

06/23/16 Chiropractic
Examining Board
Meeting - WCA
Denied Course Review
- Meeting Handouts



ADVANCED PAIN MANAGEMENT
we know your pain

[Contact Us](#) | [myapmhealth](#) | [Blog](#)

Search...

888.901.PAIN (7246)

Contact Workman's Compensation Support. Call (414) 431-9540

4TH ANNUAL PAIN CONFERENCE

SATURDAY, NOVEMBER 7TH, 2015

Marriott Milwaukee West • Waukesha, WI

[Find a Doctor](#)

[Find a Location](#)

[Pay My Bill](#)

1

Agenda

7:00 a.m.

Registration, Breakfast and Exhibit Hall

7:50 a.m.

Welcome and Announcements

8:00 a.m.

Pain Prevalence & Mechanisms

Frank Willard, MD

University of New England,

College of Osteopathic Medicine

8:45 a.m.

Utilizing a Multidisciplinary Approach in Pain Management

Stacy Peterson, MD

Medical College of Wisconsin

9:30 a.m.

Refreshment & Exhibit Hall Break (30 min)

10:00 a.m.

Updates in Interventional Techniques and Implantables

Maher Fattouh, MD

Advanced Pain Management

10:45 a.m.

Current Pain Therapies and Treatment Plans

Fadi Alhatem, MD

Medical Advanced Pain Specialists

11:15 a.m.

Assessing the Difficult Headache Patient

Alexander Feoktistov, MD

Diamond Headache

12:30 p.m.

Lunch & Break-out Sessions / Exhibit Hall (30 min)

The Psychology of Pain & Patient Interview (45 mins)

Daniel Doleys, PhD

Doleys Clinic

1:45 p.m.

Protocol Based Prescribing/Opioid Safety

Thomas Klein, DO

Advanced Pain Management

2:30 p.m.

Healthcare Reform/Patient Engagement Strategies

Jeremy Scarlett, MD

Advanced Pain Management

3:15 p.m.

Refreshment Break

3:30 p.m.

Forebrain Pain Matrix: Emerging Therapies

Frank Willard, MD

University of New England, College of Osteopathic Medicine

4:15 p.m.

Wrapup/Q&A

4:30 p.m.

Protocol Based Prescribing & Opioid Safety

Thomas Klein, D.O.

**Board Certified Anesthesiologist
Board Certified Pain Management
Fellowship Trained Pain Management**



**ADVANCED PAIN
MANAGEMENT**
we know your pain

Learning Objectives:

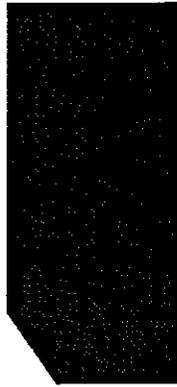
1. Describe how cautious, evidence-based prescribing practices can lower opioid-related overdose deaths while maintaining appropriate access for medically needed treatment of chronic pain.
2. Identify “best practice” strategies that can be used by clinicians for pain management treatment.
3. Explain evidence-based practice and policies for provider education and patient education programs being utilized across the US.



ADVANCED PAIN
MANAGEMENT
we know your pain

Epidemiology of Pain

- 100 million adults with chronic pain (Medical expenditure panel, 2008)
 - 28% with Chronic Low Back Pain (National Health Interview Survey, 2009)
- #1 cause for “years lived with disability” (US Burden of Disease, JAMA 2013)
- #1 cause of “disability-adjusted life years” (US Burden of Disease, JAMA 2013)



ADVANCED PAIN
MANAGEMENT
we know your pain.

Health Economic Impact of Pain

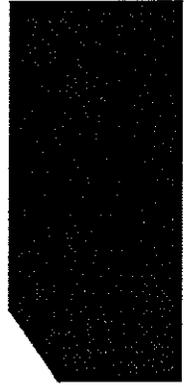
- Patients with pain cost ~\$4,500/year more than match no pain controls (IOM, 2011)
- Direct medical costs - \$293,000,000,000
 - Medicare – 25%
 - Medicaid – 8%
 - Out of Pocket – 16%
- Back Pain was 72% of these costs



ADVANCED PAIN
MANAGEMENT
we know your pain.

Comparison to Other Diseases

- Direct and Indirect Costs in Billions (JOM, 2011)
 - Pain - \$635
 - Cardiovascular – \$309
 - Cancer - \$243
 - Trauma/Poisoning - \$209
 - Endocrine/metabolic - \$127
 - Digestive System - \$112
 - Respiratory System - \$112



ADVANCED PAIN
MANAGEMENT
we know your pain.

Opioids

- Morphine
- Codeine
- Heroin
- Fentanyl
- Hydrocodone (Vicodin, Lortab)
- Methadone
- Oxycodone (Percodan, Oxycontin)
- Hydromorphone (Dilaudid)
- Meperidine (Demerol)
- New opioids, Tapentadol, Buprenorphine (Nucynta, Butrans, etc.)



ADVANCED PAIN
MANAGEMENT
we know your pain.

Pain Patients

- Who do they see?
 - Family doctor (52%)
 - Specialist (Ortho or Neuro-Spine) (40%)
 - Chiropractor (15%)
 - Pain doctor (2%)
- How many providers are there?
 - Primary care doctors (172,861)
 - Pain doctors (~2,000)



ADVANCED PAIN
MANAGEMENT
we know your pain

2013 Hurley©

Breuer et al, SMJ 2010

How is pain treatment taught?

- Primary care doctors will be the predominant providers managing pain in the US
 - Medical students receive on average <10 hours on pain physiology, neuroanatomy, physiology, diagnosis, management and treatment (Mezei et al, 2011)
 - Medical students receive on average 1 hr of education on analgesics (Institute of Medicine Report, 2011)
 - Housestaff education in pain management is not substantially better (Ogle et al, 2008)
 - Increasing discomfort of PMDs to write opioids or treat pain (Upshur et al, 2006)

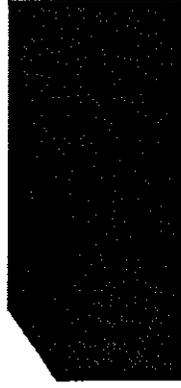


ADVANCED PAIN
MANAGEMENT

we know your pain

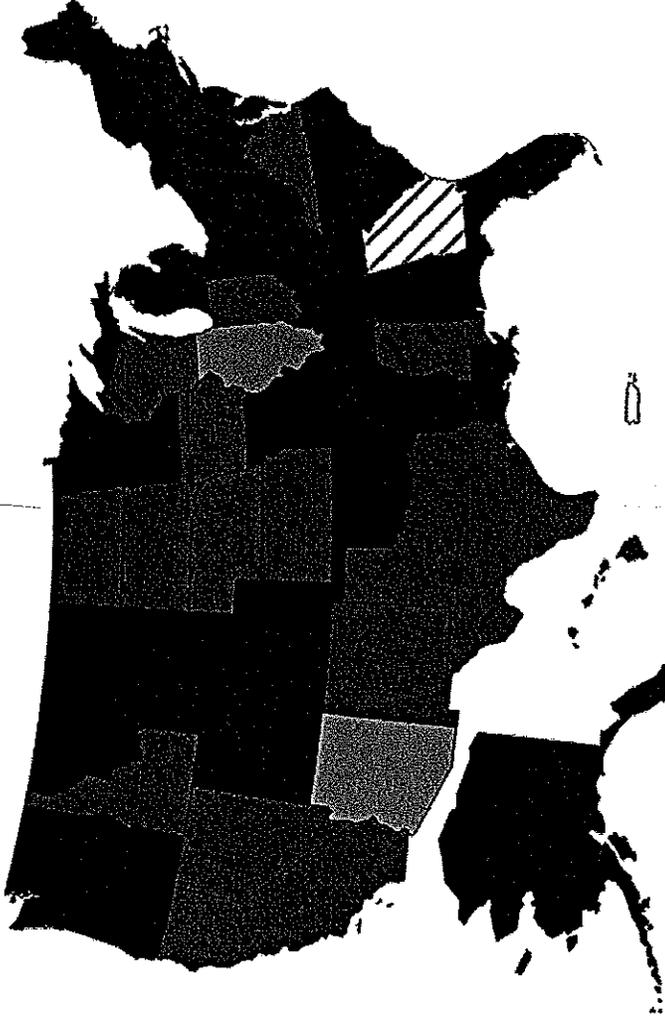
Why does Chronic Pain have such an impact?

- Chronic pain is a disease
 - Maladaptive
 - Anatomical changes
 - Physiological changes
 - Pharmacological changes
 - Psychological changes
 - Altered responsiveness to medications



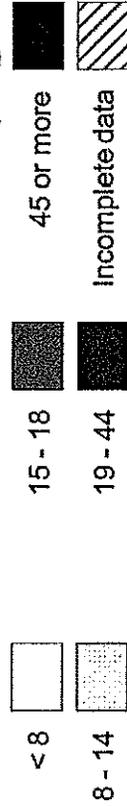
ADVANCED PAIN
MANAGEMENT
we know your pain.

**Primary non-heroin opiates/synthetics admission rates, by State
(per 100,000 population aged 12 and over)**

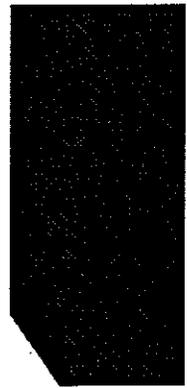


2009

(range 1 – 379)



SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Data received through 11.03.10.



**ADVANCED PAIN
MANAGEMENT**
we know your pain.

.....

.....

Spine Care Updates: Motion Preservation and a Collaborative Approach to Care

April 16, 2016

1:00 pm – 5:00 pm

Speakers: Dr. Andrew Beykovsky, Dr. Christopher King, Dr. Lynn Bartl, Dr. Reichert

1:00 – 2:00 **Spine Fundamentals: Bone Biology & Principles of Fusion**

Dr. Andrew Beykovsky

Break

2:00 – 2:30 **Surgical Intervention: Fusion vs Total Disc Replacement**

Dr. Andrew Beykovsky

2:30 – 3:00 **Total Disc Replacement Options: Competitive Landscape**

Dr. Christopher King

Break

3:00 – 4:00 **Total Disc Replacement Data from IDE Study**

Dr. Lynn Bartl

Break

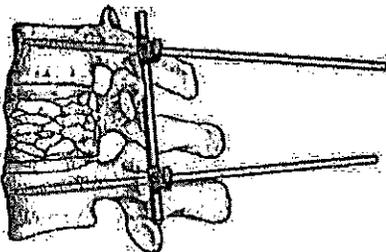
4:00 – 5:00 **Case Studies with Q&A**

Dr. Beykovsky, Dr. King, Dr. Bartl

The clinical manifestations of spinal stability fall into 3 categories

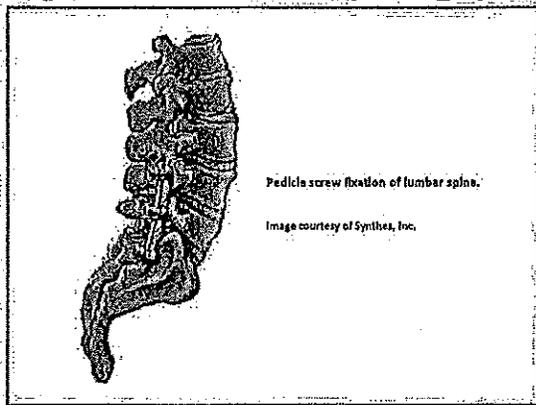
1. Neurological deficit due to cord, cauda equina, or nerve root compression
2. Pain
3. Incapacitating deformity

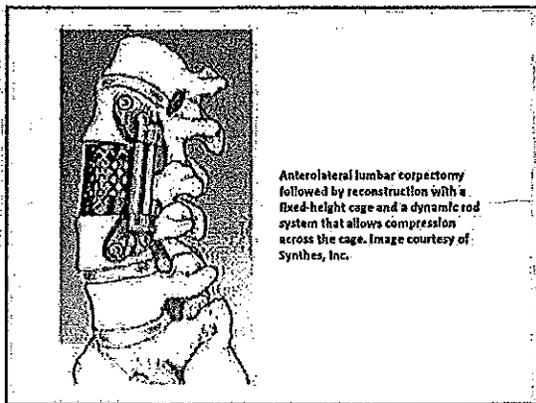
- C1-2 transarticular screw fixation
- C1-2 lateral mass/isthmus fixation
- Odontoid screw fixation
- Anterior cervical fusion
- Lateral mass screws
- Posterior cervical wiring
- Posterior and posterolateral non-instrumented lumbar fusion
- Instrumented lumbar fusion with pedicle screws
- Lumbar interbody fusion
- Lumbar corpectomy
- Posterior thoracic and thoracolumbar instrumentation
- Anterior thoracic and thoracolumbar instrumentation

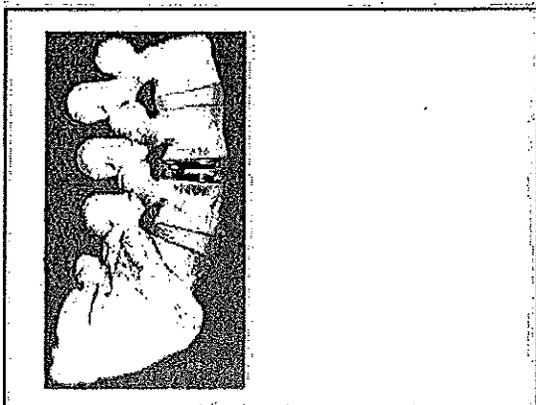


Example of application of biomechanical principles to spine surgery. Insertion of special pedicle screws (Schanz screws) pivoting on a rod transfers the instantaneous axis of rotation (IAR) to the screw/rod interface. Compression of the proximal end of the screws produces distraction-reduction of the vertebral burst fracture. If the posterior longitudinal ligament is intact, retropulsion is corrected by ligament taxis.

Image courtesy of Synthes, Inc.

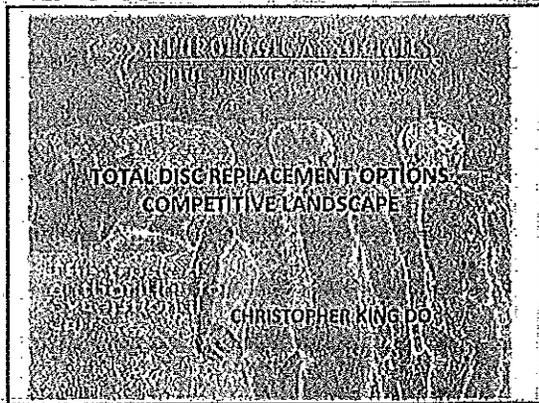


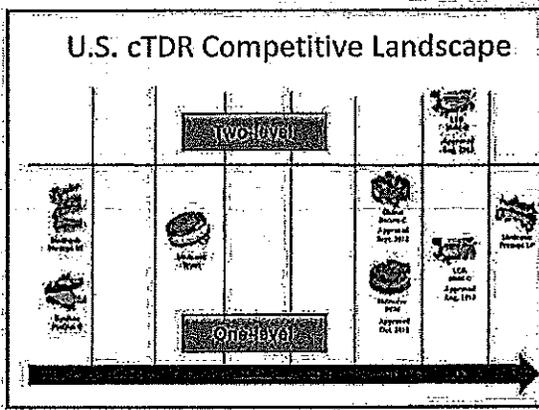




3/23/2016







Medtronic Prestige ST

Overview

- First to US market
 - FDA-approved 2007
 - > 2500 surgeons trained
 - No longer sold in Europe (replaced by Prestige LP)
- Stainless steel
- Ball-in-trough design
 - 2mm A-P translation
- Screw fixation into vertebral bodies



Medtronic

Medtronic Prestige LP

Pros:

- Reduced MRI Artifact compared to that of stainless steel or CoCr
- Upgrade from Prestige ST, which has screw fixation and is viewed as an antiquated design
- Produced by Medtronic with an arthroplasty experienced sales force



Medtronic Prestige LP

Cons:

- LP is not zero profile
- Surgical technique requires greater amount of surgical steps and additional instruments compared to Mob-C
- Stabilization pins require small cuts to first be made in bone and then impaction to fully seat the implant
- The warnings for Prestige LP state: "Implanted metal alloys release metallic ions into the body (especially those devices with metal-on-metal articulating surfaces). The long term effect of these ions on the body is not known."




DePuy Synthes

DePuy Synthes ProDisc-C

Overview:

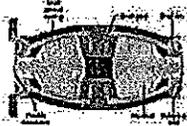
- Second to market
 - Approved late 2007
 - Soon took market share
 - ~3000 surgeons trained
- CoCr/Poly design/coupling
 - Ball and socket
 - Fixed core
 - Ti plasma sprayed coating
- Keel fixation




Medtronic Bryan

Pros:

- Titanium endplates
 - MRI "compatible", minimal MRI artifact
- "Mimics true disc"
 - "Mobile-bi-articulating core"
 - Some axial compression, "cushioning"
- Medtronic loyalists

Medtronic Bryan

Cons:

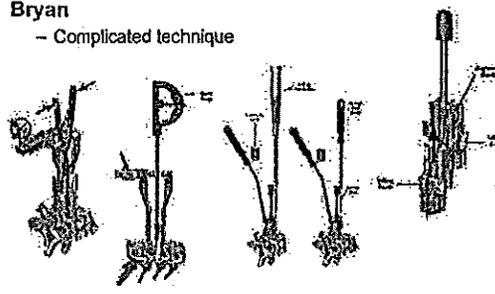
- One height (8.5 mm), one footprint only
- Complicated procedure
 - Requires milling endplates to accommodate convex endplate shape
 - Tendency toward kyphosis
- Fixation depends on "press-fit" into milled endplates; one "circular" footprint
- Anterior tabs determine AP positioning




Medtronic Bryan

Bryan

- Complicated technique



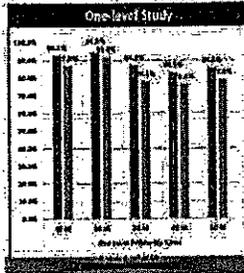


**60 Month Update:
One and Two-level Study**

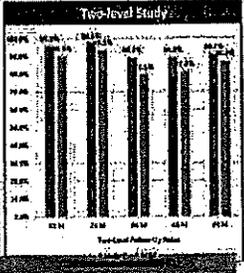
NOTE: The following is a partial view collected in the years of the study of the study.

Subject Follow-up Rates Through 60 mos

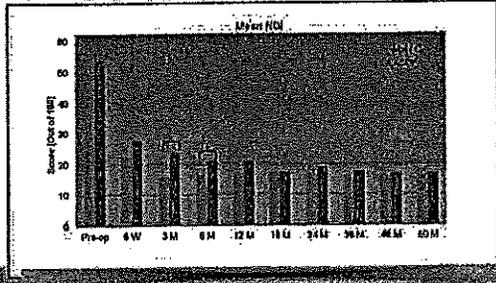
One-level Study

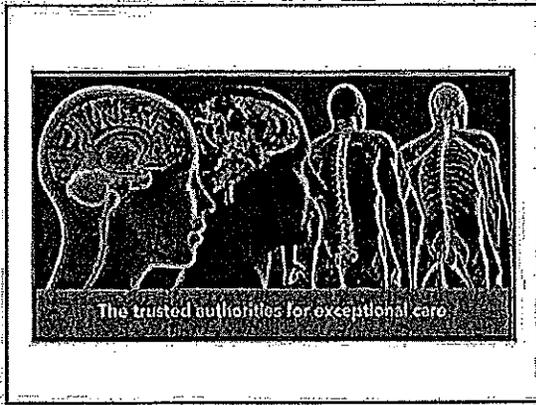


Two-level Study



Mean NDI: One-level to 60 mos







**Surgical Intervention
Fusion vs Total Disc Replacement**

**ANDREW B. BROVSKY, MD
NEUROSURGERY**



Cervical Spine Intro



Approximately 11 million patients each year in the United States (that suffer from symptomatic cervical disc disease).

This condition can significantly affect a person's ability to sleep, work, and participate in recreation or exercise, and many other basic functions of daily life.

The answer for relief of pain for many of these patients has been neck fusion surgery since the 1960s.

Over the years, our understanding of the long-term effects and consequences of fusion, as well as alternative treatments, has grown tremendously.

Patent Symptoms & Effects on Daily Life

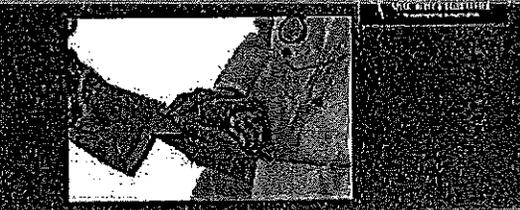


Patients with herniated discs often present with one or more of the following symptoms:

- Pain in the back, buttocks, or legs
- Pain in the neck, shoulders, or arms
- Pain in the feet, ankles, or toes
- Pain in the hands, wrists, or fingers
- Pain in the chest, stomach, or pelvic area
- Pain in the head, neck, or jaw
- Pain in the ears, nose, or throat
- Pain in the eyes, ears, or nose
- Pain in the mouth, throat, or chest
- Pain in the stomach, intestines, or bladder
- Pain in the reproductive organs
- Pain in the skin, hair, or nails
- Pain in the joints, muscles, or tendons
- Pain in the bones, cartilage, or ligaments
- Pain in the nerves, blood vessels, or lymphatic system
- Pain in the immune system
- Pain in the endocrine system
- Pain in the respiratory system
- Pain in the circulatory system
- Pain in the digestive system
- Pain in the urinary system
- Pain in the reproductive system
- Pain in the sensory system
- Pain in the motor system
- Pain in the nervous system
- Pain in the brain, spinal cord, or peripheral nerves
- Pain in the central nervous system
- Pain in the peripheral nervous system
- Pain in the autonomic nervous system
- Pain in the somatic nervous system
- Pain in the enteric nervous system
- Pain in the immune system
- Pain in the endocrine system
- Pain in the respiratory system
- Pain in the circulatory system
- Pain in the digestive system
- Pain in the urinary system
- Pain in the reproductive system
- Pain in the sensory system
- Pain in the motor system
- Pain in the nervous system

Common effects on the functions of daily life:

- Difficulty standing, sitting, or walking
- Difficulty lifting, carrying, or pushing/pulling
- Difficulty bending, twisting, or reaching
- Difficulty sleeping
- Difficulty concentrating
- Difficulty performing tasks at work or home
- Difficulty driving a vehicle
- Difficulty participating in sports or recreational activities
- Difficulty maintaining a healthy diet
- Difficulty maintaining a healthy weight
- Difficulty maintaining a healthy lifestyle
- Difficulty maintaining a healthy relationship
- Difficulty maintaining a healthy mental health
- Difficulty maintaining a healthy social life
- Difficulty maintaining a healthy financial life
- Difficulty maintaining a healthy spiritual life
- Difficulty maintaining a healthy overall quality of life



Common Treatment Options

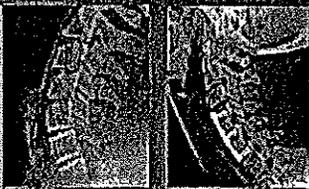
Typical Conservative Care

The standard initial treatment regimen involves 6 weeks of conservative (non-surgical) care:

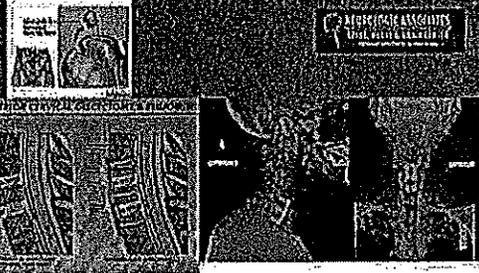
1. Rest, AOL, and Work modification
2. Physical therapy, controlled exercise, stretching, and core strengthening
3. Anti-inflammatory and analgesic medications
4. Chiropractic treatment, cervical traction
5. Pain injections, blocks
6. Acupuncture



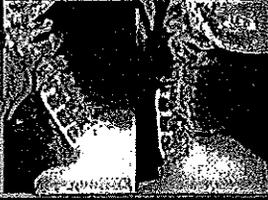
If no relief or symptoms get progressively worse, various surgical options can be discussed.



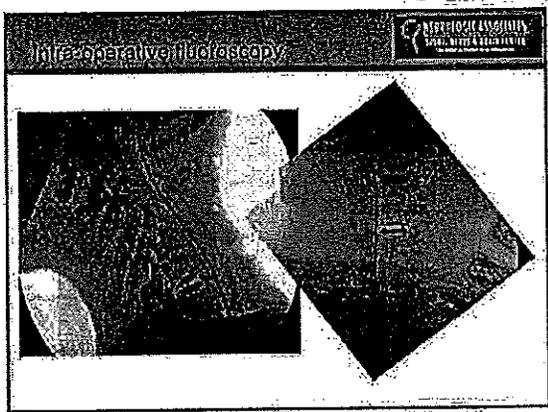
**Total Cervical Disc Replacement
vs Cervical Fusion**



Cervical Fusion Concepts



**Adjacent segment disease
with Cervical Fusions**



Chiropractic and Physical Therapy
Post-Op. Considerations

Physical Therapy:

- If a patient needs PT (decided based upon symptoms) they are usually started at 2 weeks post-op. Appx 60% feel like they need PT.
- PT's may treat post cTDR patients like a much later post-op ACDF. Most often erring on the conservative side, which is safe, but may be a bit slower than the patient could be progressed.
- For example a 2 week post-op Mobi C patient has about the same restrictions as a 3-4 month post-op ACDF. Just avoiding vigorous activities.
- Mobi C patients tend to progress rapidly through rehab and return to work quickly.

Chiropractic and Physical Therapy
Post-Op. Considerations

Chiropractic Care:

- For chiro, traction/manipulation is not recommended until approximately 6 weeks to 3 months postop depending upon the patient. This is about the same time that patients on average are allowed to get back to sports.
- Chiropractic manipulation after arthroplasty is to be avoided if possible all together.
- Modalities can typically be started after two weeks post-op.

• NOTE WORDING ON IS NOT RECOMMENDED

3/23/2016

