

## Whiplash and widespread pain

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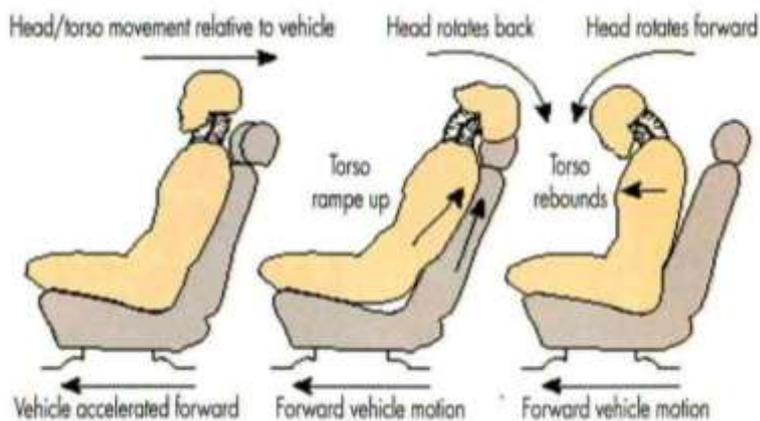
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### The patient asks: "All these problems for an old whiplash?"

The term 'whiplash' indicates a particular movement normally made by the cervical spine, which is violently and unexpectedly hit by a typical movement of the whip (as when it is used by the tamer at the circus).

In our case, it indicates a specific injury-distortive mechanism of the cervical spine which consists of a violent hyper-extension of the neck (the head is projected backward), immediately followed by a flexion counter-movement (the head is projected forward).

This mechanism is typical of automotive collisions: not just the violent or important ones, but also the modest ones.



Sometimes the cause can be just a small impact that does not require medical treatment or thorough investigation since you feel only minor disturbances or light temporary pain; sometimes you do not even feel anything for a few days, weeks or months, even to the point of forgetting the incident.

These above suspicion cases are the worst because no one relates them to the accident anymore. This creates difficulties from the therapeutic point of view because, when you can no longer find the cause, the treatment cannot be correctly targeted. In fact, the pain can arise after a long time and can hit, in addition to the neck, other areas causing symptoms that sometimes are actually above suspicion: shoulders, arms, dizziness, headaches, migraines, disorientation, tinnitus, bruxism, temporomandibular joint pain, tingling to arms and hands, lumbago, sciatica, lower limb weakness, etc.

Obviously, similar effects may also occur after other non-automotive trauma (an accidental fall or a minor trauma during sports), that are considered trivial or superficial, but that, in the same way of whiplash, the nervous system and the musculoskeletal system consider as constant interference in the postural system.

## What is a sprain?

A sprain, whether to the cervical spine or to an ankle, consists of a temporary removal of two articular heads and determines a generally partial stretching or tearing of the tissues located around the joint (capsule or ligaments).

In addition to that, a “spasm” generally occurs to defend muscles that, previously and violently stretched from trauma, defend itself with a violent contraction as automatic response.

When the body is no longer able to relax those muscular tissues that had contracted for defense (the tension remains for defensive purposes or for fear, for preventive purposes), those muscular tissues will tend to arrest over time and to keep the joints pressed and imprisoned. That is why radiographs of the cervical spine (in the post-trauma) highlight “reduction of physiological lordosis,” or “rectification” or worse, “reversing of the physiological cervical curve”.

The chronic nature of these alterations will inevitably cause to the cervical spine an incorrect joint mechanics creating altered stress and workload distributions responsible for injuries (disk disease, arthrosis phenomena, protrusions, herniated discs, root compressions, etc.). This phenomenon occurs only to the cervical spine, but for every trauma to any part of the body on any joint. Even many years after the traumatic event, many



symptoms that are not explicable to the traumatic sprain event (whiplash) will then appear: cervical pain, brachialgia, tendonitis, capsulitis, bursitis, epicondylitis, carpal tunnel, eyesight and hearing problems, reduced muscular strength, malaise, even depressive syndromes, etc.

What kind of connection exists between the old trauma and current symptoms apparently unrelated both chronologically and by location? Well, the neck is the closest part to the brain and it is crossed by the spinal cord, a mesh of nerve tissues that branch off to each vertebra. Even nerve tissues involving torso and legs cross the cervical spine (these run exactly on the top layer of the bone itself). When the marrow part of the neck is violently stretched, the stretching is reflected and transmitted to the whole marrow affecting all the connected nerve roots. This is how a cervical sprain may be able to create adverse effects over time in any part of the body.

Furthermore, from the cervical spine the nerve roots go directly to the skull and are often responsible for headaches, migraines, hearing loss, tinnitus or vertigo, or reduction in visual acuity, scotoma, red eyes, etc.

In addition to that, muscles tense up and block the cervical spine to avoid pain: muscular kinematic chains act to relieve pain and to prevent the neck from moving, but in this way other areas will be

overloaded (for example the lumbar spine) until they will also suffer for excessive workload: this is how from the cervical spine pain migrates and new diseases rise on lumbar spine, knees, hips, ankles or feet.

### **What can we do in case of collision?**

First of all, it is important to perform thorough medical investigation to ascertain the level of damage. Later, without waiting too long, you have to intervene to relax those muscles that were contracted (these are the suggestions of the latest scientific research). Then, through appropriate postural exercises, you have to return the physiological cervical curve by stretching those muscles that were retracted. The spine will function correctly only if its structure (i.e. its curves) is correct. (See Fig. 1).



*Fig.1: in the first stage after the trauma, you can intervene through gentle manual techniques called “myotensive”, which are helpful to reduce the extent of muscular spasm and prepare the next step of balancing muscular tension.*

In case of old trauma (even from decades before), through special postural exercises, it is possible to recover much of the lost mobility and help the body find again elasticity and dynamism: this will reduce or eliminate symptoms that over time were associated, as in the case we will now present.

The patient: “All these problems for an old whiplash? Unbelievable!”

Miss S., 36 years old, employee, turned to our Posturology studio in Milan to solve some problems which she described as “unexplained generalized and migrant aches” that lately have become unbearable. The problem that bothered her more consisted of annoying persistent but not acute headaches, limiting her ability to concentrate at work and also affecting her social life. She also suffered of right side neck-based pain, which sometimes became stiff neck: in addition to that, she also suffered of pain and tingling both to the shoulder and to the whole arm up to the right hand. Lately, pain had affected also her legs: she felt them “weird” and, especially at night, they lost sensitivity, while during the day she did not feel them as strong as they were once, despite her propensity to sports.

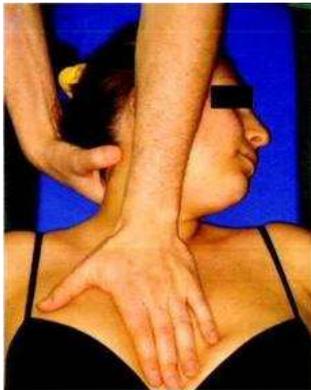
This condition started two years ago, although at the beginning pain was much more mild and tended to decrease (almost disappear) with simple gymnastics and stretching at the gym; rarely, and only in occasion of the most acute episodes, she had to resort to pharmacological treatments.

During the anamnesis, i.e. the reconstruction of her history and pain, the more significant fact turned out to be a car accident occurred about five years before. On that occasion, she suffered of cervical sprain (whiplash), but without major consequences apart from a bit of headache and shoulder pain for a few days; then for three years, no more pain!

Postural analysis highlighted immediately that the head had not a proper alignment. Even the test for neck rotation indicated an evident mobility limitation on the right side and less lateral flexion on both sides.

After the whole postural examination, that uses various techniques and tools (tests and stabilometric and baropodometric platform), postural treatment began with a gentle work of balancing muscle tension in the cervical spine on decompensated posture on Pancafit®; after this first phase, the feeling was of lightness in neck and shoulders with greater possibility to rotate the head.

After a week, headaches had reduced and therefore in the following sessions work intensity increased progressively and proportionally to the feelings of improving mobility and symptoms.



*Fig. 2: Treatment of the cervical spine in Non-compensated Global Stretching posture. The treatment on the neck is more effective avoiding those compensations that the body will automatically put in place to try to escape tensions such as lifting the chest and holding breath. At this stage a massage of paravertebral muscles can be done to ease tensions and muscle retraction.*

After ten sessions (although the improvements occurred from session to session), Miss S. did not feel that annoying circle to the head anymore; she could feel her legs once again without episodes of loss of sensation during the night, and also the right arm did not tingle anymore. At the first session Miss. S. refused to believe in the relationship between her current pain and her old whiplash, but she was then satisfied with the results achieved and exclaimed: “All these problems for an old whiplash? Unbelievable... but true!!!”

*For more information on the Raggi Method®- Pancafit® please address to Posturalmed S.A.*

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