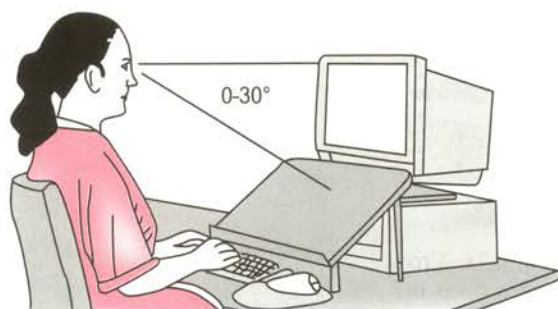


Fig. 8.6: Optimum visual angle is 0–30 degrees from horizontal

2. **Arm postures:** Correct arm postures are required to prevent tension on the scapular stabilizing muscles. The following things are advisable (Fig. 8.7a):

- Keep the arm hanging loosely by the side of the body or close to the body. In this position, the arm is most relaxed.
- The further the arm is positioned from the midline of the body, the greater is the stress on the neck and shoulder muscles.
- Work surface should be at the level of the elbow height.
- If visual activity is required, keep the work surface 5–10 cm above the elbow height.
- While working on computers provide proper arm and forearm support.

3. **Relaxing neck postures:** This can be done as follows:

- Rest the head on a surface to minimize strain on the neck.
- Use high backed chairs or sofas to provide neck support.
- In reclined postures, maintain a visual angle slightly above the horizontal surface to reduce the neck flexion.

Practice Neck and Back Care Techniques

This is extremely important to prevent the recurrence of neck pains. In this you need to compulsorily follow the back and neck care training in your day-to-day activities as enumerated below.

Practice ergonomics while at work (practice and maintain correct neck postures) (Fig. 8.7a)

Other Measures

1. **Sleeping postures** (Figs 8.7b and c)

- Maintain the head and neck postures at neutral position.
- Sleep on the sides in the recovery position.
- Do not sleep with the face down, as it twists the neck and causes pain.
- Use proper sized (about 2 inches) soft pillows and place it beneath the neck and not the head.

A word about arm movements: Proper arm movements are a must to prevent the origin of neck, shoulder and back pains. Avoid the following:

- Bending and lifting too far away from the body (see Fig. 7.19).

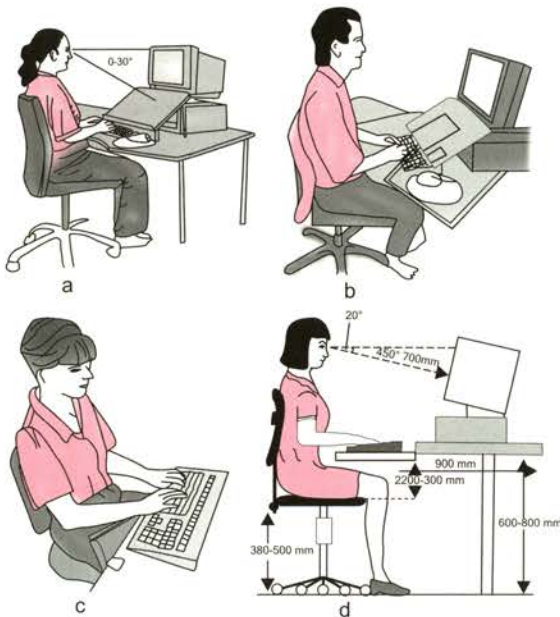


Fig. 8.7a: Proper ergonomics while using computers can reduce the incidence of neck, wrist, elbow and shoulder pains. (a) Table top support (b) Added wrist support (c) Mobile forearm support (d) The right sitting practice



Fig. 8.7b: Correct method of sleeping and the spoon theory in the designing of proper mattresses, which are back-friendly



Fig. 8.7c: Correct method of sleeping on the sides

- Reaching an object that is too high.
 - Excessive abduction of the shoulder.
2. **Role of aerobic exercises:** These exercises help to maintain a general well being apart from toning the neck, back and leg muscles which are the key to maintaining a normal posture. The recommended aerobic exercises are:
- Brisk walking.
 - Jogging

- Dancing
 - Stepping
 - Aerobics
 - Stationary cycling (active cycling with forward bent postures can create stress to the neck, shoulders and back)
 - Swimming (freestyle, back stroke are acceptable)
3. **Pranayama:** This is extremely useful in eliminating the physical pain and at the same time eliminate the physical, mental and emotional stress that are associated with RSI victims.
4. **Meditation:** The yogasana mentioned earlier has great relevance in computer professions and is very effective in overcoming all these chronic neck and other aches.

EBNEZAR'S INTEGRATED HOLISTIC THERAPY (EIHT) FOR CHRONIC NECK PAIN

I am sure after going through this book you might have developed an overwhelming appreciation for the role played by your neck. You might be overawed to learn that it strives to make your existence in this world a pleasant experience. But in return we hurt our neck day in and day out and even during the nights. Our beleaguered neck thus succumbs to this unkind treatment, resulting in vain glorious neck pains. Neck pain whether acute or chronic, is an agonizing experience that threatens to throw our lives totally out of gear.

Amidst the gloom there is a silver lining. CNPs are easy to prevent. If you scrupulously follow the simple measures suggested in this book, you will be rewarded with a trouble free neck performance.

If you inadvertently venture into the world of neck pains, still you do not need to despair. The remedial measures to overcome these menacing pains are very much simple and

within your easy grasp. Better still, if you embrace EIHT the holistic approach as suggested by me, your visit to a doctor or a therapist becomes a rarity.

This novel concept of mine is giving very good results for chronic neck pains and is gaining tremendous popularity of late. The table below gives a brief description of this treatment method. For detailed description read the text (Page 35).

Phase I: Preparatory Phase

— 30 minutes

- Omkar meditation (with chinmudra)—5 rounds (Fig. 8.8a).
- Nadi shudi pranayama (with nasikamudra)—5 rounds (Fig. 8.8c).
- Reflexology and acupressure.
- Magnet therapy—10 minutes.
- Physiotherapy—15 minutes (Fig. 8.8b):

PHASE I: PREPARATORY PHASE OF EIH THERAPY



Fig. 8.8a: Meditation



Intermittent cervical traction



Ultrasound massage



IFT



Music therapy

Fig. 8.8b: Physiotherapy and music therapy



Fig. 8.8c: Pranayama

- a. For stiffness - wax bath/usm or tens
- b. Without stiffness - tens/usm
- c. Intermittent cervical traction-10 minutes.

Phase II: Intensive Phase (modified IAYT)

— 30 minutes

Step 1: Loosening Exercises

1. Foot and ankle

- Passive rotation of the toes (each toe clockwise and anticlockwise)-5 rounds.
- Passive rotation of the ankle (both clockwise and anticlockwise)-5 rounds.
- Toe bending-5 rounds.
- Ankle bending-5 rounds.
- Ankle rotation (clockwise and anticlockwise both sides)-5 rounds

2. Knee

- Knee bending - Both sides-5 rounds.
- Knee rotation - Both sides-5 rounds.

3. Hip and Waist

- Half Butterfly-10 rounds.
- Full Butterfly-10 rounds.
- Hip rotations (both internal and external)- 10 rounds.

4. Upper Limbs

- Finger loosening-5 rounds.
- Wrist loosening-5 rounds.
- Wrist rotation (both clockwise and anticlockwise)-5 rounds.
- Elbow loosening-5 rounds.
- Arm loosening - forward and backward movements-5 rounds.

5. Neck

- Forward and backward bending-5 rounds.
- Sideward bending-5 rounds.
- Sideward tilting-5 rounds.
- Neck rotation (both clockwise and anticlockwise)-5 rounds.

Relaxation - Instant

Step 2: Strengthening Exercises

- Palm exercises-5 rounds.
- Wrist exercises-5 rounds.
- Elbow exercises-5 rounds.
- Arm exercises-5 rounds.
- Neck exercises with palm support-5 rounds.
- Knee cap tightening-5 rounds.

**PHASE II : MODIFIED IAYT
LOOSENING EXERCISES**



Ankle bending



Ankle bending



Passive bending of
great toe



Passive rotation of foot



Passive rotation of great toe



Passive rotation of ankle



Butterfly



Finger loosening



Wrist rotation



Palm stretch



Wrist bending



Shoulder rotation



Waist rotation

Step 3: Breathing Exercises

- Hands in and out breathing–5 rounds.
- Hands stretch breathing (Horizontal/Oblique/Vertical)–5 rounds each.

Relaxation - Quick

Step 4: Asanas

A. Standing Asanas

- Tadasana.
- Ardhakati Chakrasana.
- Ardha Chakrasana.
- Padahastasana.

B. Sitting Asanas

- Vajrasana.
- Shashankasana.
- Ustrasana.
- Vakrasana.

C. Supine Asanas

- Uttana Padasana.
- Pavanamuktasana.
- Garudasana.
- Setubandasana.
- Naukasana.

D. Prone Asanas

- Bhujangasana.
- Shalabasana.
- Navasana.
- Dhanurasana.
- Makarasana.

Relaxation - Quick

Step 5: Specific Practices for the Shoulder

- Neck stretching on either side with face down.

NECK SPECIFIC EXERCISES



Neck flexion



Extension



Side flexion



Side flexion other side



Neck side rotation



Circumduction



Neck circumduction

- Neck stretching with downward shoulder resistance.
- Shrugging of the shoulder.
- Neck movements against resistance.

Relaxation - Deep

Step 6: Devotional Songs

End of the Therapy

So the next time you witness anyone abusing their necks, stop, reflect, counsel and guide them. Thus you will join me in my endeavour of creating awareness in eliminating one common troublesome malady afflicting the mankind with impunity. Take charge of your neck and thus take charge of your life!

ASANAS



Ardhakati Chakrasana



Ardhakati Chakrasana



Ardhakati Chakrasana



Padahasthasana



Shashankasana



Bhujangasana



Navakasana



Pavanmuktasana



Pavanmuktasana



Instant relaxation