





Wellness

“A state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity” . . . World Health Organization Constitution
<http://www.who.int/about/en/>

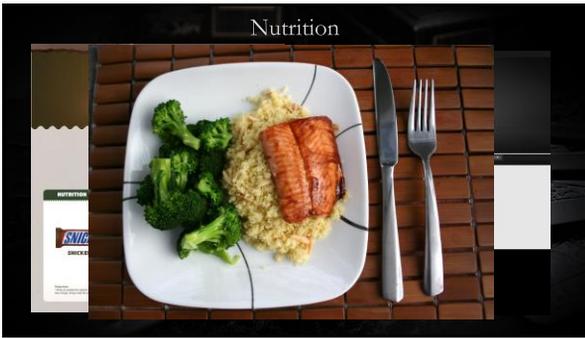
Personal	Professional
<ul style="list-style-type: none"> ◊ Sleep ◊ Nutrition ◊ Hydration ◊ Mental and Social Wellbeing ◊ Recovery 	<ul style="list-style-type: none"> ◊ Mobility / Flexibility ◊ Training ◊ Injury Care ◊ Soft Tissue and Physical Maintenance ◊ Monitoring ◊ Team Approach and the Sports Medicine Extensions

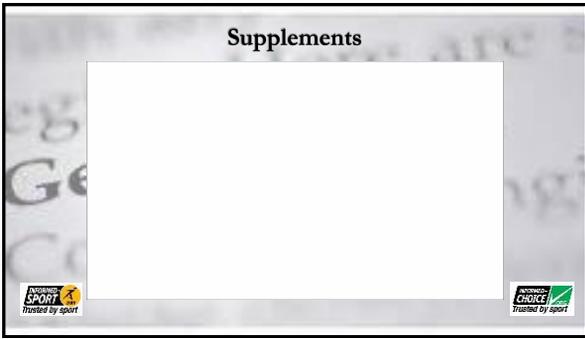
Sleep

Alternating REM (rapid eye movement) and NREM (non-rapid eye movement) cycle that repeats every 90 minutes

<p>Stage 1</p> <p>NREM (75% of night): As we begin to fall asleep, we enter NREM sleep, which is composed of stages 1-4</p> <ul style="list-style-type: none"> * Between being awake and falling asleep * Light sleep <p>Stage 2</p> <ul style="list-style-type: none"> * Onset of sleep * Becoming disengaged from surroundings * Breathing and heart rate are regular * Body temperature drops (so sleeping in a cool room is helpful) 	<p>Stages 3 and 4</p> <ul style="list-style-type: none"> * Deepest and most restorative sleep * Blood pressure drops * Breathing becomes slower * Muscles are relaxed * Blood supply to muscles increases * Tissue growth and repair occurs * Energy is restored * Hormones are released, such as: Growth hormone, essential for growth and development, including muscle development
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<https://sleepfoundation.org>





Supplements

- ◆ <http://www.fda.gov/Food/DietarySupplements/default.htm>
- ◆ <http://informed-sport.com/en>
- ◆ <http://informed-choice.org/>
- ◆ <http://nifsport.com/index.asp>
- ◆ Organizational Banned Substances List

Hydration

- ◊ 2%-3% Change in hydration can negatively affect sports performance, cognitive function and decision making. (ref)
- ◊ Critically important in **Metabolism**, maximizing **Cardiovascular Function**, and regulating the body's ability to **Dissipate Heat** during athletic performance.
- ◊ Enhances strength, power, and endurance based sports and improves mental clarity, digestion and absorption of nutrients. (ref)

Hydration Education

- ◊ GATORADE SPORTS SCIENCE INSTITUTE
<http://www.gssiweb.org/en>
- ◊ KOREY STRINGER INSTITUTE
<http://ksi.uconn.edu/>
- ◊ NATIONAL ATHLETIC TRAINERS ASSOCIATION
<http://www.nata.org/health-issues/heat-illness>
- ◊ TEAM PHYSICIAN

PRE

WIN FROM WITHIN

DURING

WIN FROM WITHIN

REFUEL

WATER
(WHITE CAPS)
UNDER 45 MINUTES OF ACTIVITY

GATORADE
(ORANGE CAPS)
OVER 45 MINUTES OF ACTIVITY

WIN FROM WITHIN

POST

Pre Exercise LBS (kg) – post exercise wt (kg) x 1.5 = body mass loss

For every 1 kg (2.2 lb) loss, additional 1 L of fluid needed
33.814 Fluid Ounces in 1 Liter
1 1/2 20oz Bottles of Gatorade per LB Lost

WIN FROM WITHIN



Maintenance and Recovery

- ◆ Acupuncture / Dry Needling / Cupping
- ◆ Chiropractor / A.R.T
- ◆ Compex, MarcPro, or other muscle stimulator
- ◆ Cryo Therapy Chamber
- ◆ Foam Roller, Stick, Ball, Stretch Band, Cord or Other
- ◆ GameReady
- ◆ Hot Tub, Cold Plunge, or Contrast Tubs
- ◆ Massage Therapist
- ◆ Normatech, Recovery Pump or Other Compression System
- ◆ One on One Flexibility by Athletic Trainer or Strength Coach
- ◆ Yoga, Pilates, or other Flexibility / Mobility Routine
- ◆ Self Stretching
- ◆ TrueStretch (Stretch Cage)



Monitoring

- ◆ NFLPA – Strict policy on how and with what monitoring devices can be applied to NFL Players
- ◆ GPS
- ◆ Heart Rate Monitoring (Team Systems)
- ◆ Omega-Wave
- ◆ Blood Flow Restriction
- ◆ Force Plate Data
- ◆ Performance Analytics and Spatiotemporal Pattern Recognition
- ◆ Virtual Reality and Performance Camera Array Systems
- ◆ Selfie Drone Video Analysis
- ◆ Biometric Sensors

Sports Science



Monitoring

What about the
information you already
have?

Physical Exam

- ◆ Comprehensive Medical History
- ◆ Emergency Medical Information
- ◆ Allergies and Intolerances
- ◆ Specific Chronic Medical Conditions
- ◆ Orthopedic Physical Exam (w/ Radiology)
- ◆ Sports Medical PPE
- ◆ EKG / ECHO
- ◆ Bloodwork / UA
- ◆ Functional Movement Screen
- ◆ Eye Exam
- ◆ Hearing Test
- ◆ Spirometry
- ◆ General Dental Exam
- ◆ Neuropsych Baseline
- ◆ Biodesx Isokinetic Evaluation

What else is there?

- ◆ Basic Flexibility / Mobility Measurements
- ◆ Sit and Reach
- ◆ Thomas Test
- ◆ Spine Hip IR/ ER
- ◆ Active Ankle Dorsiflexion
- ◆ Foot and Shoe Sizing
- ◆ Anthropometric Measurements
- ◆ Life Style Questionnaire
- ◆ Baseline Physical Tests
- ◆ EMS / SFMA / V-Balance
- ◆ "TALKING TO YOUR ATHLETES"



Wellness Report



Wellness Report

1st Year:
-33%

2nd Year:
-25%

3rd Year:
-???



Forbes 30 Under 30 in Sports



Christine Baugh, a Harvard University student pursuing a doctorate in health policy with a concentration in ethics.

Meet The Under 30 Harvard Ph.D. Student Who Wants To Change The Sports Medicine Industry

- ◊ ...testing a smartphone app that **tracks athletes' physical health, mental health, and quality of life** in an app that ...**a tool that athletes could access via their smartphones.** Athletes were prompted to respond to questions about their **mood, behavior,** and somatic symptoms...**during their sport season.** They were also asked questions about the type of **sport activity** (e.g. game, cross-training, practice) that **they had most recently participated in,** how much **sleep** they got, whether they were **experiencing stress** from school, **sports, or work life,** etc. I presented preliminary information to the NCAA in November, and they were very excited about the technology and potential results.

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- ◊ Mental and Social Wellbeing
- ◊ Recovery

Professional

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- ◊ Training
- ◊ Injury Care
- ◊ Soft Tissue and Physical Maintenance
- ◊ Monitoring
- ◊ Team Approach and the Sports Medicine Extensions

Team Approach

Athletic Training Staff

- ◊ Head ATC
- ◊ Assistant Athletic Trainers x 2
- ◊ Physical Therapist
- ◊ Season Interns ATC
- ◊ Training Camp Intern ATs
- ◊ Team Physicians
 - ◊ Head Team Physician / Ortho Surgeon
 - ◊ Orthopedic Surgeon (+Fellows)
 - ◊ Internal Medicine (+Fellows and other Techs)
- ◊ Chiropractors x 3
- ◊ Paramedics (+Dedicated Stadium Staff)
- ◊ Sports Psychologist
- ◊ Specialty MD (Spine, Neuro, Cardio/Pulm, RSI/Emergency, Ophthalmol, UNC, Independent Neuro)
- ◊ Neuropsychologist

Medical Staff

- ◊ Dentist / Oral Surgeon
- ◊ Massage Therapist
- ◊ Flexibility Therapist
- ◊ Acupuncturist
- ◊ Nutritionist
- ◊ Podiatrist
- ◊ Orthotist
- ◊ Equipment Staff
 - ◊ Head Equipment Manager
 - ◊ Assistant Equipment Managers
- ◊ Strength and Conditioning Coaches
 - ◊ Head S&C Coach
 - ◊ Assistant S&C Coach
- ◊ ATC Spotter (Gameday)
- ◊ Visiting Team Medical Liaison (VTML)



