CONTROVERSIES IN SPORTS MEDICINE

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Peak n Peek
March 2017
- Consensus
- Science
- Peer Review
- Common Sense
- Judgement
- Professional Organization
- Validation
- Standard of Care
- Board Certification
Controversial Issues

- Concussion, CTE
- EKG’s in the PPE, Sudden Cardiac Death, NBA
- ACL Prevention, Surgery and RTP, OA, TKR
- Mental Health, Suicide
- Conflict of Interest Ethics
- Could vs Should
- Well vs Happy

PATIENT

Player/ATC/Coach/AD/President/Owner/
Team/Family/Agents/Media/Money/Health

TEAM PHYSICIAN
A Fit Player is Better Than an Injured Star

OBJECTIVES

- Identify controversial topics in sports medicine
- Discuss prudent and evidenced based remedies
- Become aware of credible literature to support
- Institute peer reviewed, sanctioned and validated treatment options
PPE Dilemma

- Who should perform
- Uniformity of Exam
- 10-12 million athletes
- Underreporting
- Gender, Race, Age
- Variety of Sports
- Special Needs
- Cost Effectiveness

- MENTAL HEALTH
- PHQ9
- EKG’s
- Only good to prevent death
- African American Males .. Football and Basketball

Pre-Participation Physicals

- Cervical Fracture
- Pregnancy
- MRKH Syndrome
- Jumped Thoracic Facet
- Klippel Feil Defect
- Mononucleosis
- ADHD, Autism, Concussion
- Blindness
- Hypertension
- HCM, Myocarditis
- OCD
- Mental Health Issues
- Scaphoid Fractures
- Sickle Cell Trait
- Anemia
- ACLs, Meniscal Tears, Labral tears
Primary  
- Risk Assessment  
- Bethesda Questions  
- EKG  

Secondary  
- CPR  
- AED  
- EMS Ambulance  

Controversy in the NBA  
- Team Physician  
- Event Physician  
- Need to Know  
- Guidelines  
- Trust  
- Paternalistic  
- Visiting Player  
- Privacy  
- Player’s Association  
- Disqualification  
- Contempt  
- Autonomous
"I wasn’t going to let a simple concussion slow me down. So I screwed with my own test results to protect my spot in the lineup and on special teams. Looking back, it was one of the worst decisions I ever made, especially after experiencing a concussion in 2003 (one that knocked me out) and playing the next week in Carolina. I took the test during the practice week and was right back on the field. But I would probably do it again if it kept me on the roster.

Case 1
(bowen 2011)

Concussion Controversy

- More Concussions than we know about
- Physician must see and recognize the event
- Children and females suffer
- Multiple concussions have consequences
- Early RTP can be catastrophic
- Long term deficits can result from repetitive head injury
- 1592 Pro Football Players Salary  6.4 Billion
- 600 NHL Players
- 450 NBA Players
- 64,000 NCAA Players
- 1.5 million High School
- 3 million Pre High School

**Spectrum**

- Head Trauma
- Concussion
- Mind /Spirit Trauma
- Post Concussion Syndrome
- Prolonged Post Concussion Syndrome
- Chronic Traumatic Encephalopathy

Sedney & Bailes
### Odds of Making It in the NFL

<table>
<thead>
<tr>
<th>Category</th>
<th>Odds</th>
</tr>
</thead>
<tbody>
<tr>
<td>H.S. Football Players</td>
<td>1,086,627</td>
</tr>
<tr>
<td>H.S. Football Seniors</td>
<td>310,465</td>
</tr>
<tr>
<td>NCAA Football Players</td>
<td>70,147</td>
</tr>
<tr>
<td>NCAA FR Playing FB</td>
<td>20,042</td>
</tr>
<tr>
<td>% of HS players to NCAA</td>
<td>6.5%</td>
</tr>
<tr>
<td>NCAA SRs playing FB</td>
<td>15,588</td>
</tr>
<tr>
<td>Players scouted by NFL</td>
<td>6,500</td>
</tr>
<tr>
<td>Invited to Combine</td>
<td>350</td>
</tr>
<tr>
<td>Players drafted by NFL</td>
<td>256</td>
</tr>
<tr>
<td>Rookies making a Team</td>
<td>300</td>
</tr>
<tr>
<td>% of players NCAA to NFL</td>
<td>1.6%</td>
</tr>
<tr>
<td>NFL players reaching YR 4</td>
<td>150</td>
</tr>
<tr>
<td>2014 NFL Min Salary</td>
<td>$420,000</td>
</tr>
<tr>
<td>Income after Taxes (est.)</td>
<td>$252,000</td>
</tr>
</tbody>
</table>

If you’re lucky enough to be one of the 6.5% to become a NCAA football player, and one of the 1.5% of that group to make it to the NFL, you’ll be lucky to get **three** years out of it. At a minimum salary, you won’t make enough to live on for the rest of your life.

**What’s going to provide for you and your family after football is over?**

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### A Fit Player is Better Than a Injured Star

**Durability is more important than ability.**
Complex Concussion

- Cognitive
- Vestibular
- Oculomotor
- Affective
- Migrainous
- Cervical Spine
- Preferred Perception

RTP per Physician

- Serial Physical Exams
- Visual Acuity
- Concussion History
- Diagnostics CT/MRI
- NeuroPysch Testing
- SAC, SCAT 3, Computer
- Balance Testing
- Family Observations
- School Work
- Social
- Sleep
- Appetite

- Exertion Testing/Graded Aerobic Protocol
- Enthusiasm to Return
- ATC/ Coaches Opinion
- Age/Gender/Tanner/Sport/ Position
- Parents Expectations
- Prevention Counseling
- Equipment / helmet fit/ mouthguard
- EDUCATION
- Strength and Fitness
Unreliable

- Literature
- Neuropsych Results (75% Invalid)
- Symptom Reporting
- Concussion definitions
- Statistics
- Equipment Claims
- Spotter in the Booth
- Return to Play Protocol

10 Cs of CONCUSSION

- Concealment
- Capitulation
- Circumstance
- Complicity
- Control
- Collusion
- Celebrity
- Conflicts of Interest
- Class Action
- Celebrity

- CTE
- Mental Health, Suicide
- Depression
- Violent Behavior
- Abuse
- Disability
- Medication
- Drug Abuse
Case 2
(hyland 1979)

“A high school basketball star hoping for an athletic scholarship to college seriously injured his knee. He informed his physician that he intended to hide the extent of his injury, out of fear that it would affect his chances for a scholarship. Representatives of the team contacted the physician, inquiring about the status of the player’s knee. Is it ethical to disclose this information without the consent of the player? On the other hand, would it not be equally unethical not to inform the team that they are about to give a scholarship to an athlete whose career is precarious at best?”

Meniscal Tear

- Clean Up
- 14 days RTP
- Repair
- 3 months RTP
ACL Prevention
Rejuvenating Biomedical Injections
Narcotics & NSAID’s
ACL Rehab
OARSIS
Return to Play
Injury Prevention and Education
Orthopedics and Treatment
Physical Therapy and Rehabilitation

Who is at Risk?

- 38,000/150,000
- 1/3
- 1/100 High School
- 1/10 College
- Quads/Hamstrings
- 3x-8x Female > Male soccer/basketball
- BMI
Preventive Strategies

- Hop, skip, Jump
- Gait Analysis
- One leg squat
- Wall posture
- Leg Length
- Wellness 5
- Vitamin D
- Shoe Wear
- Prevent Injury and Enhance Performance
- FIFA 11+
- Sportsmetrix
- Functional Movement Screen
- Biodex Balance

ACL REDUCTION

- FIFA 11
- Sportsmetrics
- PEP
Prevention Programs

• Sportsmetrics
  • www.sportsmetrics.org

• FIFA 11
  • www.f-marc.com

• PEP (Prevent injury, Enhance Performance)
  • www.smsmf.org/smsf-programs/pep-program

• KIPP (Knee Injury Prevention Program) for Coaches:
  • kipp.instituteforsportsmedicine.org

Sportsmetrics/Cincinnati

Anterior Cruciate Ligament Injury Prevention Training in Female Athletes: A Systematic Review of Injury Reduction and Results of Athletic Performance Tests

Frank R. Noyes, MD, and Sue D. Barber Westin, BS*
Prevention Protocol

- Plyometrics
- Dynamic Stabilization
- Strength training for the trunk, upper body, and lower body.
- Sport specific agility, flexibility, strength, balance training
- ACL prevention should start in the preseason for at least 6 weeks and continue in-season with less frequency 1-2 times a week.

What does the Literature say?

- 2-8 times higher incidence of ACL injury in females
- High School Football highest risk ACL Injury
- Highest risk sports for females include soccer, basketball, and gymnastics.
- Most ACL injuries occur in non-contact situations usually during cutting or pivoting maneuvers and single leg landing. (60-90%)
- ¼ will go on to a second injury
Return to Performance, Maybe

- 54 weeks NFL
- 21% Don’t Return
- 33% performance deficit
- <50% return in one year
- $\frac{1}{4}$ second knee injury
- Strong In Strong Out
- Motivation
- Neuromuscular training
- Multiplanar movements
- Male Rerupture same
- Female Contralateral 88%

- Hewett Am JSM 2013
Current trends of Mental Health in College Students

- 1 out of 2 have been in counseling
- 1 out of 3 have taken a psychiatric medication
- 1 out of 4 have self-injured
- 1 out of 3 have seriously considered suicide
- 1 in 10 have been hospitalized for psychiatric reasons
- Nearly 1 in 10 have made a suicide attempt
- 1 out of 5 have experienced sexual assault
- 1 out of 3 have experienced harassment or abuse
- 1 out of 3 have experienced a traumatic event

*Center for Collegiate Mental Health (CCMH), founded by and housed at Penn State's Counseling and Psychological Services*
SUBJECTIVE
- Treatment
- Chronic
- Mental
- Narcotics
- What ever works
- Emphasis Doctor Delivery
- OMT, Acupuncture, Injections, Medication, Aroma, Cupping Meditation, Spirit, Imagery, Touching, Mindfulness
- No Insurance.....Cash

OBJECTIVE
- Diagnosis
- Acute
- Physical
- Non Narcotic
- Evidence Based
- Validated
- Well Accepted
- Patient Adherence
- OMT, Physical Therapy, Injections, HEP
- Wellness 5,
Cupping

- Drawing up the skin is believed to open up the skin’s pores, which helps to stimulate the flow of blood, balances and realigns the flow of *qi*, breaks up obstructions, and creates an avenue for toxins to be drawn out of the body.

KinesioTaping
Acupuncture

Other Controversies

- Tens Unit
- Ice
- Stretching
- Helmets
- Mouthpiece
- Supplements
Do Teams Really Want Trained Sports Medicine Specialists?

- Accurate Diagnosis
- Testing
- Referral
- Rehabilitation
- Return to Play, Performance, Excellence

ENCOURAGE MEDIOCRITY
MAINTAIN CONTROL

- Burden of Knowledge
- Ignorance is bliss
- Purposeful Under Reporting
- Continuity of Care
- Responsibility to player/parents/agent
- Responsibility to team
- Responsibility to OWNER

Sports Conundrum

- Short term gain
- Personal physician
- Best for team
- Return to play
- Autonomous

- Long term consequences
- Team Physician
- Best for Player
- Not ready, risks to health
- Paternalistic
References

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McNamee M, Partridge B.

doi: 10.1080/15265161.2013.828114
PMCID: PMC3899648
 NIHMSID: NIHMS546303
Sports Medicine and Ethics
Daniela Testoni, MD, FACP
“Wellness 5”

- Exercise
- Sleep
- Nutrition
- Mental Health
- Substance Abuse