



***2019 NSCA TACTICAL
ANNUAL TRAINING***

Conflict of Interest Statement

We have no actual or potential conflict of interest in relation to this presentation.

Disclaimer

- The views presented are those of the speakers and do not necessarily represent the views of DoD or its Components.

The Theory of Monitoring, Implementing, & Mitigating Stress to Build Mental & Physical Resiliency

Lt Col Emily Rucker, PsyD

Tyler Chrisitansen, CSCS,*D, TSAC-F,*D, RSCC*D

Special Warfare (SW) Training Wing

- Two Groups, 7 Squadrons, 14 subordinate detachments/operating locations across 9 states.
- Administers 16 training courses and manages Air Force (AF) participation in 5 joint schools.
- Build human foundation of the AF's SW capability - both special operations and conventional forces.

USAF Special Warfare



Combat Control &
Special Tactics Officer



Pararescue & Combat
Rescue Officer



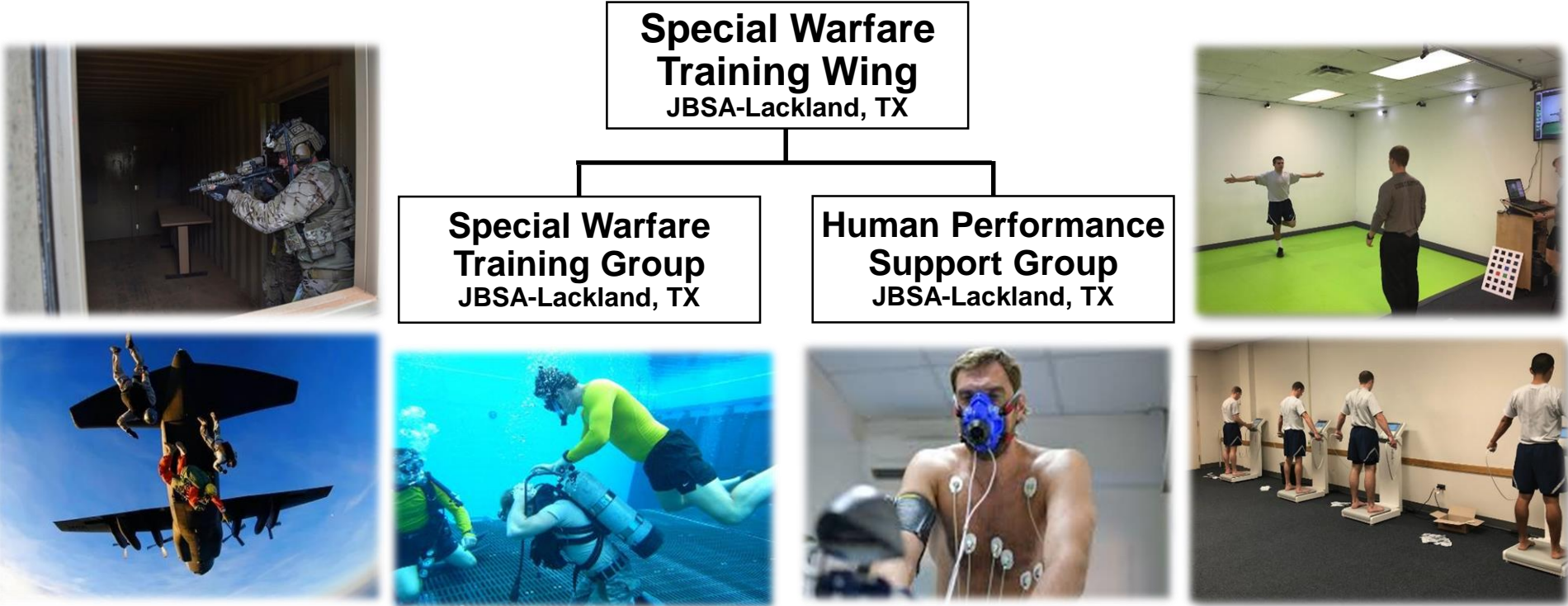
Now...Special
Reconnaissance



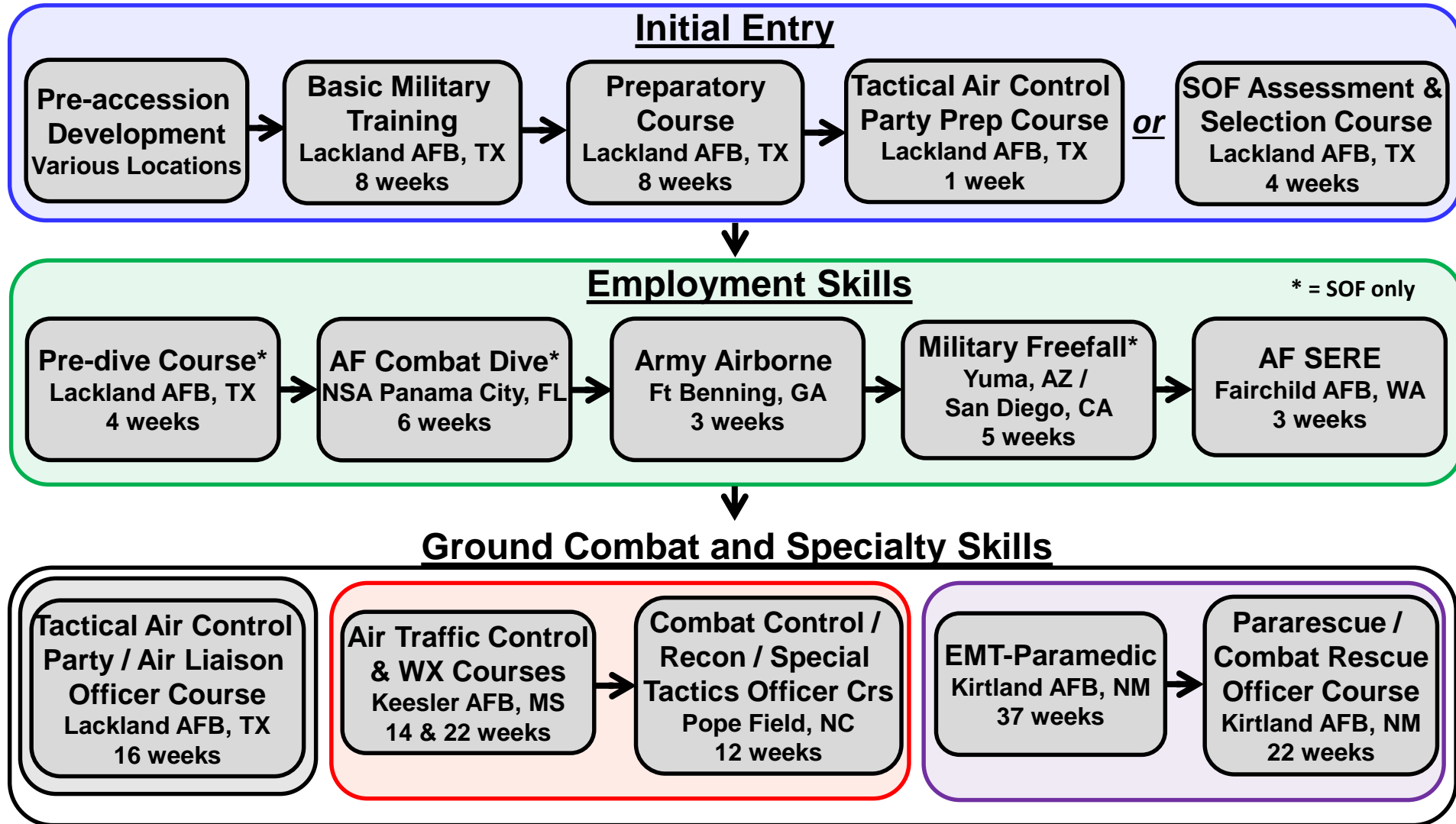
Tactical Air Control Party
& Air Liaison Officer

Special Warfare Training Wing

Building the human foundation of Air Force Special Warfare capability



Pipeline Overview



Human Performance Support Group (HPSG)

- One-of-a-kind organization within the Air Force
- Dedicated to the optimization and care for the human weapon system
- Integrated human performance and medical capabilities
- Multidisciplinary team
- Fully integrated within the training formation
- Airmen are better prepared for the combat mission going in and better cared for coming out, to include when they move on with life after the AF

Human Performance Team

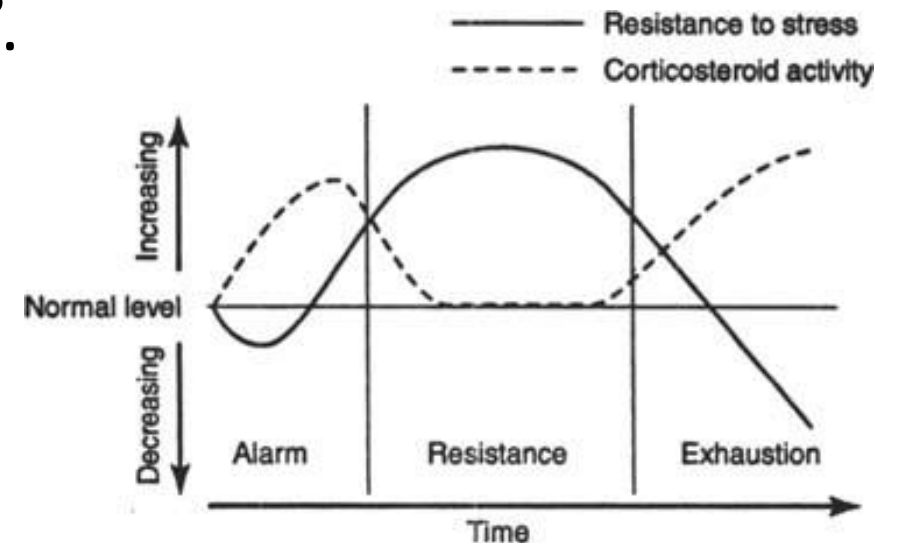
- Performance Dieticians & Diet Technicians
- Physical & Occupational Therapists & PT/OT Technicians
- Psychologists & Psych Technicians
- Strength Coaches
- Athletic Trainers
- Sports Medicine Physician & Medical Technicians
- Research Flight & Supporting Personnel (HP techs, data analysts)

Data

- Training sessions
- Potential mitigation of injuries
- Refine and improve physical and mental performance
- Lifecycle management
- Resilience

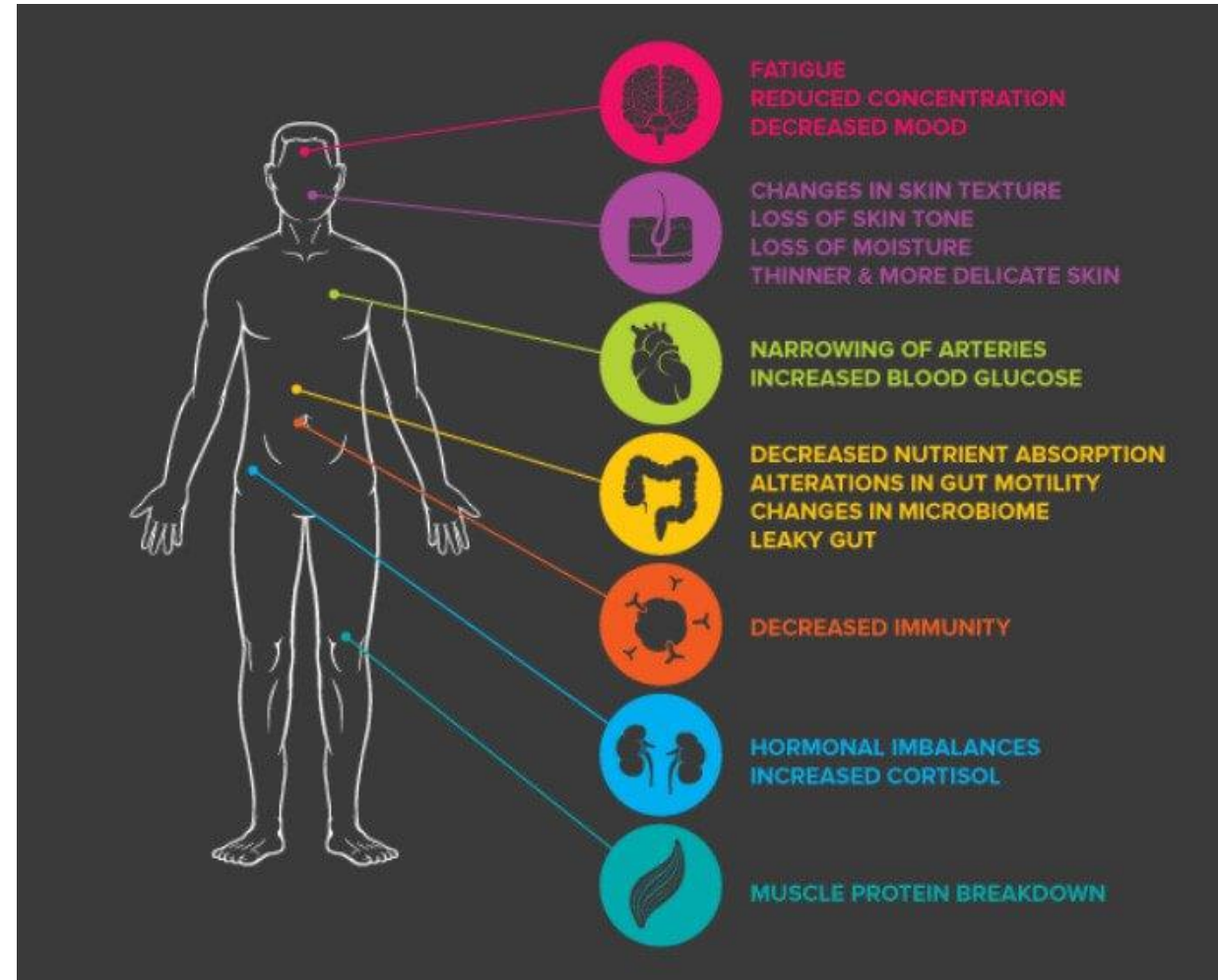
What Is Stress

- Hans Selye defined stress in 1936 as “the non-specific response of the body to any demand for change”.
- Holyroyd and Lazarus (1982): “psychological stress requires a judgment that environmental and/or internal demands exceed the individual’s resources for managing them”.
- A shift from homeostasis



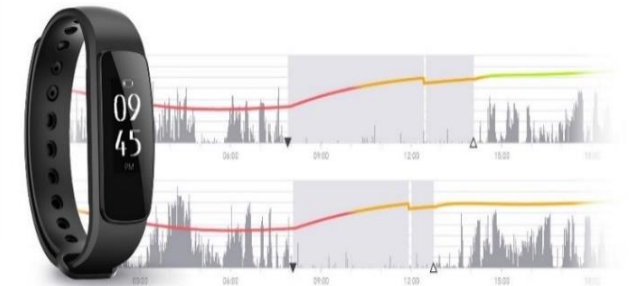
Why Measure Holistic Stresses

- Too much stress over time or at one time can lead to “something” breaking mentally or physically
- Enable a better learning environment
- Exposure to high level stressors in a controlled environment
- Identification of overreaching vs. overtraining
- Health Concerns



How to Monitor

- Omegawave
 - DC Potentials, HRV, CNS Readiness
- Zephyr Systems
 - GPS, Body Temp, GRF, HR
- Fatigue Science Readiband
- DARI
 - Movement screen, asymmetries
- Smartabase



How to Monitor (continued)

- Urine testing
- Body composition testing
- Tonnage/Vol/Intensity
- Rate of Perceived Exertion
- Surveys/Self-report
- Weather Reports
- Academic Reports
- Psychological Tests
 - Personality
 - Cognitive
- Tactical Skill Training
- Cadre Evaluations
- Peer Feedback
- Interviews



How to Induce Stress

Increase

- Physical load
- Psych/Social Stress
- Environmental conditions
- Academic demands
- New or unfamiliar tasks
- Sensory load

Decrease

- Food – amount or type
- Hydration
- Sleep
- Recovery time or methods
- Predictability and control
- Undulation of holistic stress in tactical training and HP

How to **Mitigate** stress

Decrease

- Physical load
- Psych/Social Stress
- Environmental conditions
- Academic demands
- New or unfamiliar tasks
- Sensory load

Increase

- Food – amount or type
- Hydration
- Sleep
- Recovery time or methods
- Predictability and control
- Undulation of holistic stress in tactical training and HP

How to Mitigate Stress within S&C

- Optimize progressive overload
 - Overreaching vs overtraining
 - Utilizing Tim Gabbert's Acute Chronic Workload ratio (1.3x)
 - RPE by data (HR, Tonnage, etc) vs self reported
- Hot/cold tanks, cryo, recovery sleeves, float tanks
- Yoga, mobility, breathing, meditation, mindfulness
- Brain Stimulation (non-invasive)



How to Mitigate Stress within S&C (continued)

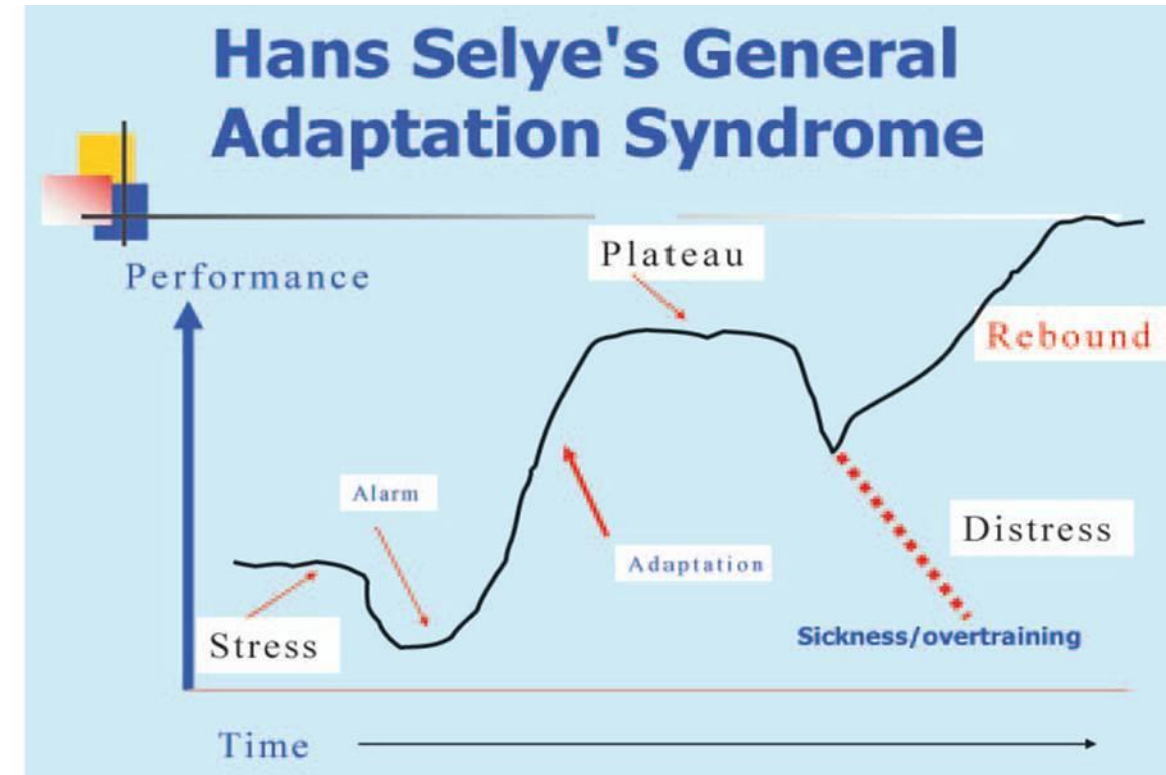
- Utilize data and Coach's experience
- Mental Toughness practice integrated into Physical Training (MT/PT)
 - Potentially gives students MT skill repetitions and awareness that skills can be used outside of S&C (in the field)
 - If MT skills are practiced and refined overtime => increased efficacy => improved resilience

Challenges

- Data noise and validity
- Over-reliance on or misuse of data
- Limits of technology
- Misapplication of stressors – what does right look like?
 - Trainee population
- Training time
- Personnel/lack of manning
- Change management
- Strategic focus

Potential Future Directions

- Holistically capture “stress” data from Tactical and Human Performance Training to methodically undulate stressors to build a more physically and mentally resilient and lethal Special Warfare Airman
- Continue to utilize HP and Cadre’s expertise supplemented with Research Flight findings to dial in physical and mental training



Questions?

Contact Info:

- Tyler Christiansen, Human Performance Director
 - Twitter [@tylerjohn515](#)
 - Work Email: tyler.christiansen.3@us.af.mil
 - Personal Email: tylerchristiansen@live.com