Self-Directed Structured Spine Care

David Hanscom, MD
Swedish Neuroscience Specialists
Seattle, WA
Pain Severity

1. If 10 is the worst pain imaginable, and 0 is no pain, please note your pain over the last TWO WEEKS:

   LEFT = TRAPEZIUS, RHOMBOIDS, SHOULDER & NECK ALWAYS ACHE!
Onset

When did this set of CURRENT problems begin? 2005, 06. 07, 2011

Low back, June 2011, legs, feet

What is your chief complaint? Never ending HOT NERVE PAIN IN NECK

What event(s) caused your current spine problem? (Check all that apply)

- Upper thoracic, low back, legs, feet
- Maker of pain worse
- Lifting
- Pushing
- Pulling
- Other 3-4 Bad Falls

What were the circumstances surrounding this onset? (Check all that apply)

- Vehicle/Boating accident
- On the job injury
- Other 2 Bad Falls on Stairs, landing on Neck, Back, Table
- Lost consciousness

Bad fall trying to hang curtains, slip, fall onto wood floor, hit head, blacked out

Please explain these events that surrounded the onset of this spine problem:

1988 - Stairs, slip, fell, knocked out, landed on back, neck, Hardwood Table,

2010 - Wet out of shower to answer ringing phone, slip on tile Stairs,

floor, fell forward flat on front body, slid into cupboard,

3-4 Bad Falls make the pain worse

3-4 Bad Falls

1-2 Bad Falls on Stairs, landing on Neck, Back, Table

Lost consciousness

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1988 - Stairs, slip, fell, knocked out, landed on back, neck, Hardwood Table,

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Two Years Later

David, She has made remarkable changes. She is motivated and has developed a strong internal locus of control. She has chosen treatments that have helped her and is focused in conversation, a huge change. She gets advice and help from all of us.

Really wonderful, Joel
Enjoying the Management of Your Patients in Chronic Pain
Structured Care

David A. Hanscom, M.D.
Swedish Neuroscience Specialists
Seattle, WA
Disease in man is never exactly the same as disease in an experimental animal, for in man the disease at once affects and is affected by what we call the emotional life. Thus the physician who attempts to take care of the patient while he neglects this factor is as unscientific as the investigator who neglects to control all of the conditions that affect his or her experiment.
One of the essential qualities of the clinician is interest in humanity, for the secret of care is in caring for the patient.
Purpose
Psychosocial factors are equally or more important in selecting patients for surgery.
Chronic pain is not acute pain
Shape shifting pain: chronification of back pain shifts brain representation from nociceptive to emotional circuits

Javeria A. Hashmi, 1 Marwan N. Baliki, 1 Lejian Huang, 1 Alex T. Baria, 1 Souraya Torbey, 1 Kristina M. Hermann, 1 Thomas J. Schnitzer 2 and A. Vania Apkarian 1,3,*
Prospective fMRI Study
LBP

- Acute pain = 94
  - < 2 months
- Chronic pain = 59
  - > 10 years
Location of brain activity

- Acute pain – nociceptive area
- Chronic – emotional area
Longitudinally followed 39 acute LBP

- 19 recovered
- 20 become chronic
12-month period
Scans every 3 months

Resolved

• Nociceptive area diminished
• No other changes

Became Chronic

• Activity shifted to the emotional centers
• Nociceptive region diminished/ absent
Chronic pain exists in the emotional not the nociceptive areas of the brain.
Anxiety and chronic pain are linked

Permanent Pathways

Processed in the same area of the brain
• History of Abuse—physical, sexual, emotional, neglect, or caregiver
  • If > 2 of 5 positive the surgical success around 15% at one year
    • Schofferman, et al, Spine, 1992
Psychological factors are a better predictor of success in spine surgery for LBP than the anatomic lesion

- Block et al, Spine, 2001
- Spengler et al, JBJS, 1990
- Trief et al, Spine, 2000
Depressed Somatisizers do poorly

- DRAM INDEX
  - Two scales—Depression and somatization
    - Surgical patients excluded
  - Depressed/Depressed or Depressed/Somatizers have 5X disability risk
Surgeons have a limited capacity to assess chronic pain risk

- DRAM given to 125 orthopedic patients
  - 35 pts “distressed”
  - 54 pts “at risk”

- Surgeons had only a 26% sensitivity in identifying distressed patients
  - Grevitt et al, European Spine Jrl, 1998
Surgeons Ignoring Psych Guidelines

- 10% of orthopedic and neurosurgeons using routine psychological screening
  - 110 respondents
  - Community more compliant than academic
Consequences

• Depression
• Longer recovery
• Increased complications
• Poor patient compliance

  • Skolasky, Jrn Spinal Disorders, April, 2014
Surgery is the “definitive solution”
Degenerating Discs are part of the Normal ageing Process

- There is a 35% incidence of disc changes in asymptomatic people between 20-39 yrs—almost 100% over 60 yrs
Fusion Results

- Swedish study comparing fusion vs conservative care—294 pts randomized with > 2 years of CLBP
  - Surgery=222, Non-op=72
- Fritzell et al, Spine, 2001
Results of Fusion

- **Surgery-222**
  - Disability decreased 25%
  - LBP decreased 33%
  - >Better—63%
  - Depression decreased 20%

- **Non-Surgery-72**
  - Disability decreased 6%
  - LBP decreased 7%
  - >Better—29%
  - Depression decreased 7%

  - Fritzell et al, Spine 2001
Observations of Fritzell’s study

Conservative care not structured—
  - Would not expect improvement
  - Prognosis worsens with time
  - Surgical results are not good
    - Does not really even reach placebo
    - Major downside
Fusion Results

- 64 patients with > 1 yr of LBP
- Randomized to highly-structured rehab program or lumbar fusion
Fusion Results

- Fusion  n=37
  - ODI -- 41 to 26
  - Overall success
    - 70%
      - Early complications 18%

- Rehab  n=27
  - ODI – 42 to 30
  - Overall success
    - 76%

Brox Study Observations

• Surgery was helpful
• The non-operative was very highly structured
  • “not widely available”
• Structured non-operative care is highly effective obviating the need for surgery
• “Future studies should evaluate strategies toward implementation of cognitive intervention and exercise for CLBP”
The “Perfect Patient”

- 78 Patients—62 followed up
  - 32 isthmic spondylolisthesis
    - Successful surgery 72%
  - 30 discogenic pain—low pressure discography
    - Single level
    - Normal psychosocial profile
    - Successful surgery 27%

- Carragee et al, 2006
Any surgical procedure can induce chronic pain
<table>
<thead>
<tr>
<th>Type of Operation</th>
<th>Incidence of Chronic Pain (%)</th>
<th>Estimated Incidence of Chronic Severe Pain (&gt;5 out of 10) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amputation</td>
<td>30–85</td>
<td>5–10</td>
</tr>
<tr>
<td>Thoracotomy</td>
<td>5–65</td>
<td>10</td>
</tr>
<tr>
<td>Mastectomy</td>
<td>11–57</td>
<td>5–10</td>
</tr>
<tr>
<td>Inguinal hernia</td>
<td>5–63</td>
<td>2–4</td>
</tr>
<tr>
<td>Coronary bypass</td>
<td>30–50</td>
<td>5–10</td>
</tr>
<tr>
<td>Cesarian section</td>
<td>6–55</td>
<td>4</td>
</tr>
<tr>
<td>Cholecystectomy</td>
<td>3–50</td>
<td>Not estimated</td>
</tr>
<tr>
<td>Vasectomy</td>
<td>0–37</td>
<td>Not estimated</td>
</tr>
<tr>
<td>Dental surgery</td>
<td>5–13</td>
<td>Not estimated</td>
</tr>
</tbody>
</table>

*Source: Reproduced with permission from: Macintyre et al.*
Risk Factors

- Female
- Severity/ duration of pre-op pain
- Emotional vulnerability
  - Catastrophizing
  - Anxiety/ depression
- Younger adults
Inducing chronic pain is rarely mentioned as a surgical complication.
2013 Outstanding Paper Runner-up

Lumbar surgery in work-related chronic low back pain: can a continuum of care enhance outcomes?

Tom G. Mayer, MD\textsuperscript{a,\textasteriskcentered}, Robert J. Gatchel, PhD, ABPP\textsuperscript{b,c}, Emily Brede, RN, PhD\textsuperscript{d}, Brian R. Theodore, MS, PhD\textsuperscript{e}
Structured Rehab
“Continuum of Care”
All Workers Comp

- Improved outcomes almost 300%
  - RTW
  - Opioids
  - Less future surgeries/ healthcare
Structured Interventions

- CBT
  - Stress management/relaxation tools
- Physical conditioning
- Education about pain/recovery
- Medication stabilization
Unclear whether surgery added anything
Prehab
Ingredients for success

- Education about chronic pain
- Address **ALL** relevant variables simultaneously
- Patients take control
Outpatient Rehabilitation Services

Back on Track
Back Education Seminar

OUTPATIENT REHABILITATION SERVICES
Cherry Hill
500 17th Ave.
James Tower, Suite 100
Seattle, WA 98122
T 206-320-2404

First Hill
1101 Madison, Suite 200
Seattle, WA 98104
T 206-386-2035
www.swedish.org
The Pain Puzzle: Empowering You to Put the Pieces Together

It hurts! But why? What happens in the body when you are in pain? Medical researchers studying pain have discovered important new answers to this question that can help you reduce and manage pain more effectively. This two-class program gives you the latest facts about pain and treatment choices that help you heal.

Learn About:
- The nervous system
- Pain pathways in the body, spinal cord and brain
- Types of pain

Understand How:
- The brain activates when the body is in pain
- Nervous communicate and become sensitive
- To optimize your nervous system activity and reduce nerve sensitivity

About Our Instructor:
Carolyn McManus, MPT, MS, MA, has specialized in the care of people with chronic pain for over 25 years. An author, researcher and nationally recognized expert in the non-drug treatment of pain, she developed this educational program to help you understand what happens when you are in pain and empower you to take control.

Other Program Information:
The Pain Puzzle takes place in the conference room of the Outpatient Rehabilitation Services, Swedish/First Hill, 1101 Madison Suite 200, Seattle, WA 98104. Each class is 2½ hours long, with a week between the first and second class.

This program is billed to your insurance carrier as a group physical therapy visit and may be covered under your physical therapy benefits. If your insurance requires you to submit a physician’s referral for physical therapy you will need to obtain that referral from your physician.

For class dates and to register, please call Swedish Outpatient Rehabilitation Services at 206-386-2055.
STOMP
Structuring Your Own Management of Pain

Setting goals that help you and your doctor alleviate your pain and improve your quality of life.

www.swedish.org/STOMP
If you are ready to control your care, stimulate changes in your brain (neuroplasticity) and decrease your pain, use the STOMP information to develop your goals and an action plan.

The STOMP medical team developed this program specifically with you in mind.

We wish you good luck on your voyage to recovery.

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Back in Control
A spine surgeon’s roadmap out of chronic pain
David Hanscom MD
www.back-in-control.com
Current Protocol

Elective surgery

- Axial pain diminished at least 50%
  - “Spine surgery will not help your back/neck pain.”
- Anxiety being actively treated
- Sleeping at least 7 hours a night
- Medications defined and stabilized
Current Protocol

Elective surgery

• No surgical decisions on the initial visit
  • Extensive education process
  • Surgery done *only* on structural problems

Prehab for 6 – 12 weeks
  • Continue for as long as needed
Workers Comp

- Done in the context of an active rehab/ RTW plan
Benefits

- Good outcomes better
  - Fewer failures
- Less post op pain/ frustration about meds
- Patients proactive about conditioning
Surgery often completely avoided

- Writing up over 30 patients
- All structural
  - Planned surgical intervention
68 y/o female with neck pain
No Myelopathy
62 y/o female with neurogenic claudication
Cases
Non-Surgical Treatment of Severe Scoliosis
63 y/o Female

- MVA – 2001
- Slip and fall – 2002
- Knocked over 2004
- Wheelchair bound since 2004
October 2012

• Initial Presentation
• Total body pain
• Wanted her scoliosis fixed
• 200 mg Oxycodone/ day
• Began structured care approach with Pain and Headache Center
Reasons for Discontinuing Care
• No clinical progress
  • After months of follow-up and guidance
• Concerned about other aspects of care
  • Serious other medical problems were occurring
• Not able at that time to engage with the material for chronic pain management
16 months later

- No Meds
- No Pain
- No Wheelchair
Link Between Balanced Deformity and Pain is Weak
My Son Just Died........
My Father Just Died......
Right C5-6 Spur
Summary
Problem

- Surgery performed for nociceptive pain cannot reliably work as chronic pain exists in the emotional centers
Problem

• Surgery commonly induces chronic pain
  • Not usually mentioned as a complication
  • Risk factors known
    • Not assessed or treated
Volume does not equal quality

The medical profession is creating not preventing or solving disability
With Education and ........
Simultaneously addressing all variables affecting chronic pain

- Sleep
- Anxiety/ anger/ depression
- Medication stabilization
- Physical conditioning
- Overall game plan/ life outlook

And.........
With the patient taking full responsibility for his or her own care
The outcome is usually pain free

Incredibly Rewarding
Thank You