

**Whiplash Injury**  
**30-Year follow-up of a single series**

**Journal of Bone and Joint Surgery - British Volume,**  
**Volume 92-B, Issue 6, pp. 853-855**

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FROM ABSTRACT:

We have reviewed 22 patients at a mean of 30 years (28 to 31) after a whiplash injury.

A complete recovery had been made in ten (45.5%) while one continued to describe severe symptoms.

Persistent disability was associated with psychological distress but both improved in the period between 15 and 30 years after injury.

After 30 years, ten patients (45.5%) were more disabled by knee than by neck pain.

THESE AUTHORS ALSO NOTE:

“The term ‘whiplash’ is used to denote the mechanism of an indirect flexion-extension soft-tissue injury to the neck resulting from a rear-end motor-vehicle collision.”

The whiplash-injured patient will have reached maximum improvement by 2 years after injury.

At two years after injury, about 50% of whiplash-injured patients are completely recovered, and about 50% will have ongoing symptoms. 4.5% of whiplash-injured patients will suffer from severe symptoms 2 years after injury.

Whiplash-injured patients with a disability often develop an abnormal psychological profile.

“Musculoskeletal pain tends to increase with age and this may be superimposed on the pre-existing symptoms of a whiplash injury thereby causing more severe disability in the neck with advancing years.”

These authors re-evaluated 22 whiplash-injured patients 30 years after injury. They had previously evaluated these same patients at 2, 10, and 15 years.

RESULTS

<b>Group A</b>	<b>Group B</b>	<b>Group C</b>	<b>Group D</b>
<u>Asymptomatic</u>	<u>Mild symptoms</u> Not interfering with work or leisure activities	<u>Intrusive Symptoms</u> Handicapping work and leisure activities Patient using drugs, physical therapy, orthoses for symptoms	<u>Severe Symptoms</u> Causing patients to lose their jobs and rely continually on drugs, orthoses and repeated medical consultations
45%	40.9%	9.1%	4.6%

“Of the 22 patients, ten (45.5%) were asymptomatic (group A), nine (40.9%) had mild symptoms (group B), in two (9.1%) the symptoms were intrusive (group C) and in one (4.6%) they were severe (group D).”

Between 15.5 year and 30 years, neck disability had improved in 45.5% of patients, remained the same in 45.5% of patients, and deteriorated in 9.1% of patients.

## DISCUSSION

In this study, after 30 years, 45.5% of patients had made a full recovery while one 4.5% continued to describe severe symptoms.

“Symptoms appeared to improve between 15.5 and 30 years with a change mainly from moderate to mild disability. The hypothesis that age-related neck symptoms become superimposed on those from the whiplash injury is disproven.”

“Musculoskeletal pain appeared to increase with age. About half was due to low back pain and the rest to arthritis at other sites.”

## KEY POINTS FROM DAN MURPHY

1) This is the longest study of whiplash-injured patients that I have seen in the PubMed database: a 30-year follow-up study. The results are:

<b>Group A</b>	<b>Group B</b>	<b>Group C</b>	<b>Group D</b>
<u>Asymptomatic</u>	<u>Mild symptoms</u> Not interfering with work or leisure activities	<u>Intrusive Symptoms</u> Handicapping work and leisure activities Patient using drugs, physical therapy, orthoses for symptoms	<u>Severe Symptoms</u> Causing patients to lose their jobs and rely continually on drugs, orthoses and repeated medical consultations
45%	40.9%	9.1%	4.6%

2) Between 15.5 year and 30 years, neck disability had improved in 45.5% of patients, remained the same in 45.5% of patients, and deteriorated in 9.1% of patients.

- 3) 45.5% of whiplash-injured patients had made a full recovery 30 years after being injured.
- 4) About 15% of whiplash-injured patients have significant symptoms and impairments 30 years after being injured.
- 5) Although most whiplash-injured patient will have reached maximum improvement by 2 years after injury, this study shows that some (9.1%) are continuing to deteriorate 30 years after being injured.
- 6) At two years after injury, about 50% of whiplash-injured patients are completely recovered, and about 50% will have ongoing symptoms. 4.5% of whiplash-injured patients will suffer from severe symptoms 2 years after injury.
- 7) Whiplash-injured patients with a disability often develop an abnormal psychological profile.
- 8) Age related spinal degeneration advances with age. In this study, 30 years after being injured, 91% of the whiplash-injured patients either improved or remained the same between 15 and 30 years after being injured. This suggests that chronic whiplash symptoms are not linked to age-related advancing of spinal degeneration.

#### COMMENTS FROM DAN MURPHY

Once again, this study shows that a significant number of those injured in whiplash trauma will suffer with chronic symptoms. Thirty years after being injured:  
45% are completely recovered  
40% retain nuisance symptoms  
15% have significant symptoms and impairments, requiring ongoing treatment

Additionally:

Psychological distress is common in the chronic group.

It is not unusual for maximum improvement to take 2 years.

Most patients with chronic symptoms at 2 years will continue to have chronic symptoms 30 years later.