



# **VAX-D therapy for low back pain**

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## **Workers' Compensation Board of BC**

**Worker and Employer Services**

**Clinical Services**

**Evidence Based Practice Group**

# Outline

- Background
  - Why even consider VAX-D
  - What is VAX-D
  - History of Traction
- Objectives
- Methods
- Results
- Search update
- WorkSafeBC conclusions

# Background.

- The mandate of WorkSafeBC is to:
  - Promote the prevention of workplace injury, illness, and disease
  - Rehabilitate those who are injured and provide timely return to work
  - Provide fair compensation to replace workers' loss of wages while recovering from injuries
  - Ensure sound financial management for a viable workers' compensation system

# Why even consider VAX-D?

- Section 21(1) of the *Act* provides in part as follows:
- In addition to the other compensation provided . . . , the **Board may may furnish or provide for the injured worker any medical, surgical, hospital, nursing and other care or treatment**, transportation, medicines, crutches and apparatus, apparatus, including artificial members, **that it may consider reasonably necessary** at the time of the injury, and thereafter thereafter during the disability to cure and relieve from the effects of the of the injury or alleviate those effects, and the Board may adopt rules and rules and regulations with respect to furnishing health care to injured injured workers entitled to it and for the payment of it.

# Why even consider VAX-D?

- Potential for Treatment:
  - ~ 3.2 million workers in BC
- WorkSafeBC Low Back Pain (LBP) claims
  - ~ 17,500 new claims annually

# Requests for VAX-D Therapy

- Costs:
  - Operator
    - VAX-D Table 125,000 USD (1999)
    - Standard Traction Table , up to 7,000 CDN
  - Patient
    - US Patient Testimonial: 30 sessions @ 200.00 each
    - CDN Patient Testimonials: 1,000.00 up-front fee, and need for 10 to 20 sessions

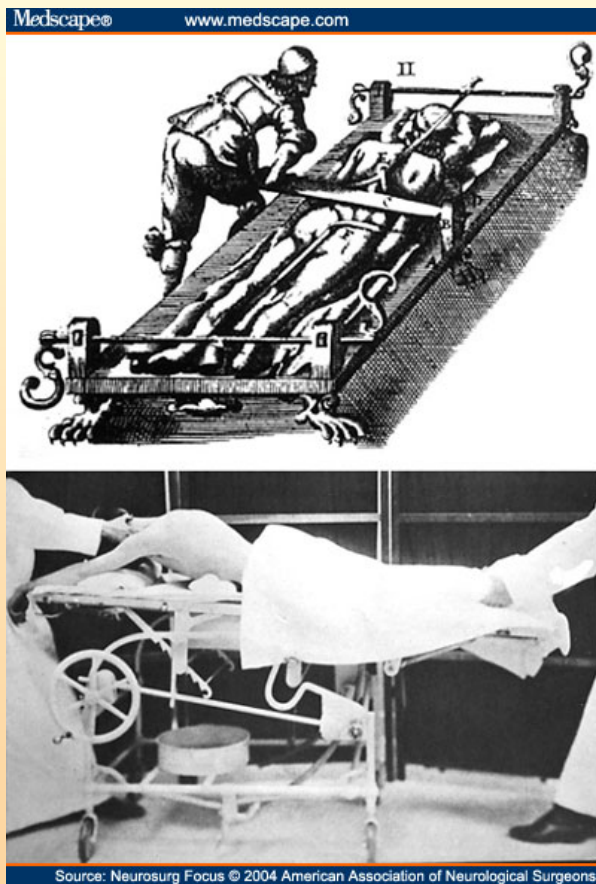
- What is VAX-D ?
- Link to company website with photos of equipment:
- <http://www.vax-d.com/>

# History of Traction

- Therapy vs. Torture
- Links to photos/information of traction in history:
- [http://en.wikipedia.org/wiki/Hippocratic\\_bench](http://en.wikipedia.org/wiki/Hippocratic_bench)
- <http://www.iso-trac.com/hipandme.htm>



- Regular traction table.



# Outline

- Background
- Objectives
  - Our question
  - First review
- Methods
- Results
- Search update
- WorkSafeBC conclusions

# First Review

- 1999: limited review → no evidence of effectiveness for VAX-D in treatment of low low back pain

# Objectives:

- To investigate the effectiveness of VAX-D in treating low back pain by conducting a systematic review of the literature
- To update review done in 1999

# Outline

- Background
- Objectives
- **Methods**
  - Search date
  - Keywords
  - Inclusion/exclusion criteria
  - Sources
- Result.
- Search update
- WorkSafeBC conclusions

# Methods:

- Date:  
1999 to week 1 February 2005
- Keywords:  
VAX-D or vertebral axial decompression or vertebral  
vertebral axial decompression table
- Inclusion – exclusion criteria:  
none

- Sources:
  - OVID® Gateway Databases :
    - ACP® Journal Club, BIOSIS®, CINAHL®, EMBASE®, OVID® Medline
    - 38 articles retrieved; only 6 related to VAX-D; 4/6 published after 1999; 1/4 was patent application.
  - Cochrane Library:
    - Cochrane Database of Systematic Review, Cochrane Central Trial registry, DARE
  - INAHTA and its member countries:
    - CCOHTA, AHFMR, Aetmis, VATAP, NCCHTA, MSAC, MSAC, NZHTA, SBU, DACEHTA and GR

- Other Workers' Compensation Boards:  
Boards:
  - Canada: Alberta, Ontario WSIB
  - US: Washington State Department of Labor and Industries & Colorado Department of Labor Labor and Employment
- Health insurance Providers:
  - Aetna®, Medicare-Medicaid, Regence group, Blue Cross of California



# Outline

- Background
- Objectives
- Methods
- **Results.**
  - 1 systematic review
  - 1 RCT
  - 2 other primary studies
  - Other workers' compensation boards
  - Health insurance providers
- Search update
- WorkSafeBC conclusions

# Results:

- 1 systematic review:
  - Australian Medical Services Advisory Committee, Committee, June 2001
  - Comprehensive search up to December 2000
  - Transparent, high quality review
- Conclusions:
  - Chronic Low Back Pain→insufficient evidence
  - Radiculopathy→some evidence surgical discectomy more more effective than VAX-D for pain relief in short (up to 6 (up to 6 months) and medium term (up to 1 year)

- Systematic review, continued....
  - None studies reported incidence of adverse events or patient drop out rates due to adverse adverse effects
- MSAC recommendations: Medicare should not reimburse VAX-D procedure for treating chronic low chronic low back pain
- Link:  
<http://www.msac.gov.au/pdfs/reports/msac1012.pdf>  
[12.pdf](http://www.msac.gov.au/pdfs/reports/msac1012.pdf)

- 1 RCT:
  - *Sherry E, Kitchener P, Smart R. A prospective randomized controlled study of VAX-D and TENS TENS for the treatment of chronic low back pain. Neurological Research. 2001 Oct; 23(7):780-4 23(7):780-4*
  - Included in the MSAC review as an unpublished paper
  - 44 patients were 'randomized' half to VAX-D & half & half to TENS
  - *Design, Execution, Reporting Considerations*
  - Authors' Conclusion: VAX-D statistically reduced reduced pain and improved functional outcome among patients with chronic low back pain as compared to those treated by TENS

- 2 other studies:

1. Naguszewski William K, Naguszewski Robert K, Gose Earl E. *Dermatomal somatosensory evoked potential demonstration demonstration of nerve root decompression after VAX-D therapy. Neurological Research. 2001 Oct; 23(7):706-714 714*

- This study was not appraised

2. Deen HG Jr, Rizzo TD, Fenton DS. Sudden progression of lumbar disk protrusion during vertebral axial decompression decompression traction therapy. Mayo Clinic Proceedings. 2003 Dec; 78(12):1554-6

- Data on adverse events (only such study?)
- Case Study—single patient
- Described the increased in LBP VAS score in a 46 year old patient patient with radiculopathy after VAX-D treatment

- Other WCBs:

- Canada:

- No information posted to websites (Alberta and Ontario)

- United States:

- Washington State and Colorado State Department of Labor: no evidence regarding the effectiveness of VAX-D VAX-D to treat chronic LBP
    - Washington State reimburses VAX-D treatment providing providing that it is delivered by a licensed physiatrist or PT or PT at the same rate with other traction therapy for LBP LBP

- Other Health Insurance Providers:
  - US Medicare and Medicaid,
  - Aetna®,
  - the Regence and Blue Cross Group
    - consider VAX-D to be experimental
- Therefore, no reimbursement for VAX-D

- Survey: various workers' compensation board board and health insurance company websites showed none that provide a special special reimbursement for VAX-D treatment treatment



# Limitations

- Search did not include:
  - hand search
  - unpublished materials
  - non-English language materials

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# Search update:

- November 10, 2005
- Same methods
- No new published articles found

# WorkSafeBC summary:

- VAX-D system is a specialized table and computer designed to apply distractive tension tension along the axis of the spine. The VAX-D VAX-D system is promoted to alleviate pain pain and neurological deficits associated with with nerve root compression. The system is is also promoted as being 'completely risk free' free'

# WorkSafeBC conclusions:

- To date, no evidence that VAX-D system is effective in treating chronic LBP associated with herniated disc, degenerative disc, posterior facet syndrome, sciatica or radiculopathy
- WorkSafeBC has no special re-imburement for VAX-D therapy

# Our Question:

- Is VAX-D traction therapy *reasonably necessary* to promote recovery for workers with claims entitled for low back pain conditions

# Our Answer:

- No, VAX-D traction therapy cannot be considered as *reasonably necessary* to promote recovery for workers with claims entitled for low back pain conditions

- Complete review document is available at:

[http://www.worksafebc.com/for\\_health\\_care\\_providers/Assets/PDF/vertebral\\_axial\\_decompression\\_low\\_back\\_pain.pdf](http://www.worksafebc.com/for_health_care_providers/Assets/PDF/vertebral_axial_decompression_low_back_pain.pdf)



# THANK YOU.

## Questions ?

[http://www.worksafebc.com/for\\_health\\_care\\_providers/related\\_information/evidence\\_based\\_medicine/default.asp](http://www.worksafebc.com/for_health_care_providers/related_information/evidence_based_medicine/default.asp)

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