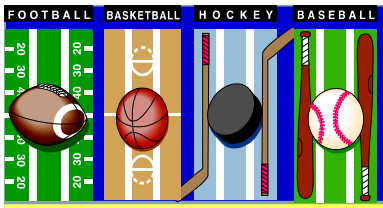

"Chiropractic Treatment of the Elite Athlete"

James L. Holding, D.C., C.C.S.P.

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Bowie, MD

www.drholding.com

James L. Holding, D.C., C.C.S.P. has no association or conflict of interest with any entity

GOOD AFTERNOON! IT'S NICE TO BE BACK HOME IN CHICAGO.

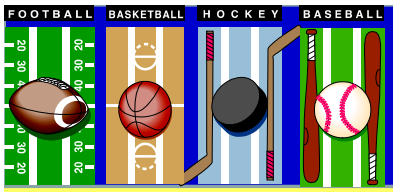
I'D LIKE TO THANK DR. BEN SHAFFER AND THE SOCIETY FOR THE OPPORTUNITY TO SPEAK HERE TODAY.

I'D ALSO LIKE TO THANK THE STAFF AT AOSSM FOR BEING SO HELPFUL (AND PATIENT) WITH ALL OF MY QUESTIONS.

I'VE BEEN VERY FORTUNATE OVER THE LAST 13 YEARS AND HAD THE OPPORTUNITY TO WORK WITH AND LEARN FROM SOME OF THE BEST IN OUR FIELD. THANK YOU – SMITTY, CURTIS, FRANK, SLUGGO, AND BEN.

CLICK FOR TRANSITION

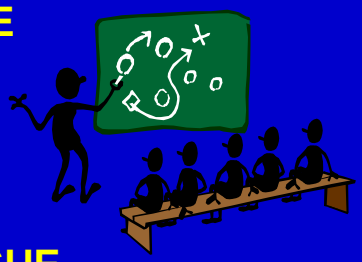
I'VE LEARNED THAT KNOWING YOUR *SPECIFIC* ROLE AND GOOD COMMUNICATION ARE ESSENTIAL TO THE SYNERGY AND SUCCESS OF THE MULTI-DISCIPLINARY HEALTH CARE TEAM, ESPECIALLY WHEN TREATING ELITE ATHLETES.



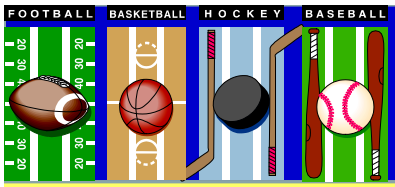
"Chiropractic Treatment of the Elite Athlete"

Chiropractic Utilization

NATIONAL HOCKEY LEAGUE	24 / 30
MAJOR LEAGUE BASEBALL	28 / 30
NATIONAL FOOTBALL LEAGUE	31 / 32
PROFESSIONAL GOLF ASSOCIATION	16
2008 - US OLYMPIC TEAM BEIJING	4 DC'S



TODAY, ALMOST *EVERY PROFESSIONAL* SPORTS FRANCHISE HAS A DOCTOR OF CHIROPRACTIC AS A MEMBER OF THE HEALTH CARE TEAM. THE U.S.O.C. HAD 4 CHIROPRACTORS IN BEIJING THIS MONTH FOR THE OLYMPICS (UNFORTUNATELY I WASN'T ONE OF THEM).

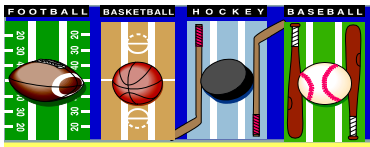


"Chiropractic Treatment of the Elite Athlete"

Why Chiropractic for Athletes?

- **Expedites recovery from Pain/Injury**
- **Reduces incidence of re-injury**
- **Enhances Performance**

MY GOAL TODAY IS TO EXPLAIN WHY CHIROPRACTIC IS AN ESSENTIAL INGREDIENT IN THE INTERDISCIPLINARY CO-MANAGEMENT OF THE ELITE ATHLETE AND HOW WE CONTRIBUTE TO: A MORE EFFICIENT RECOVERY FROM INJURY, REDUCED LIKELIHOOD OF REINJURY, AND HELP TO ENHANCE OVERALL PERFORMANCE IN ATHLETES.



"Chiropractic Treatment of the Elite Athlete"

The Science of Chiropractic

- **Evidence based**
- **Interdisciplinary/Co-management**
- **Assessment/Methodology**
- **The Lesion - Subluxation/Fixation**

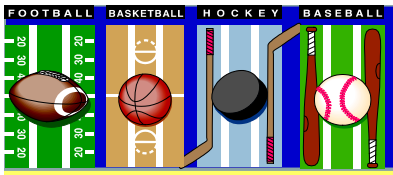
IN THE LAST 25 YEARS MANUAL MEDICINE HAS COME OF AGE. STORIES ABOUT THE ANECDOTAL EFFECTIVENESS OF MANIPULATION ARE EQUIVICAL AND OF LIMITED VALUE IN THIS ERA OF SCIENTIFIC VALIDATION. THE CURRENT BODY OF LITERATURE, ESPECIALLY AS IT RELATES TO ATHLETIC PERFORMANCE AND INJURY MANAGEMENT, IS IMPRESSIVE AND EVEN SOMEWHAT OVERWHELMING (AS I FOUND OUT PREPARING FOR THIS PRESENTATION).

TODAY, IN OUT-PATIENT HEALTH CARE, CO-MANAGEMENT HAS BECOME COMMON PLACE. IN THE PROFESSIONAL ATHLETIC ENVIRONMENT, IT'S *NOT* OPTIONAL – IT'S THE STANDARD OF CARE!
WE ARE (ALL) *COMPLIMENTARY*, NOT ALTERNATIVE.

ASSESSMENT METHODOLOGY IN CHIROPRACTIC IS SIMILAR TO THE MEDICAL MODEL – CASE HISTORY/ORTHO-NEUROLOGICAL EXAMINATION/IMAGING (AS INDICATED)/CLINICAL CORRELATION AND TREATMENT OR REFERRAL (AS APPROPRIATE).
IN ADDITION, WE UTILIZE FUNCTIONAL JOINT AND SOFT TISSUE EVALUATIONS INVOLVING MOTION PALPATION, SELECTIVE TISSUE TENSIONING, AND MANUAL MOTOR STRENGTH TESTING

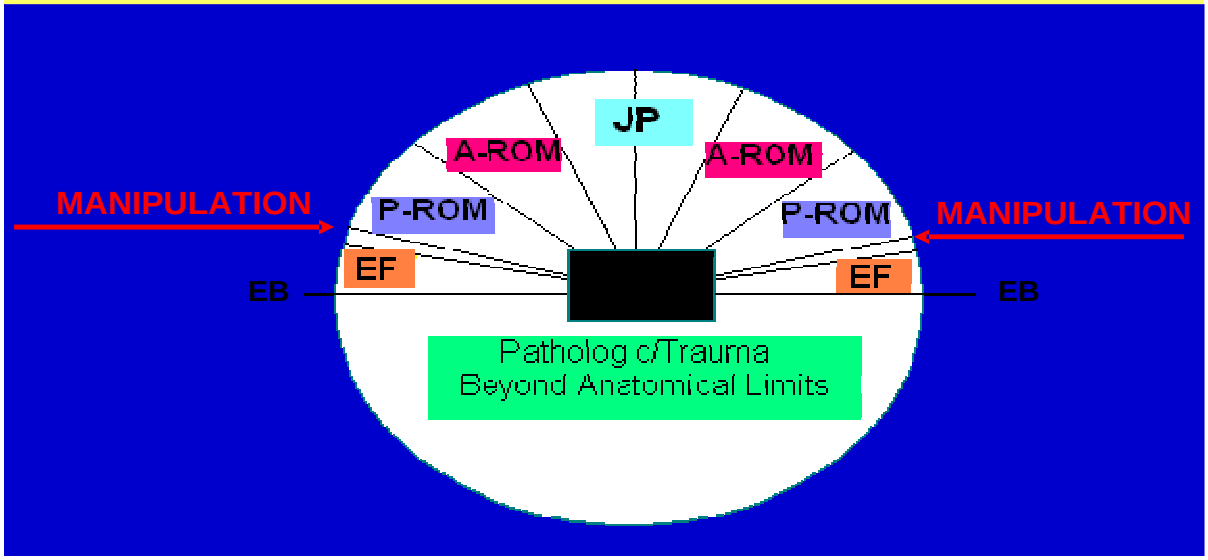
HISTORICALLY, THE CHIROPRACTIC PROFESSION HAS USED THE TERM SUBLUXATION TO DESCRIBE THE LESION WE TREAT. JOINT DYSFUNCTION OR FIXATION ARE MORE APPROPRIATE AND CONTEMPORARY TERMS.

THE *FORMER* THEORETICAL MODEL OF JOINT DYSFUNCTION WAS A STATIC REPRESENTATION (Basically, a bone out of place). THE *CURRENT* EMPERICAL MODEL IS DYNAMIC – A MODEL BASED ON MOVEMENT, MUCH LIKE A HINGE ON A DOOR (HANDS) MOVING SMOOTHLY. WHEN JOINT DYSFUNCTION IS PRESENT, IT'S SORT OF LIKE A RUSTY HINGE, IT GETS STUCK OR FIXED – AND THE GOAL OF MANIPULATION, IS TO REESTABLISH THE NORMAL PHYSIOLOGICAL MOTION IN THAT JOINT.



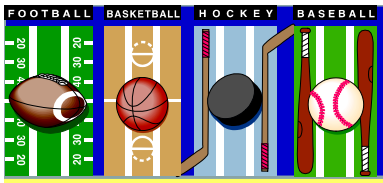
"Chiropractic Treatment of the Elite Athlete"

Dynamic Joint Analysis
Motion Palpation



TO ASSESS JOINT DYSFUNCTION AND DETERMINE THE APPROPRIATENESS OF MANIPULATION, WE UTILIZE MOTION PALPATION. WE PALPATE THE JOINT AS WE GUIDE THE JOINT THROUGH ITS' SPECIFIC PLANES OF MOTION.

WHEN APPROPRIATE, MANIPULATION IS SAFELY PERFORMED IN THE LAST 20% OF THE PASSIVE FIELD OF MOTION – PRIOR TO THE END FEEL AND BEFORE THE ELASTIC BARRIER.



"Chiropractic Treatment of the Elite Athlete"

Manipulation

- **Types of manipulation**
- **Indications**
- **Contra-indications**
- **"Primum Non Nocere"**
- **Benefits**

THERE ARE A VARIETY OF DIFFERENT TYPES OF OSSEOUS OR SYNOVIAL JOINT MANIPULATIONS:

A.) LONG AXIS OR DISTRACTIVE – SIMILAR TO MANUAL TRACTION OR DECOMPRESSION - THIS IS USUALLY VERY EFFECTIVE WITH DISC INJURIES.

B.) THERE ARE INSTRUMENT ASSISTED DEVICES THAT IMPART A VERY LIGHT IMPULSE OR SUSTAINED PRESSURE.

C.) THERE IS ALSO MANIPULATION UNDER ANESTHESIA, WHICH IS OFTEN UTILIZED IN CAPSULAR LESIONS, SUCH AS A FROZEN SHOULDER.

D.) FINALLY, THERE IS SHORT LEVER MANIPULATION, WHICH IS WHAT MOST PEOPLE THINK OF WHEN THEY HEAR THE TERM MANIPULATION. THIS IS MANIPULATION DONE BY HAND, AND IS THE TECHNIQUE OF CHOICE FOR MOST ATHLETES.

<u>INDICATIONS.</u>

DECREASED RANGE OF MOTION (GLOBAL)

SEGMENTAL DYSFUNCTION AND LOSS OF NORMAL "JOINT PLAY"

BACK PAIN / NECK PAIN - AND BASICALLY, ANY JOINT PAIN OF MECHANICAL ORIGIN, WITH AN ABSENCE OF CONTRAINDICATIONS.

OF COURSE, THIS IS ALL PREDICATED ON THE ASSUMPTION THAT APPROPRIATE – HISTORY / PHYSICAL EXAM / IMAGING AND LAB TESTING (AS INDICATED) / WAS COMPLETED TO DETERMINE POTENTIAL EFFICACY OF TREATMENT.

CONTRA INDICATIONS.

(IN THE OUTPATIENT WORLD, THIS IS BASED ON PATIENT PRESENTATION)

I HAVE AN EXTENSIVE LIST HERE, BUT IN THE INTEREST OF TIME (AND BOREDOM), I'LL SPARE YOU FROM READING THIS. ALSO, THE A.T.C. AND MEDICAL STAFF HAVE PREVIOUSLY SCREENED THESE ATHLETES.

CNS LESIONS

MALIGNANCY OR METS

TUBERCULOSIS OF BONE

FRACTURES AND BONE DISEASE

ACUTE ARTHRITIS OR GOUT

SEPSIS OR JOINT INFECTIONS

ADVANCED OSTEOPOROSIS

COMPRESSIVE CORD SIGNS / SYMPTIONS

CAUDA EQUINA SIGNS OR SYMPTOMS

ADVANCED DEMYLIENATING SIGNS

VASCULAR OCCULUSION / INSUFFICIENCY

SYPHILLIS / GONNORHEA

ABOVE ALL ELSE, DO NO HARM - I BELIEVE A GOOD CLINICIAN KNOWS WHEN *NOT* TO TREAT.

BENEFITS

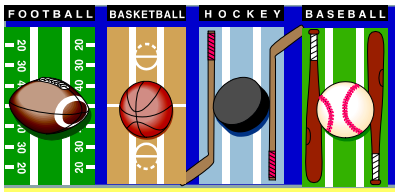
IMPROVED JOINT FUNCTION AND RANGE OF MOTION

INCREASED CIRCULATION TO TISSUES

DECREASED ADHESIONS AND SCAR TISSUE

REDUCED STRAIN AND IMBALANCE ON ANTAGONISTIC MUSCLES

DECREASED STRESS ON OTHER INERT JOINT TISSUES (LIGAMENTS / CAPSULE)



"Chiropractic Treatment of the Elite Athlete"

Chiropractic Safety *In Perspective*

February 2008 "Spine"

- Chiropractic does not increase risk of CVA
- "Chiropractic visits and VBA is not greater than the association between PCP visits and VBA, there is no excess risk of VBA stroke from Chiropractic Care"

Cassidy et. al. SPINE 33 (4S) S176-S183, February 15, 2008

MANIPULATION IS INHERITANTLY SAFE, WHEN PERFORMED BY A *PROPERLY TRAINED AND QUALIFIED CLINICIAN* , WHO HAS PERFORMED THE APPROPRIATE ASSESSMENTS.

OVER THE LAST FEW YEARS, THERE HAS BEEN SOME CONTROVERSY REGARDING THE POTENTIAL FOR CVA FOLLOWING MANIPULATION OF THE CERVICAL SPINE. THERE HAVE BEEN A NUMBER OF STUDIES DONE OVER THE LAST 10 YEARS THAT HAVE ESTIMATED THE RISK AT SOMEWHERE BETWEEN 1 IN TWO (2) MILLION AND 1 IN 5.8 MILLION PROCEDURES.

A CURRENT STUDY FROM ONE OF THE MOST PRE EMINENT SCIENTIFIC JOURNALS IN THE WORLD CONCLUDES THAT, THERE IS *NO ASSOCIATION*, OR CAUSE-AND-EFFECT RELATIONSHIP, BETWEEN CHIROPRACTIC MANIPULATION AND CERVICAL ARTERY DISSECTION.

IT IS BELIEVED THAT THE SYMPTOMS OF NECK PAIN AND HEMI-CRANIAL CEPHALGIA, ARE INDICATIVE OF A PATIENT CURRENTLY EXPERIENCING A STROKE OR OTHER ISCHEMIC EVENT. (IE. BRITTANNE – 1999 COLUMBUS HOCKEY GAME).

THE PROBLEM SEEMS TO BE ONE OF RECOGNITION.

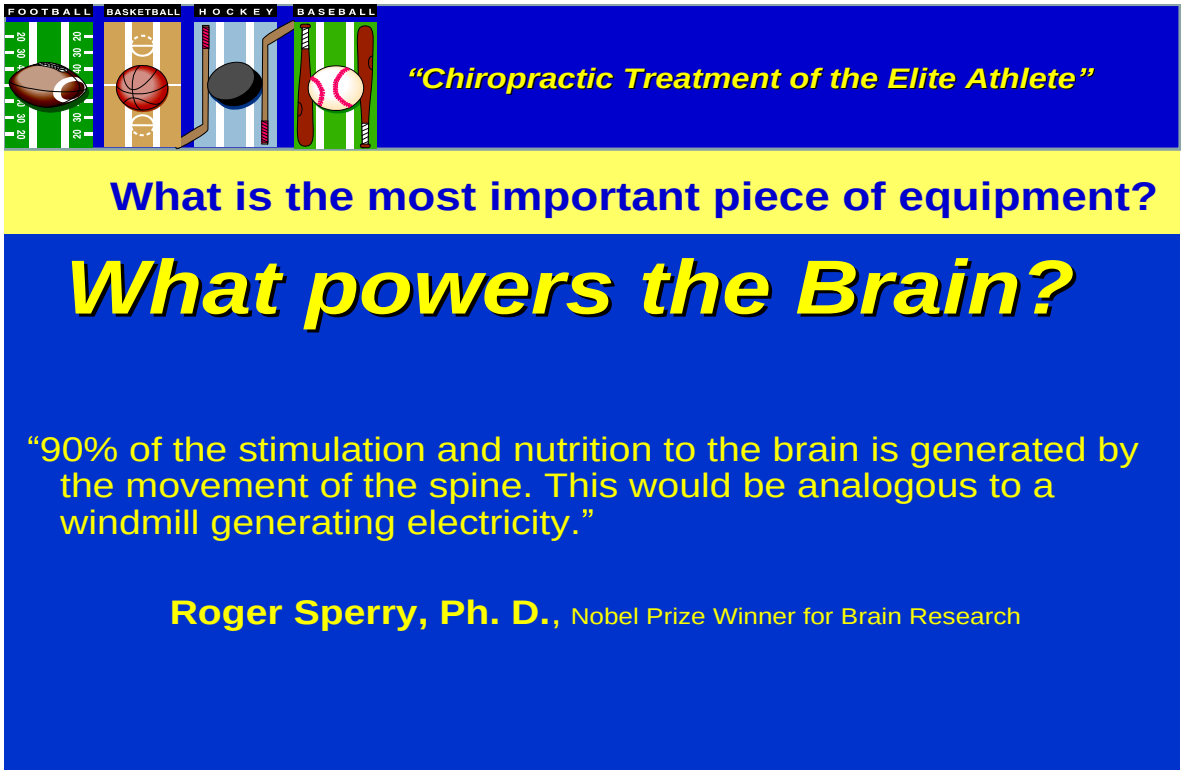
WHAT IS THE MOST IMPORTANT PIECE OF EQUIPMENT ?

TRANSITION 1

I THINK IT'S THE NERVOUS SYSTEM.

BY THE WAY, IF YOU HAVE AN OPPORTUNITY TO SEE THE BODY WORLDS EXHIBIT (#2), ABOUT THE BRAIN AND NERVOUS SYSTEM, I HIGHLY RECOMMEND IT. IT'S ALL ABOUT ATHLETES AND FUNCTIONAL NEUROANATOMY. ATHLETES ARE DISSECTED AND PLASTINATED. IT'S ONE OF THE MOST FASCINATING THINGS I HAVE EVER SEEN. THE EXHIBIT IS IN BALTIMORE UNTIL SEPTEMBER 1st.

TRANSITION 2



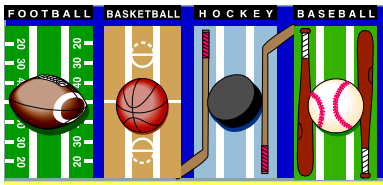
ONE OF THE MOST FASCINATING PARTS OF THIS EXHIBIT WAS ABOUT THE SUBJECT OF NEUROPLASTICITY. NEUROPLASTICITY IS ONE OF THE MOST EXTRAORDINARY DISCOVERYS OF THE 20th CENTURY, ESPECIALLY IN A PERFORMANCE BASED ENVIRONMENT LIKE COMPETITIVE ATHLETICS.

IMAGINE THE CENTRAL NERVOUS SYSTEM BEING ABLE TO SELF REGULATE, AND REORGANIZE ITS NEUROLOGICAL PATHWAYS FOR MAXIMUM EFFICENCY, BASED ON CONCIOUS DESIRE OR CHANGES IN ITS ENVIRONMENT.

PERHAPS THIS IS THE FRONTIER OF PERFORMANCE BASED MEDICINE IN THE FUTURE. NEUROLOGICAL INTEGRATATIVE SPORTS TRAINING.

WHY CAN SOME ATHLETE'S SIMPLY WATCH AN ACTIVITY, AND THEN PERFORM IT EXACTLY AND PRECISELY, SEEMINGLY WITHOUT EFFORT, AND THEN ACTUALLY IMPROVE UPON IT ?
IT APPEARS THAT SOME OF THE WORLDS MOST GIFTED ATHLETES MAY HAVE LEARNED HOW TO ACCESS THIS ADVANCED FUNCTION OF THE NERVOUS SYSTEM.

FOR ME, THE NAME MICHAEL PHELPS COMES TO MIND.



"Chiropractic Treatment of the Elite Athlete"

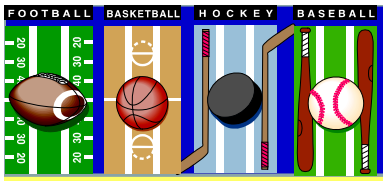
Brain Control of Muscle Coordination depends on Input from the Joints of the Body

"The brain is driven by the information it receives from the mechanoreceptors and proprioceptors (nerve receptors), in the joints and muscles."

" Joints with abnormal alignment and motion send signals to the brain that affect the brain, not only reducing the capacity for other brain functions, but also causing an abnormal response to the muscles that control movement and coordination of the body."

Guyton MD - Physiology Text 1991

CONTRARY TO WHAT MANY PEOPLE THINK, CHIROPRACTIC MANIPULATION HAS IT'S PRIMARY AFFECT ON THE NERVOUS SYSTEM, NOT THE SKELETAL SYSTEM. SENSORY INTEGRATION AND MOTOR RESPONSE ON THIS "*INFORMATION SUPER HIGHWAY*" ARE CRITICAL TO OPTIMAL FUNCTION IN THE HUMAN BODY.

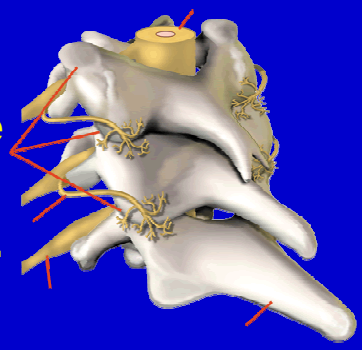


"Chiropractic Treatment of the Elite Athlete"

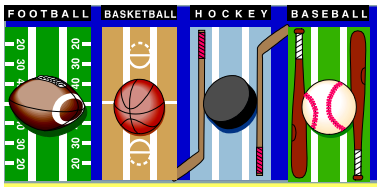
Nerves of the Facet Joints

"The spinal column and feet contain by far the greatest amount of sensory receptors, which provide feedback to the brain and spinal cord to coordinate all voluntary and involuntary muscle action. The upper neck contains the greatest amount of receptors in the spine."

Guyton MD



THE CENTRAL NERVOUS SYSTEM MUST PROCESS AND COORDINATE THIS INCREDIBLE VOLUME OF SENSORY FEEDBACK AND SORT THRU MASSIVE AMOUNTS OF INCOMING INFORMATION, AND THEN ELICIT AN INSTANTEOUS MOTOR RESPONSE, IN MILLISECONDS – OR YOU GET, THE SILVER MEDAL !



"Chiropractic Treatment of the Elite Athlete"

Brain Control of Muscle Coordination Depends on Input from the Joints of the Body

"Chronic neck joint dysfunction alters balance and function."

McPartland JM, Brodeur RR, Hallgren RC. J Manip Physiol Ther 1997

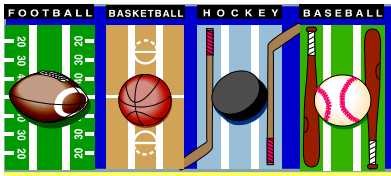
"Abnormal Proprioceptive feedback plays an essential role in joint dysfunction, breakdown and pathology. Normal proprioceptive feedback is essential for proper rehabilitation of injury."

Janda V., Vavrova M.Sensory Motor Stimulation. In Liebenson C. ed. Rehabilitation of the Spine. Williams and Wilkins, 1996

"Spinal joint dysfunction affects brain response accuracy and performance."

Lersa LB, et al. Journal of Manipulative and Physiological Therapeutics. September 2005; Vol. 28, Iss. 7, pp. 502-507

JOINT DYSFUNCTION INHIBITS THE SENSORY FEEDBACK FROM OUR INTRICATE NERVOUS SYSTEM, AND SLOWS OR ALTERS THE RESPONSE TO OUR ENVIRONMENT. NOT ONLY DOES THIS SET THE STAGE FOR INJURY, IT ALSO RETARDS RECOVERY AND REDUCES PERFORMANCE.



"Chiropractic Treatment of the Elite Athlete"

Motion of the vertebrae affect tension and strength of the muscles

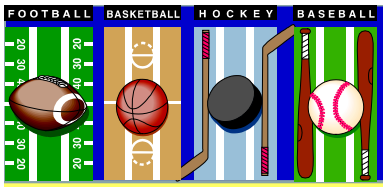
Communication from joints to the brain control conscious awareness of joint position and awareness of movement, as well as subconscious reflex effects on muscle tone and balance which provides dynamic stabilization of joints. *Wyke M.D. Aspects of Manipulative Therapy 1985*

Joint receptors are fundamental to control of human movement. Research shows that position and movement sense are impaired in the presence of joint damage or arthritic changes.

Swinkels A. MSc Dolan P. PhD Spine 1998; 23 (5): 590-597

Dynamic stability requires more than adequate force generated by muscles. The force must be properly coordinated at precise points in every movement. Normal proprioception is essential for this muscular coordination. *Gill MSc, Callaghan M Phil. Spine 1998; 23 (3): 371-377*

THIS *INNATE* COMMUNICATION SYSTEM ORCHESTRATES EVERY ASPECT OF FUNCTION (VOLUNTARY AND INVOLUNTARY) THROUGHOUT THE ENTIRE BODY.
WHEN THE NERVOUS SYSTEM IS INHIBITED, AND THE NORMAL PROPRIOCEPTIVE OR MECHANORECEPTIVE FUNCTION IS ALTERED, THE CONSEQUENCES ARE IMPAIRED FUNCTION AND SUBSEQUENT INJURY, OR LESS THAN OPTIMAL PERFORMANCE.



"Chiropractic Treatment of the Elite Athlete"

The Eitology of Mechanical Dysfunction

"85% of hip and low back complaints originate from a loss of structural integrity of the lower extremities and spine."

American Academy of Orthopedic Surgeons

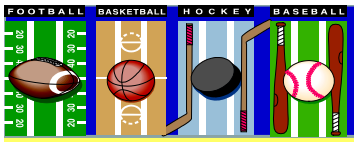
"Most sports injuries are related to flexibility, posture, clinical defects, and previous injury in high level players of contact sports."

International Journal of Sports Medicine, 2001

"Sports injuries in footballers are related to defects in posture and biomechanics."

Sports Physicians Medical Fitness, 1995

BIOMECHANICAL FAULTS WITHIN THE KINETIC CHAIN ARE OFTEN CAUSAL TO INJURY AND UNFULFILLED ATHLETIC PERFORMANCE. MANY OF THESE ARE SECONDARY TO JOINT DYSFUNCTION, AND ITS SUBSEQUENT NEUROLOGICAL IMPACT.



"Chiropractic Treatment of the Elite Athlete"

Chiropractic and Athletic Ability

Fifty athletes were evaluated for agility, balance, reaction time, kinesthetic perception, and power. The control group improved 4.5% at 6 weeks. The adjusted group improved 10.6% or 2.4 times greater than the control group. The adjusted group improved another 6.1% after an additional six weeks of spinal adjustments.

Lauro. J. Chiro. R. & C. I. 1991; 6 (4): 84-87

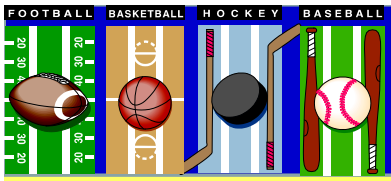
I HAVE TWO EXAMPLES TO SHARE WITH YOU TODAY - HERE IS AN INTERESTING PERFORMANCE BASED STUDY WHERE THEY TOOK TWO GROUPS OF ATHLETES, ONE GROUP SERVED AS A CONTROL AND THE OTHER WAS THE EXPERIMENTAL GROUP. VARIOUS PARAMETERS OF OPTIMAL ATHLETIC PERFORMANCE WERE MEASURED IN BOTH GROUPS.

BOTH GROUPS THEN TRAINED EXACTLY ALIKE, BUT THE EXPERIMENTAL GROUP WAS ADJUSTED (MANIPULATION) REGULARLY DURING THE STUDY. AFTER SIX WEEKS, AND AGAIN AT TWELVE WEEKS, PERFORMANCE PARAMETERS WERE RE – EVALUATED.
AT SIX WEEKS, THE ADJUSTED (EXPERIMENTAL) GROUP's PERFORMANCE SCORES IMPROVED 10.6%, WHILE THE CONTROL GROUPS SCORES IMPROVED ONLY 4.5%.

AT TWELVE WEEKS THE EXPERIMENTAL GROUP HAD IMPROVED ANOTHER 6.1%, FOR A TOTAL OVERALL PERFORMANCE IMPROVEMENT OF 16.7%, IN JUST TWELVE WEEKS !

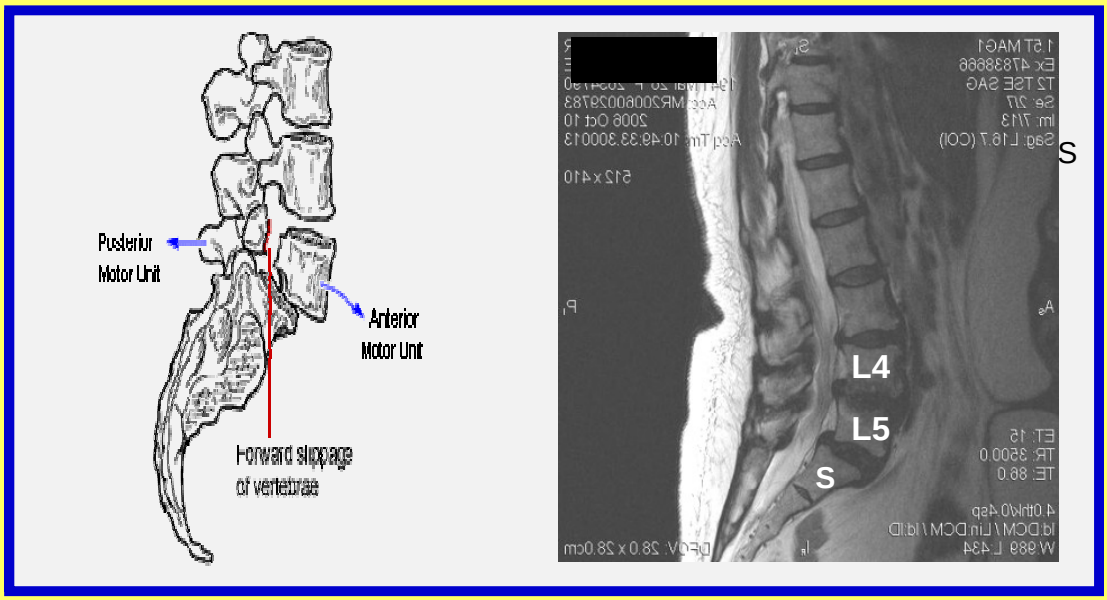
I WAS INVOLVED IN AN UNPUBLISHED INFORMAL STUDY A FEW YEARS AGO. IN ADDITION TO WORKING WITH THE WASHINGTON CAPITALS, I WORK WITH THE LOCAL "AA" AFFILIATE OF THE BALTIMORE ORIOLES. DURING PRACTICE WE CONDUCTED AN INFORMAL EXPERIMENT WITH THE PITCHERS AND CLOCKED 5 AVERAGE FASTBALLS (AFTER THOROUGH WARM UP)/ ADJUSTED CERVICAL SPINE / CLOCKED AVERAGE 5 FAST BALLS (AFTER) / EVERY PITCHER HAD A 5-7 MPH INCREASE IN VELOCITY AFTER.

IT IS MY OPINION, BASED ON 25 YEARS OF CLINICAL EXPERIENCE, AND THE CURRENT SCIENTIFIC LITERATURE, THAT CHIROPRACTIC CARE IS AN *ESSENTIAL* INGREDIENT IN THE EFFECTIVE INTERDISCIPLINARY CO-MANAGEMENT OF ELITE ATHLETES, AND THAT CHIROPRACTIC MANIPULATION MAKES A *SIGNIFICANT CONTRIBUTION* TO INJURY MANAGEMENT AND MAXIMIZING PERFORMANCE IN ATHLETES AT EVERY LEVEL.



"Chiropractic Treatment of the Elite Athlete"

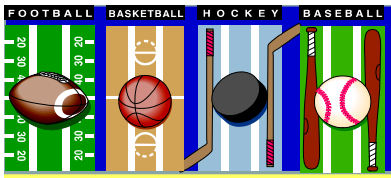
Spondylolisthesis



I WOULD LIKE TO SHARE A CLINICAL PEARL ABOUT A CONDITION WE COMMONLY SEE IN COMPETITIVE ATHLETES.

SPONDYLOLISTHESIS.

THE XRAY YOU SEE IS A PATIENT WHO IRONICALLY CAME IN AS I WAS PREPARING THIS PRESENTATION. AS YOU CAN SEE, SHE HAS A MULTI LEVEL SPONDYLOLISTHESIS.
INTERESTINGLY, SHE IS INCREDIBLY FLEXIBLE FOR A 68 YEAR OLD. SHE HAS BEEN A CHIROPRACTIC MAINTAINCE PATIENT AND HAS PRACTICED YOGA FOR 40 YEARS NOW AND SHE IS EXTREMELY ACTIVE, AND PROBABLY IN BETTER SHAPE THAN MOST OF US.



"Chiropractic Treatment of the Elite Athlete"

Spondylolisthesis

- ✓ Congenital / Isthmic / Degenerative / Traumatic (M.O.T.) / Pathological / Incidental
- ✓ Fatigue Fx. / Recurrent Mechanical
- ✓ Loading / Hyperextension / Overuse-Shear Forces
- ✓ Active vs. Inactive
- ✓ Spect Bone Scan (Single Photon Emission Computed Tomography)
- ✓ Boston (Overlap) Brace 8 – 12 weeks/ 0° Lordosis / Aquatic Exercises
- ✓ F/U CT Scan – Pars Reunited
- ✓ Treatment / Rehabilitation
- ✓ Return to Contact Sport

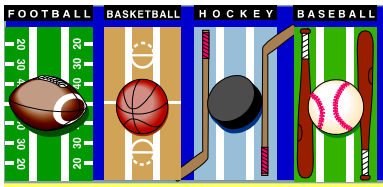
OUT OF RESPECT FOR THE TIME CONSTRAINTS TODAY, I'M GOING TO LIMIT THIS PART OF MY PRESENTATION TO A FEW KEY POINTS.

1.) ACTIVE v.s. INACTIVE (INCIDENTAL) – TO DETERMINE IF THE SPONDYLO. IS ACTIVE – ORDER A SPECT BONE SCAN.

2.) MANY ARE INCIDENTAL, AND <u>NOT</u> THE ETIOLOGY OF THE PTs. PAIN. / MANY DRs. TURN THESE PTs. INTO "SPONDYLO. INVALIDS" BY TELLING THEM TO NO LONGER PARTICIPATE IN THEIR CHOSEN SPORT.
MANY TIMES THE SXs. ARE DUE TO OTHER BIOMECHANICAL DYSFUNCTION, ABOVE THE SPONDYLO., OR SHEAR FORCE ON THE DISC BELOW, CAUSING THE RECURRENT MENINGEAL NERVE TO FIRE.

3.) SPECT BONE SCAN - IF "HOT" BOSTON BRACE (0 DEGREES/ LORDOSIS) AND AQUATIC EXERCISES FOR 8 – 12 WEEKS. CT SCAN FOLLOW UP AT 10 WEEKS/ IF PARS HAS REUNITED, THEN Tx. AND REHABILITATION. RETURN TO CONTACT SPORTS AFTER APPROPRIATE RECONDTIONING. (CASE Hx. OF LUKE).

ENTIRE ARTICLE WILL BE POSTED ON MY WEB SITE AFTER 9/1/08.



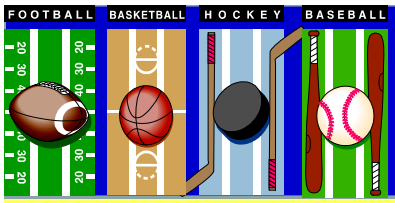
"Chiropractic Treatment of the Elite Athlete"

"It's what you learn after you know it all that counts"

Attributed to John Wooden

www.drholding.com

THE INFORMATION I HAVE SHARED WITH YOU TODAY IS TAKEN FROM REFEREED PEER JOURNALS AND IS PART OF THE CURRENT SCIENTIFIC BODY OF KNOWLEDGE IN THE FIELD OF MANUAL MEDICINE. THE STUDIES I HAVE MENTIONED, AS WELL AS OTHER ABSTRACTS, AND EVEN SOME COMPLETE ARTICLES, ARE AVAILABLE ON MY WEBSITE FOR YOUR REVIEW AFTER 9/1/08.



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Resources

Orthopedic Physical Assessment
David J. Magee, M.D.

Functional Soft Tissue Examination and Treatment by Manual Methods
Warren L. Hammer, D.C., M.S., D.A.B.C.O.

Textbook of Orthopedic Medicine
James Cyriax, M.D.

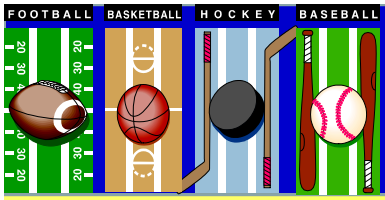
Joint Pain: Diagnosis and Treatment using Manipulative Techniques
J.M. Mennell, M.D.

Rehabilitation of The Spine
Craig Liebenson, D.C.

HERE ARE A FEW TEXTBOOKS THAT PROVIDE ANOTHER CREDIBLE SOURCE OF INFORMATION ON FUNCTIONAL ASSESSMENTS (AND EVEN MANIPULATION), BY SOME OF THE PIONEERS OF MANUAL MEDICINE.

ALONG WITH TRADITIONAL ORTHOPEDIC EVALUATION, THERE ARE CHAPTERS ABOUT EVALUATING JOINT PLAY, AND PERFORMING FUNCTIONAL SOFT TISSUE EXAMINATIONS.

IT IS MY UNDERSTANDING THAT THE AUTHOR OF THE FIRST TEXT BOOK IS ACTUALLY IN ATTENDANCE THIS WEEKEND.



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Acknowledgements

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Jessica Hall, C.T.

M.E. Schuler, Ps.P.

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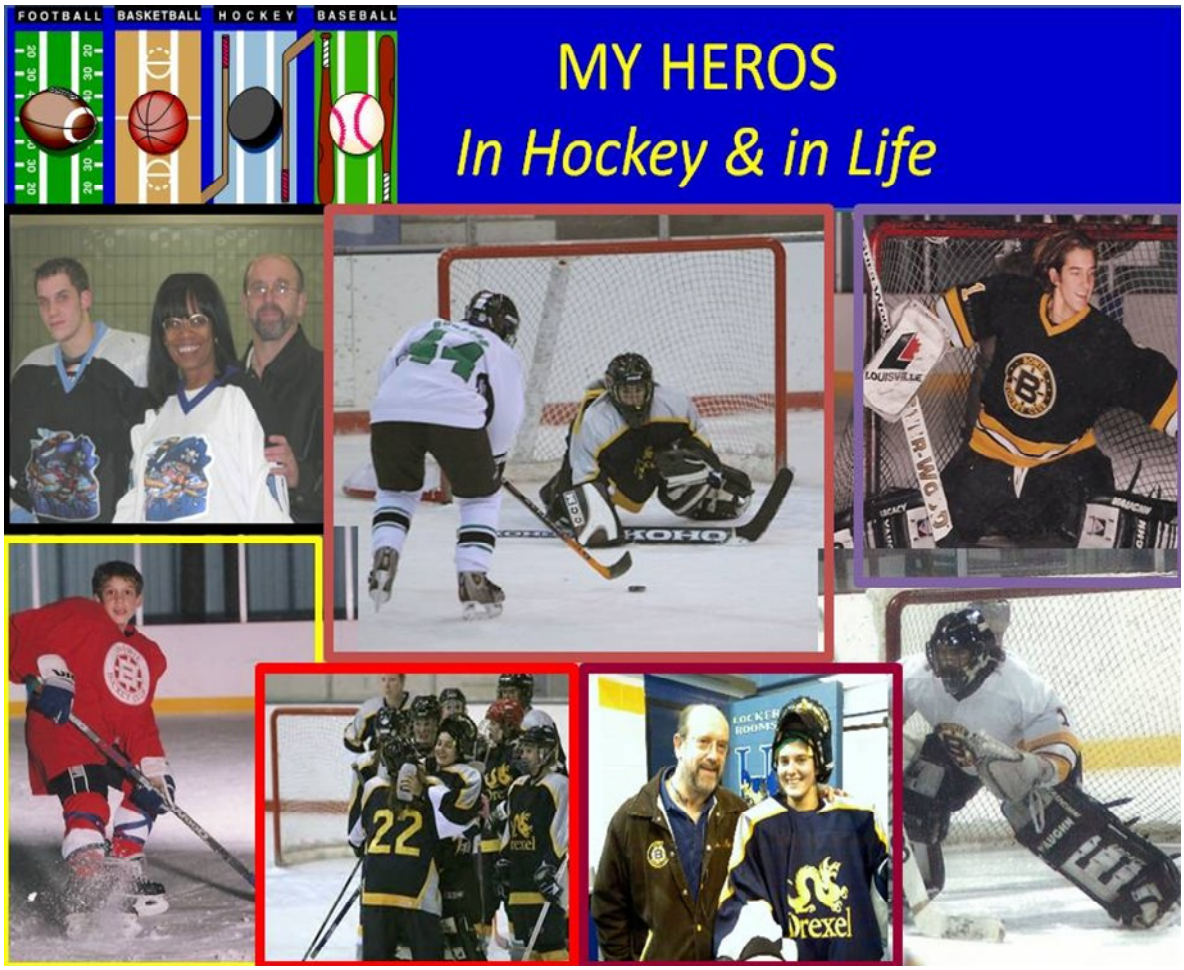
I WOULD LIKE TO ACKNOWLEDGE SOME WONDERFUL PEOPLE WHO WERE INSTRUMENTAL IN THE DEVELOPMENT OF THIS PRESENTATION.

AND FINALLY, IN THE LAST 25 YEARS OF CLINICAL PRACTICE, I HAVE LEARNED A GREAT DEAL FROM A VARIETY OF ATHLETES AND CLINICIANS --- - BUT I'VE WATCHED ICE HOCKEY FOR OVER 20 YEARS NOW,

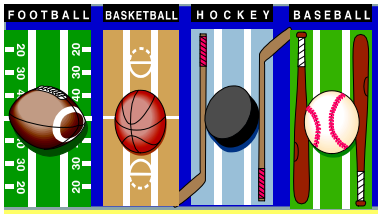


AND NO ONE HAS TAUGHT ME MORE ABOUT HOCKEY (AND LIFE FOR THAT MATTER) THAN MY HEROS (HESITATE)

LADIES AND GENTLEMEN ----------

THANK YOU FOR INVESTING YOUR AFTERNOON.

BACKUP SLIDES



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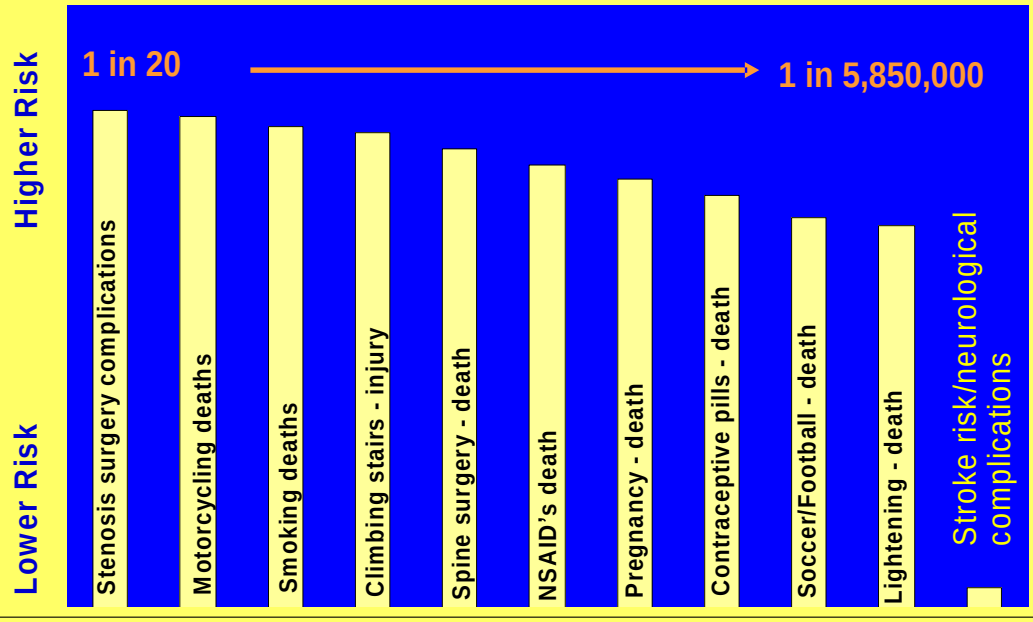
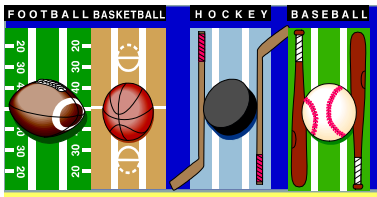
Chiropractic Manipulations and Relative Risks



SOURCE: Anspaugh/Hamrick/Rosato, Wellness: Concepts and Applications, ed.3,.1997, Mobsby Book,Inc.



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28% - Americans use DC's

Chiropractic Safety

250m patient visits per year

- **In a 65 year study by GJ Terrett*, 149 of 255 reported complications were attributed to DC's**
  - **The other 106 caused by non-DC's trying to perform SMT**

***Terrett, G.J. Current concepts in vertebrobasilar complications following spinal manipulation. NCMIC 2001**