

Alternative and Complementary Therapies in Athletic Training

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Overview

- Scientific Support of CAM
- Inflammation
- Nutrition
- Body Work
- Mind / Body Work
- Energy Work

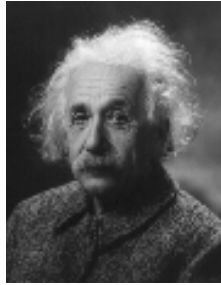


The Science



Scientific Support

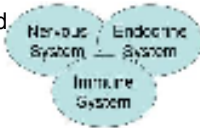
- Psychoneuroimmunology
 - The mind's influence on the body
- Quantum Physics
 - Particles
 - System Theory
- Energy Medicine
 - Holistic Health
 - 4 quadrants of need and function
 - Vibration / Bioenergetics
 - Fascia / Epigenetics



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Psychoneuroimmunology

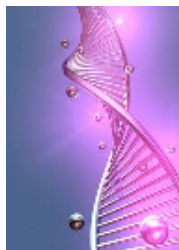
- Over last 20+ yrs has been demonstrated in science a continuous dialogue between the mind and the nervous, and immune system suggesting emotions can effect the immune system in both positive and negative ways.
 - Being grateful has been shown to alter the electrical fields of the heart and migration of electrons



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Energy Medicine

- Energy Medicine
 - Holistic Health
 - 4 quadrants of need and function
 - Physical
 - Intellectual
 - Emotional
 - Spiritual
 - Based on quantum physics and system theory, emphasize evaluation and treatment of the whole person and application of modalities that help people return to their nature state of healing facilitated by enhancing flow of energy



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Energy Medicine

- Energy Flow
 - Spirals
 - Our body is made up of spirals or helixes
 - DNA, blood vessels, fascia, heart muscle, central core of energy (chakras)
 - Wherever there is a helix with energy there is also found a magnetic field
 - Vibration / Bioenergetics
 - Everything in nature is vibrational
 - Fascia
 - A living crystal matrix
 - A piezoelectric tissue
 - Epigenetics
 - DNA responds only to vibration



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“We are swimming in photons (energy) and just like fish in water, we don’t know it.” - Carol Davis

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Fascia

Fascia is the organ system that mediates how we relate to space:

- stability
- organization
- development
- growth
- perception
- emotion



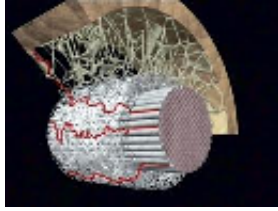
*from Tom Myers What is Fascia? Webinar with The Benjamin Institute 5/10/11

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Fascia

The fascial webbing as a system:

- Is continuous & interconnected.
- Distributes strain.
- Is the tissue of shape.
- Holds compensations.
- Is our richest sensory organ.



*from Tom Myers What is Fascia? Webinar with The Benjamin Institute 5/10/11



Fascia

- Connected within the nucleus to the DNA of every cell
- Is the cell and the extra cellular matrix
- ECM is our reserve of electrons or energy
- Majority is bound water, organized like a liquid crystal.
- Sponge like tissue
- When fascia gets restricted cells cannot vibrate and receive signals from each other that allow them to function for health

Fascia manipulation whether it be movement or soft tissue mobilization has a direct effect on energy, emotion, and cellular regulation.



Fascia: Strolling Under the Skin

<http://youtu.be/k6FaULbOmnE>



The Inner Life of a Cell

<http://youtu.be/wJyUtbn0O5Y>



Inflammation



Injury = Inflammation



“Inflammation is the body’s response to injury, and optimally it results in healing of tissues by replacement of damaged and destroyed tissue, with an associated restoration of function.”

Andrews, Harnetson, Wik. Physical Rehabilitation of the Injured Athlete. Saunders; Philadelphia, Pa. 2004.
pg. 13.



Inflammatory Agents



- Inflammation is abundant in the body to varying degrees.
- Many external factors can induce inflammation:
 - Poor nutritional habits
 - Stress
 - Heavy physical activity
 - Poor recovery / Overtraining
 - Environment pollutants
 - Biological agents (bacteria, viruses, etc.)



Mamadou. Inflammation Defined, Examined, Managed. Transformation Seminar. 10/12/2007



Is Inflammation good or bad?



- Healing **cannot** occur without inflammation (acute).
- However, too much of a good thing spells disaster (chronic).
- **Inflammation is needed but must be controlled.**
- Chronic inflammation is linked to many diseases, including autoimmune, cancers, heart disease etc.

Berardi J., Andrews A. Nutritional Strategies for the Management of Sports Injuries.
Dell'Orge G. Musculoskeletal Trauma: Implications for Sports Injury Management. Human Kinetics. 2002



Nutrition



Nutrition- Nature's Anti-inflammatory

- "Nutraceuticals"
 - "The principal difference between populations with the highest cancer rates and those with the lowest was their food"



Nutrition Solutions

- Manage inflammation
- Prevent chronic inflammation
- **Food First!**
- Provide adequate calories
- **Hydrate**
- Avoid processed carbohydrate
- **Provide adequate protein**
 - Include healthy fat
 - **Avoid pro-inflammatory fat**
 - Take fish oil

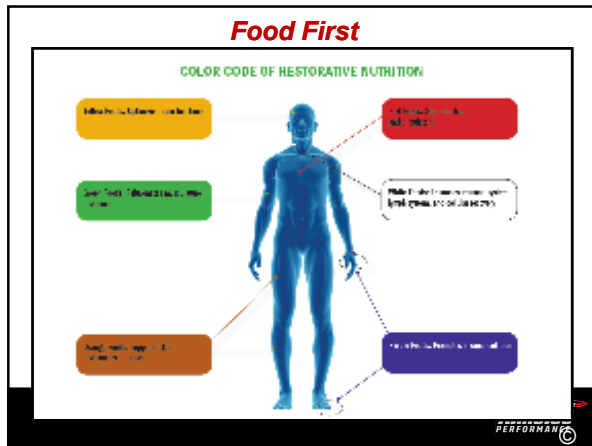


Nutrition Solutions continued

- Prevent any micronutrient deficiencies
- **Include anti-inflammatory rich foods & spices**
- Digestive enzymes and probiotics if needed
- **Supplement with pertinent amino acids if needed**
- Supplement with protease enzymes if needed
- **Supplement with anti-inflammatory compounds if needed**


Berard, J., Andrews, A. Nutritional Strategies for the Management of Sports Injuries.
Thompson, CW. Nutrition and Wound Healing. 2003.





Put out the "flame" with these foods

- Each of these foods have powerful antioxidants & phytochemicals linked to anti-inflammatory action:
 - Green Leafy Vegetables
 - Beans
 - Berries
 - Apples
 - Grapes
 - Tea
 - Chocolate



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Inflammatory Influence of Carb

- High levels of blood glucose and Insulin are linked to the production of inflammatory messengers from AA.
 - Insulin activates enzymes that cause our body to make additional AA
 - Insulin also controls AA metabolism into inflammatory chemical (prostaglandins, leukotrienes)
 - These inflammatory chemicals regulate insulin levels

Covey, D. The Role of EFAs in the Control of Inflammatory Immune Response. Transformation Seminar. 10/12/07
Natarajan R, Nadler JC. Lipid inflammatory mediators in diabetic vascular disease. Arterioscler Thromb Vasc Biol. 2004 Sep; 24(9):1542-8.

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Hydrate



- Do not neglect!
- Dehydration can impact blood flow and consequently the delivery of healing nutrients.
 - Strive for 0.5 – 1 fl. oz. of water / pound / day
- Dehydration can decrease the suppleness of fascia causing a decrease in vibration and electron uptake in the ground substance= decreasing energy flow (Ch'i) and altering homeostasis



Body Work



Body Work

- Myofascial Release
- Structural Integration



Myofascial Release- Barnes Method

- Developed by John Barnes, PT
- Whole body hands-on approach for eval and treatment of the human structure
- Focus is on the fascial system
- Low intensity sustained stretch
- Stay with stretch and pressure and follow tissue 3D as it unwinds for 90 seconds to 5 min
- Releases layer by layer of fascial restrictions
- Tissue changes and improves, memories and emotions that are associated with restriction may come to surface



Structural Integration

- Developed by Ida Rolf
- Based on human body and response to injury and gravity
- Looks at relationship between structure and function
- 3 main principles: the role of gravity in shaping posture and movement, importance of the fascial system as the organ that connects and supports everything, and structure can be changed
- 10 sessions of soft tissue mobilization (SI) MFR based on evaluation and key structures to work on
- Central structure of body is pelvis
- Uses pelvic lift / sacral float MFR which has been shown to cause a relaxation response



Mind / Body Work



Mind / Body Work

- T'ai Chi
- Yoga
- Pilates



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T'ai Chi

- Ultimate Energy
- Guided by the Yin and Yang
- Ancient physical art form, originally a martial art
 - Defendant uses his attacker's own energy against him
- Based in philosophy of Taoism
- Improves respiratory status, trunk control, expands base of support, rotation, coordination, and body awareness.



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Yoga

- Sanskrit for yoke or unite
 - Uniting the body, mind, and spirit
- Classic yoga practice components:
 - Moral restraints, personal behavior observances, postures, regulation of breath, drawing senses inward, concentration, meditation
- Benefits:
 - Increased strength, balance, stamina, flexibility, relaxation



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Pilates

- Created by Joseph Pilates
- Utilizing apparatus' to allow for efficient functional movement
- Foundations in yoga, martial arts, dance, and Zen meditation
- Guiding principles
 - Breathe, concentration, control, precision, coordination, centering, flowing movement



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Body / Mind Movements

- Similarities
 - Breathing
 - PNS Dominance
 - Positivity
 - Fascia movement / manipulation



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Energy Work

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Energy Work

- Reiki
- Qi Gong
- Earthing / Grounding



Reiki

- Healing system that channels the universal life force through the practitioner's hands.
- Promote energy balance, healing, and a state of well being
- Can be through touch or holding hands over the body
- Currently used to decrease stress and decrease pain in chronically ill



Qi Gong

- "Energy Skill"
- A therapeutic Chinese practice used to optimize and restore energy (Qi) to the body, mind, and spirit
- Elements of Taoist and Buddhist philosophies
- Heavy emphasis on meditation
- Promote health and vitality through gentle exercises for the breath, body, mind, and voice, increasing circulation and energy flow
- 1 month= enhanced leukocyte, immunoglobulin, and other immune system improvements in suppressed immune systems
- Decreased HR, respiratory rate, and BP



Earthing

- Increased incidence of disease follows increase incidence of footwear
- Earthing effects:
 - Improved sleep
 - Decrease pain
 - Decrease inflammation
 - Relaxation
 - Improved healing
 - Improved heart rate variability
 - Decreased clumping of RBC
 - Decreased blood viscosity (decrease CV disease)



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Earthing

- Proteins within cells are “semi-conductors” because they are bound within water molecule lined helices
 - “We are broadcasting and receiving antennas”
- The ground substance is an electron reservoir
- Most people are electron deficient because they have not refilled reservoirs by touching the ground.



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Closing thoughts

- Role as a clinician
- Appreciation of fascia
- Psychoneuroimmunology
- Treating holistically

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References

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