

An Osteopath’s Role in the  
Forward Deployed Military  
Setting

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Disclosures

- I have no relevant financial relationships or conflicts of interest to disclose.

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A bit about me

- PCOM Graduate, Class 83
- Internal Medicine Residency / Cardiology Fellowships (2)
- Direct Commission into the Army in 2006
- Basic Training 2006 / Flight Surgeon Wings 2007
- Deployment to the 86<sup>th</sup> CSH, 44<sup>th</sup> MED Command, Combat Zone during the surge - Mosul, Iraq, 2007-2008
- Colonel in the United States Army Reserve Medical Corps 2014
- Deployed to the 452 Combat Support Hospital, (CSH) Camp Arifjan Kuwait, August - November 2018.

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My Primary Responsibility in Kuwait  
- Flight Surgeon 61N

- Flight physicals for the pilots and aircrew
- Medically clear patients for air transport
- Can patient egress aircraft on their own
- Can patient take meds on their own for a long flight
- Can patient Valsalva
- Other - altitude concerns for the patient

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Altitude Concerns Include Gas Expansion  
Occurs Going above Sea Level

- Pneumothorax – limit altitude to < 5,000’ above MSL
- Chest tubes – placed to water seal, not clamped
- Gastric distention – pt with decreased LOC should have NG/OG tube
- Hypothermia – an open cabin cools from rotor wash and 3.5 degree temperature drop / 1,000 feet of altitude elevation
- ABSOLUTE CONTRINDICATION to altitude - Decompression Illness

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MEDEVAC Training with CSH Personnel

- Proper personal protective equipment (PPE), eye and ear protection, and no head gear!
- Proper approach to the Blackhawk – 90 degree off to the side
- Never approach from the front due to tip of blades drooping with slowing of the rotor RPM’s
- Never approach from the rear due to exposed tail rotor blades and hot engine exhaust going rearward
- Knowing the aircrew commands and when and how to move / load patients

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MEDEVAC Transport vehicles

- Civilian and Military ambulances
- HH-60 Blackhawk helicopter
- CH-47 Chinook heavy lift helicopter
- V-22 Osprey tiltrotor aircraft
- C-130
- C-17 Globemaster

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“Tail to Tail Transfers”

- Transfer of patients from one aircraft (helicopter)
- To another aircraft of longer range capability usually (C-17)
- To be received at a higher level facility

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V 22 Osprey Landing

- Tilt rotor aircraft
- Desert environment
- Lots of sand and dust even on paved surfaces
- Leads to a “Brown Out” condition with little or no visibility for the pilot during the final stage of landing

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### Combat Support Hospital

- Roles of care - hospital
- Emergency medical treatment (EMT) – 2 trauma bay, 9 treatment beds
- Operating room - 2 OR suites
- Radiology – CT scan, X-Ray, limited Ultrasound
- ICU and Ward (general floor) – 4 ICU, 20 ICW beds
- Pharmacy
- Laboratory
- Access to host nation treatment at local hospitals – Cardiac Catheterization

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### Combat Support Hospital

- Role – Outpatient
- Troop Medical Clinic
- Physical Therapy
- Treadmill EKG Stress testing

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### Troop Medical Clinic

- Patients seen here included all US military forces, coalition country forces and civilian contractors
- Routine periodic health exams
- Vaccinations
- Sick call
- Significant amount of orthopedic injuries

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Orthopedic injuries seen in the clinic  
Many Overuse Injuries – Too much Too soon

- Reservist trying to get back into shape for their army fitness test
- Sacroiliac somatic dysfunction – pain into buttocks and thigh, many times history is not accurate as to the location of their symptoms
- Patellofemoral syndrome
- Cervical and upper thoracic somatic dysfunction
- Ankle strains and sprains, some fractures
- Plantar fasciitis – insoles at PT clinic
- Shoulder impingement symptoms or rotator cuff injury

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The Osteopathic Exam

- A good history of the chief complaint
- A good osteopathic physical exam - TART
- Evaluate for tissue texture abnormality
- Asymmetry
- Determining the motion restriction (comparing the physiologic to the restrictive barriers)
- Tenderness (sensitivity) - least accurate

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My OMM Training Faculty at PCOM  
“Mens et Manus”

- Nicholas S. Nicholas, D.O., FAAO, Chairman of OPP at PCOM
- Alexander S. Nicholas, D.O., FAAO
- Evan A. Nicholas, D.O.
- David Heilig, D.O., FAAO
- Robert England, D.O., FAAO
- Marvin Blumberg, D.O., FAAO
- Jerome Sulman, D.O.
- Katherine England D.O.

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OMM Treatment of Somatic Dysfunction

- A major goal of OMM therapy is to minimize or eliminate the dysfunction causing the restrictive barrier

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OMM Techniques

- Soft Tissue Techniques\*
- Lymphatic Techniques\*
- Muscle Energy Techniques (MET)\*
- High-Velocity, Low Amplitude Techniques\*
- Myofascial Release Techniques\*
- Counterstrain Techniques
- Techniques of Still
- Many Others
- (\*) My Preferences

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Sacroiliac Dysfunction- Exam

- Palpation – Tissue Texture
- Landmark Asymmetry – ASIS, PSIS, Medial Malleolus - Height, Eversion
- Motion Tests – ASIS Compression, Standing Flexion
- Provocative Tests – Active Leg Raising
- Point Tenderness / Sensitivity
- Treatment – Muscle Energy Techniques the HVLA

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Cervical Region OMM

- Occipitoatlantal Dysfunctions and Treatment
- Atlantoaxial Dysfunctions and Treatment
- C 2 – C 7 Dysfunctions and Treatment

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Thoracic Region OMM

- Upper, Middle and Lower Thoracic Dysfunctions and Treatments
- Flexion and Extension Dysfunctions and Treatment
- Rib Dysfunctions and Techniques

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Lumbar OMM

- Lateral Recumbent Techniques (Long Lever)
- Seated Techniques Short Lever and Long Lever)

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Upper and Lower Extremity OMM

- Multiple Techniques
- Have Your Favorites

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