

#ideaworld

IDEA
WORLD
CONVENTION
FITNESS • NUTRITION • WELLNESS

LIMITLESS

Session 601:
Move Away From Back Pain
Thank you for coming!!!

PRESENTED BY
Chuck Wolf, MS, FAFS

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HUMAN
MOTION
ASSOCIATES
By Chuck Wolf

Move Away From Back Pain

Thank you for coming!!!

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There Are Solutions

SHIT CREEK
THIS IS THE PLACE
PADDLE STORES

GET YOUR
PADDLE HERE

ICE COLD
SCREW
BEER

WE HAVE ALL THE HELP
YOU NEED

Best comment for this client's success

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HUMAN
MOTION
ASSOCIATES
By Chuck Wolf

Orchestrated Movement

"The traditional mechanistic view of anatomy, as useful as it has been, has objectified rather than humanized our relationships to our insides."

".....whatever else they may be doing individually, muscles also influence functionally integrated body-wide continuities within fascial webbing."
-----Thomas W. Myers
"Anatomy Trains"

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chronic injury

Know Your Clientele

84%

Source: 2013 IDEA Fitness & Equipment Trends 2000-2016
Idea Group Inc.
Pennsylvania, USA

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back pain

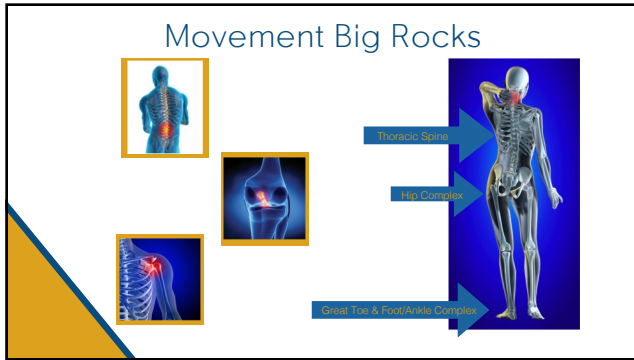
From 1996 to 2016

nationally total healthcare costs \$1.4 trillion to \$3 trillion

\$134 billion out of pocket expenses related to low back and neck pain

Most common musculoskeletal disorder globally

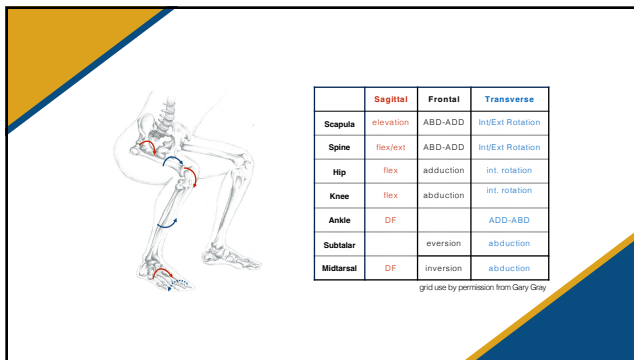
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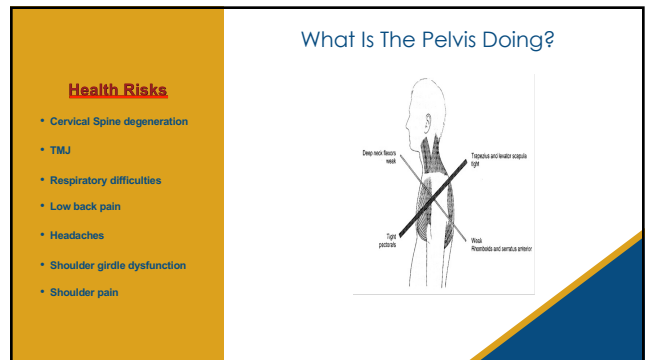
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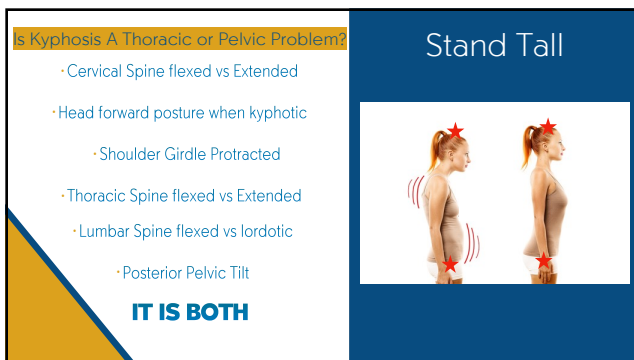
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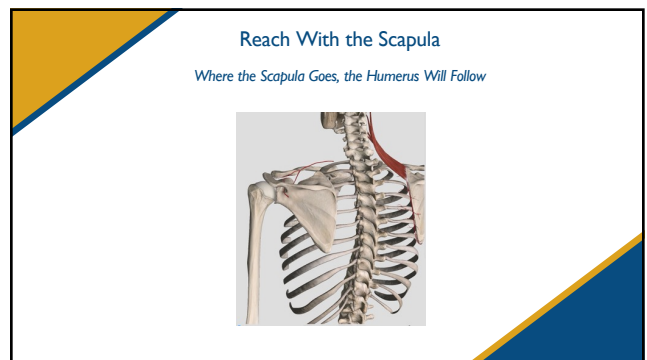
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Shine The Beacon of Light

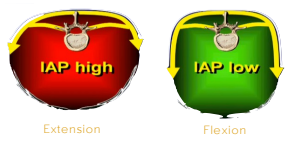
Where the Pelvis Goes, the Low Back Will Follow



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Respiration & Integrated Core Connections

IAP controls fascia



Lordosis & IAP controls the force transmission efficiency of the Lumbosacral fascia

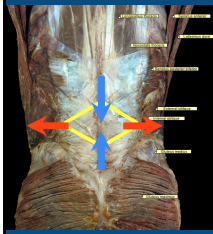
Along with multifidus and psoas, creates the hoop tension

Gait, especially hip extension, ankle dorsiflexion, & Great toe dorsiflexion enhances the function

Serge Gorcovetsky, Ph.D. 2007

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Posterior Core



When the TA is activated, its brings the spinous process closer together & extends the spine

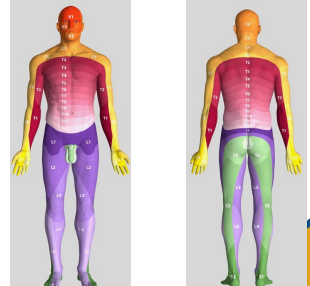
Consider the Posterior X-Factor and pelvic function & the impact upon the anatomy

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Dermatome Map

Dermatomes is a sensory mapping of nerve fibers from a specific spinal cord segment to specific myofascial regions and skin of the body providing sensory information.

- V1: Ophthalmic N
- V2: Maxillary N
- V3: Mandibular N



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Thoracic Spine Segment ROM

| Level | Sagittal Plane Combined | Frontal Plane | Transverse Plane |
|--------|-------------------------|---------------|------------------|
| T1-2 | 4 | 6 | 9 |
| T2-3 | 4 | 6 | 8 |
| T3-4 | 4 | 6 | 8 |
| T4-5 | 4 | 6 | 8 |
| T5-6 | 4 | 6 | 8 |
| T6-7 | 5 | 6 | 8 |
| T7-8 | 6 | 6 | 8 |
| T8-9 | 6 | 6 | 7 |
| T9-10 | 6 | 6 | 4 |
| T10-11 | 9 | 7 | 2 |
| T11-12 | 12 | 9 | 2 |
| T12-L1 | 12 | 8 | 2 |

Low Back Disorders, Stuart McGill, Human Kinetics, 2002


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Lumbar Spine Segment ROM

| Level | Flexion/Extension | Frontal Plane | Transverse Plane |
|-------|-------------------|---------------|------------------|
| L1-2 | 8/5 | 6 | 2 |
| L2-3 | 10/3 | 6 | 2 |
| L3-4 | 12/1 | 8 | 2 |
| L4-5 | 13/2 | 6 | 2 |
| L5-S1 | 9/5 | 3 | 5 |

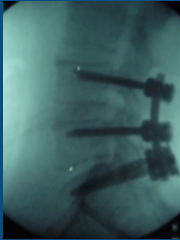
Low Back Disorders, Stuart McGill, Human Kinetics, 2002

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Common Spine Disorders

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Disc Bulge/Herniation Laminectomy/Fusion


Goal: Retraction of Disc (if herniated), reduce discomfort, gain mobility of regions above & below

Strategy: Check Foot, Hip, T-Spine Function
 Deep Abdominal wall Activation progression
 Supine Hip Lift
 Quadruped Thoracic Rotation
 Lunge with reach progression

Mobilization: Ankle Mobes
 Hip Mobilization
 I-2 levels above and below
 Thoracic Spine Type I & II mobes
 Self Gravitational Traction

Precautions: Avoid Lumbar Rotation: get it through the hips and T-Spine

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Scoliosis

Goal: Improve alignment, reduce frontal asymmetry extension thresholds, reduce discomfort, gain mobility & strength

Strategy:

- Success will depend upon age & length of dysfunction
- Work from level Hips
- Caution to Sagittal Plane Extension, work through Frontal & Transverse
- Deep Abdominal Wall Activation progression
- Supine Hip Lift often challenging, not a movement of choice initially
- Quadruped Thoracic Rotation
- Prone is key!!
- Staggered Stance with arm movement to create Type I & II environments
- Use isometric holds at first

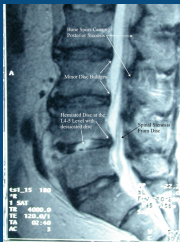
Mobilization:

- Ankle Mobes, if necessary
- Hip Mobilization
- Thoracic Spine Type I & II mobes
- Self Gravitational Traction

Precautions:

- Avoid Lumbar Extension: get it through the hips and T-Spine, think Transverse

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Spinal Stenosis

Goal: Improve extension thresholds, reduce discomfort, gain mobility & strength

Strategy:

- Success will depend upon age & length of dysfunction
- Check Foot, Hip, T-Spine Function
- Caution to Sagittal Plane Extension, work through Frontal & Transverse
- Deep Abdominal Wall Activation progression
- Supine Hip Lift often challenging, not a movement of choice initially
- Quadruped Thoracic Rotation
- Prone is key!!
- Staggered Stance with arm movement to create Type I & II environments
- Use isometric holds at first


Mobilization:

- Ankle Mobes, if necessary
- Hip Mobilization
- Thoracic Spine Type I & II mobes
- Self Gravitational Traction

Precautions:

- Avoid Lumbar Extension: get it through the hips and T-Spine, think Transverse plane

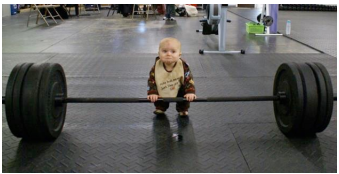
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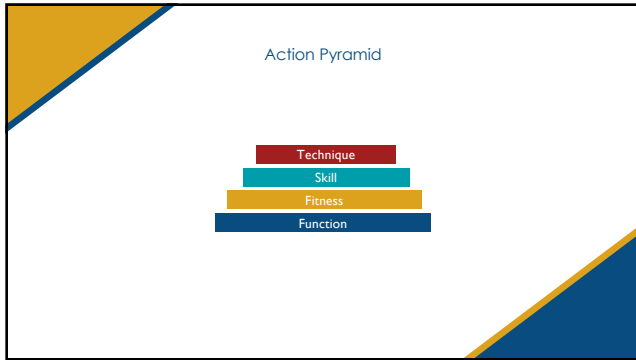
Program Design

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Learn & Know Your Client's Limitations



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Sample Low Back Reconditioning Program

Weeks 1 & 2 Goals

1. Increase isolated central unit strength
2. Kinesthetic awareness

Diaphragmatic Breathing
Dead Bug with Extremity Reach
Supine Hip Lift - Sagittal Plane
Quadriped - All Planes

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Sample Low Back Reconditioning Program

Weeks 1 & 2 Goals

1. Increase isolated central unit strength
2. Kinesthetic awareness

Wall Patterns
Wall Bangers

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Sample Low Back Reconditioning Program

Weeks 2-4 Goals

1. Gain Frontal & Transverse Plane motion
2. Mobilize foot/ankle complex & hips through movement patterns

Supine Hip Lift - Frontal Plane
Supine Hip Lift - Transverse Plane
Core Stabilization with Step Out

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Sample Low Back Reconditioning Program

Weeks 2-4 Goals

1. Gain Frontal & Transverse Plane motion
2. Mobilize foot/ankle complex & hips through movement patterns

Pivotal Toe Touch
Tri-Plane Shifts
Tri-Plane Lunges
Warding Patterns - Level 1

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Sample Low Back Reconditioning Program

Weeks 5 & 6 Goals

1. Increase in-plane motion at Hips & Thorax
2. Gain integrated strength

Warding Pattern Level 2
TRX Chest Press with progressions
TRX Lat Pull

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Weeks 7 & 8 Goals

1. Increase ROM in transverse plane of hips & T. spine
2. Start activities for return to play

TRX Wording Patterns
Tri-Plane Lunges w/ reaches
Tri-Plane Activities

Sample Low Back Reconditioning Program



TRX Wording Patterns



Tri-Plane Lunges w/ reaches



Tri-Plane Activities


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Flexibility Highways

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Anterior Flexibility Highway



Key Intersections

- Anterior Tibialis to distal Quads
- Proximal Quads to distal HF
- Proximal HF to distal ABS
- Proximal ABS to distal PECS
- Proximal PECS to distal DELTS





PHOTO 31: ANTERIOR FLEXIBILITY HIGHWAY. CRYSTAL, LINDA, AND KYLE YOUNG

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Posterior Flexibility Highway



Key Intersections

- Plantar fascia to calcaneus to Achilles
- Posterior calf to distal hamstrings
- Proximal hamstrings to distal glutes
- Opposite glutes to opposite lat.
- Distal erectors to Cervical rotators to Occiput



PHOTO 32: POSTERIOR FLEXIBILITY HIGHWAY. CRYSTAL, LINDA, AND KYLE YOUNG

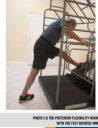


PHOTO 33: THE POSTERIOR FLEXIBILITY HIGHWAY. CRYSTAL, LINDA, AND KYLE YOUNG

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The Turnpike




PHOTO 34: THE TURNPIKE




PHOTO 35: THE TURNPIKE, TAKE 1




PHOTO 36: THE TURNPIKE, TAKE 2

PHOTO 37: THE TURNPIKE, TAKE 3

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Lateral Flexibility Highway



Key Intersections

- PERONEALS to ITB, TFL
- ITB, TFL to LATERAL GLUTEALS
- LATERAL GLUTEALS to QL, OBLIQUES
- OBLIQUES to OPPOSITE PECS & SHOULDER



PHOTO 38: THE LATERAL FLEXIBILITY HIGHWAY

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Anterior X-Factor Flexibility Highway



Hip Flexors – Opposite Shoulder
(Anterior X-Factor)



PHOTO 5.11 THE ANTERIOR X-FACTOR WITH ABDUCTOR EMPHASIS

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Posterior X-Factor Flexibility Highway



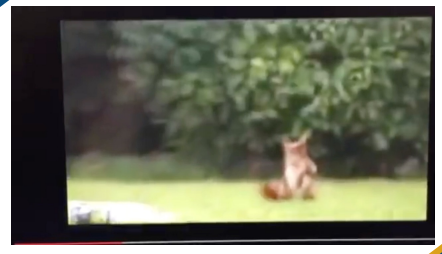
Gluteals – Opposite Shoulder
(Posterior X-Factor)




PHOTO 5.12 THE POSTERIOR X-FACTOR

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Putting It All Together




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**HUMAN
MOTION
ASSOCIATES**
By Chuck Wolf

Thank You For Attending!!!

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