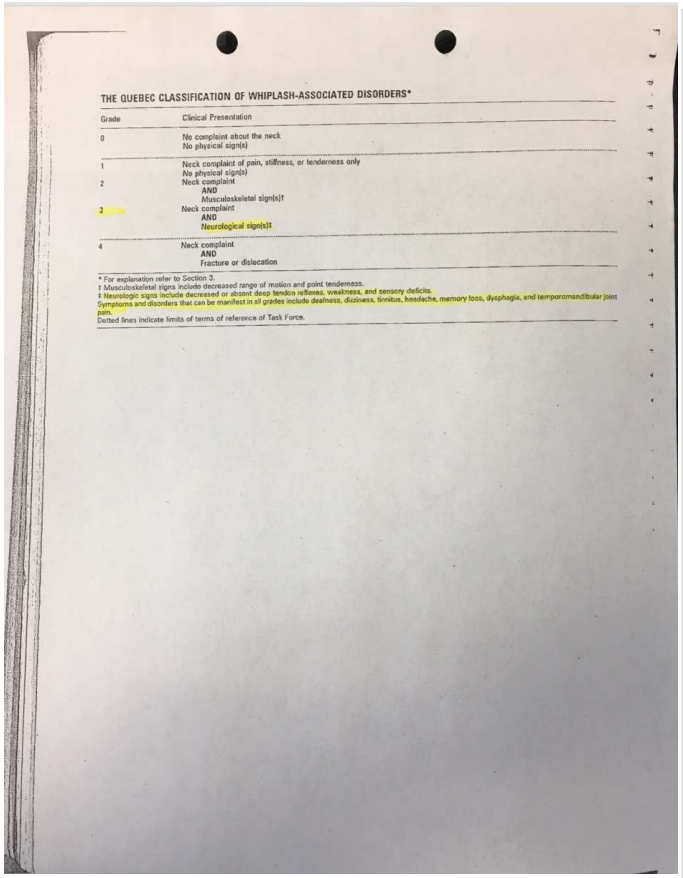
- QTF Guidelines

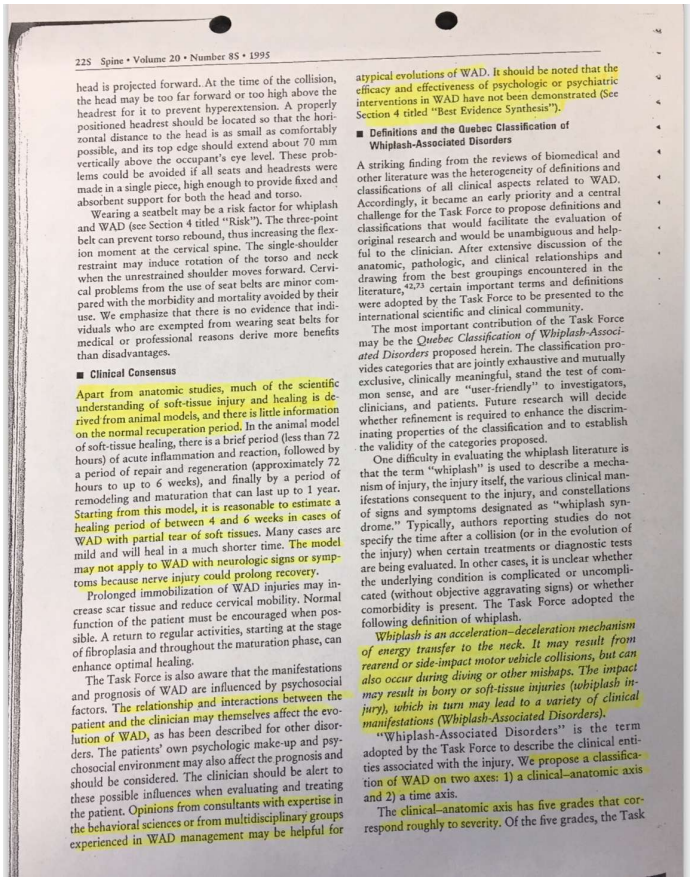
Screen Shots of the Scientific Monograph of the Quebec Task Force (QTF) on Whiplash Associated Disorders publication in Spine.



THE QUEBEC CLASSIFICATION OF WHIPLASH-ASSOCIATED DISORDERS*

Grade	Clinical Presentation
0	No complaint about the neck No physical sign(s)
1	Neck complaint of pain, stiffness, or tenderness only No physical sign(s)
2	Neck complaint AND Musculoskeletal sign(s)†
3	Neck complaint AND Neurological sign(s)‡
4	Neck complaint AND Fracture or dislocation

* For explanation refer to Section 3.
† Musculoskeletal signs include decreased range of motion and point tenderness.
‡ Neurologic signs include decreased or absent deep tendon reflexes, weakness, and sensory deficits.
§ Symptoms and disorders that can be manifest in all grades include deafness, dizziness, tinnitus, headache, memory loss, dysphagia, and temporomandibular joint pain.
Dotted lines indicate limits of terms of reference of Task Force.



head is projected forward. At the time of the collision, the head may be too far forward or too high above the headrest for it to prevent hyperextension. A properly positioned headrest should be located so that the horizontal distance to the head is as small as comfortably possible, and its top edge should extend about 70 mm vertically above the occupant's eye level. These problems could be avoided if all seats and headrests were made in a single piece, high enough to provide fixed and absorbent support for both the head and torso.

Wearing a seatbelt may be a risk factor for whiplash and WAD (see Section 4 titled "Risk"). The three-point belt can prevent torso rebound, thus increasing the flexion moment at the cervical spine. The single-shoulder restraint may induce rotation of the torso and neck when the unrestrained shoulder moves forward. Cervical problems from the use of seat belts are minor compared with the morbidity and mortality avoided by their use. We emphasize that there is no evidence that individuals who are exempted from wearing seat belts for medical or professional reasons derive more benefits than disadvantages.

■ Clinical Consensus

Apart from anatomic studies, much of the scientific understanding of soft-tissue injury and healing is derived from animal models, and there is little information on the normal recuperation period. In the animal model of soft-tissue healing, there is a brief period (less than 72 hours) of acute inflammation and reaction, followed by a period of repair and regeneration (approximately 72 hours to up to 6 weeks), and finally by a period of remodeling and maturation that can last up to 1 year. Starting from this model, it is reasonable to estimate a healing period of between 4 and 6 weeks in cases of WAD with partial tear of soft tissues. Many cases are mild and will heal in a much shorter time. The model may not apply to WAD with neurologic signs or symptoms because nerve injury could prolong recovery.

Prolonged immobilization of WAD injuries may increase scar tissue and reduce cervical mobility. Normal function of the patient must be encouraged when possible. A return to regular activities, starting at the stage of fibroplasia and throughout the maturation phase, can enhance optimal healing.

The Task Force is also aware that the manifestations and prognosis of WAD are influenced by psychosocial factors. The relationship and interactions between the patient and the clinician may themselves affect the evolution of WAD, as has been described for other disorders. The patients' own psychologic make-up and psychosocial environment may also affect the prognosis and should be considered. The clinician should be alert to these possible influences when evaluating and treating the patient. Opinions from consultants with expertise in the behavioral sciences or from multidisciplinary groups experienced in WAD management may be helpful for atypical evolutions of WAD. It should be noted that the efficacy and effectiveness of psychologic or psychiatric interventions in WAD have not been demonstrated (See Section 4 titled "Best Evidence Synthesis").

■ Definitions and the Quebec Classification of Whiplash-Associated Disorders

A striking finding from the reviews of biomedical and other literature was the heterogeneity of definitions and classifications of all clinical aspects related to WAD. Accordingly, it became an early priority and a central challenge for the Task Force to propose definitions and classifications that would facilitate the evaluation of original research and would be unambiguous and helpful to the clinician. After extensive discussion of the anatomic, pathologic, and clinical relationships and drawing from the best groupings encountered in the literature,[72,73] certain important terms and definitions were adopted by the Task Force to be presented to the international scientific and clinical community.

The most important contribution of the Task Force may be the *Quebec Classification of Whiplash-Associated Disorders* proposed herein. The classification provides categories that are jointly exhaustive and mutually exclusive, clinically meaningful, stand the test of common sense, and are "user-friendly" to investigators, clinicians, and patients. Future research will decide whether refinement is required to enhance the discriminating properties of the classification and to establish the validity of the categories proposed.

One difficulty in evaluating the whiplash literature is that the term "whiplash" is used to describe a mechanism of injury, the injury itself, the various clinical manifestations consequent to the injury, and constellations of signs and symptoms designated as "whiplash syndrome." Typically, authors reporting studies do not specify the time after a collision (or in the evolution of the injury) when certain treatments or diagnostic tests are being evaluated. In other cases, it is unclear whether the underlying condition is complicated or uncomplicated (without objective aggravating signs) or whether comorbidity is present. The Task Force adopted the following definition of whiplash.

Whiplash is an acceleration–deceleration mechanism of energy transfer to the neck. It may result from rearend or side-impact motor vehicle collisions, but can also occur during diving or other mishaps. The impact may result in bony or soft-tissue injuries (whiplash injury), which in turn may lead to a variety of clinical manifestations (Whiplash-Associated Disorders).

"Whiplash-Associated Disorders" is the term adopted by the Task Force to describe the clinical entities associated with the injury. We propose a classification of WAD on two axes: 1) a clinical–anatomic axis and 2) a time axis.

The clinical–anatomic axis has five grades that correspond roughly to severity. Of the five grades, the Task

1. Spitzer WO, Skvtn ML, Salmi LR et al., "Scientific monograph of the Quebec task force on whiplash-asscociated disorders: redefining "whiplash"and its management," Spine, vol. 20, pp. 2–235, 1995.
2. Freeman MD, Croft AC, Rossignol AM: Whiplash Associated Disorders (WAD) - Redefining Whiplash and its Management" by the Quebec Task Force: A Critical Evaluation. Spine September 12, 1997.

Copyright: Dr. Jason Mazzarella, DC – North American Spine Institute, Inc.