

# ***Headquarters U.S. Air Force***

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## ***Air Force Physical Fitness Standards and Gender Neutral Occupational Standards***



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**RFI 6**

# Components of Physical Fitness

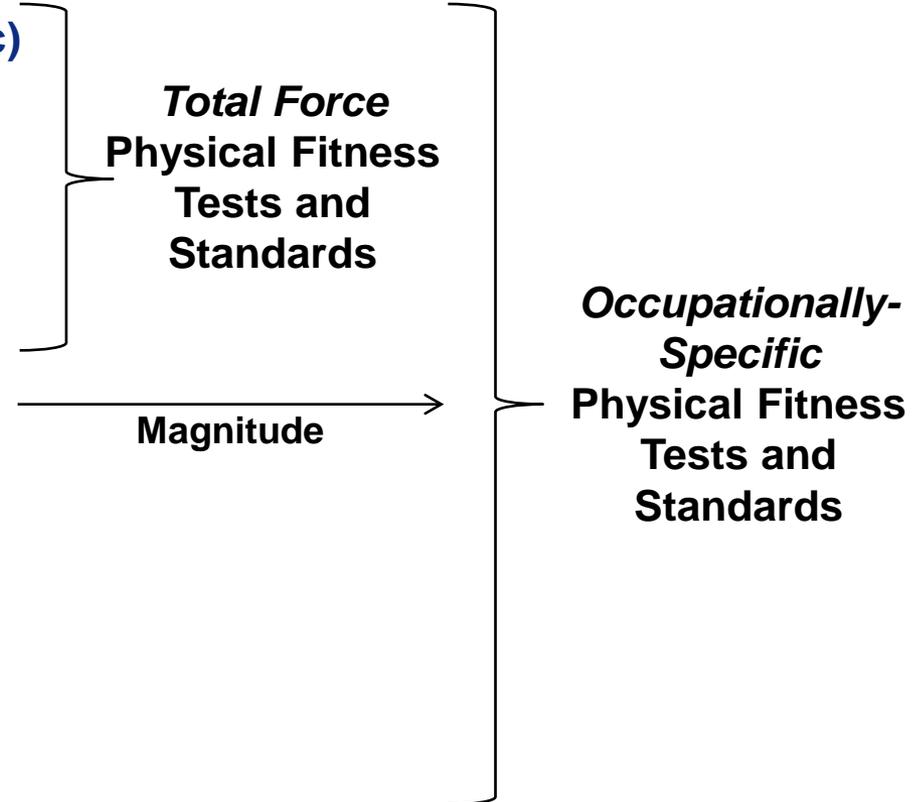
## ■ Health components of physical fitness (PF)

- 1 Cardiorespiratory Endurance (Aerobic)
- 2 Body Composition (BC)
- 3 Muscular Strength
- 4 Muscular Endurance
- 5 Flexibility / Mobility - Stability

(MF)

## ■ Skill components

- 1 Agility
- 2 Balance
- 3 Coordination
- 4 Power
- 5 Reaction time
- 6 Speed



**Comprehensive Physical Fitness = Health + Skill**



# ***AF Physical Fitness Standards and Gender Neutral Occupational Standards***

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- **AF PF Tests and Standards: for total force (current Fitness Assessment)**
  - **Evidence-based, criterion standards**
  - **Health and general fitness standard across Aerobic, BC, MF components**
    - **BC in Fitness Test, abdominal circumference measurement**
  - **Occupationally (AFSC) independent**
  - **Gender dependent**



***AF Fitness Assessment does not necessarily reflect military task achievement***

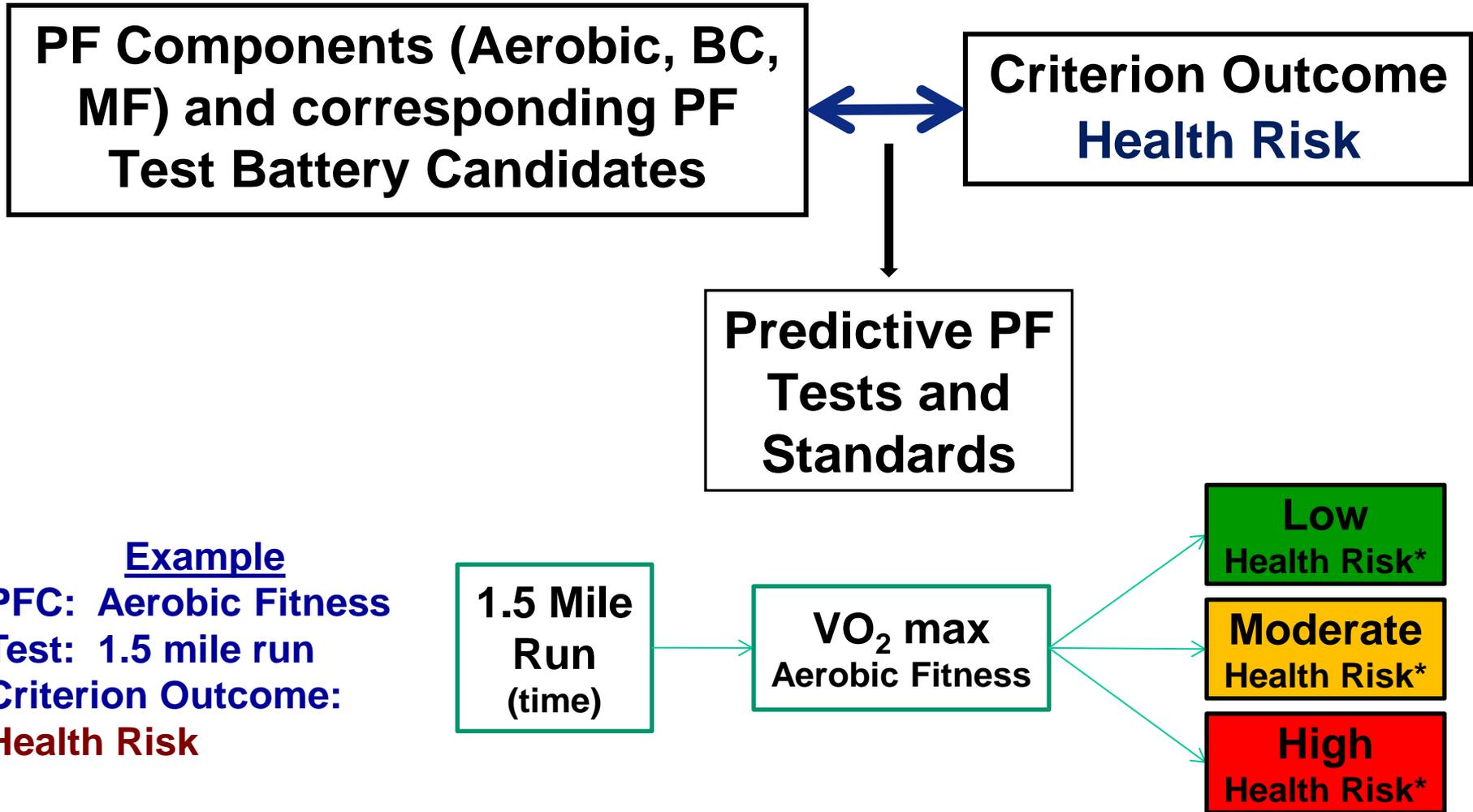
- **AF PF Tests and Standards: Occupationally-Specific/Operationally-Relevant**
  - **Evidence-based, criterion standards**
  - **Performance standard across all fitness components**
  - **Occupationally dependent (AFSC-specific)**
  - **Gender independent**





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# AF PF Tests and Standards Health Criterion Linkage



\*All cause mortality, cardiovascular diseases, diabetes, some cancers



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# *Methodology: development of occupational standards*

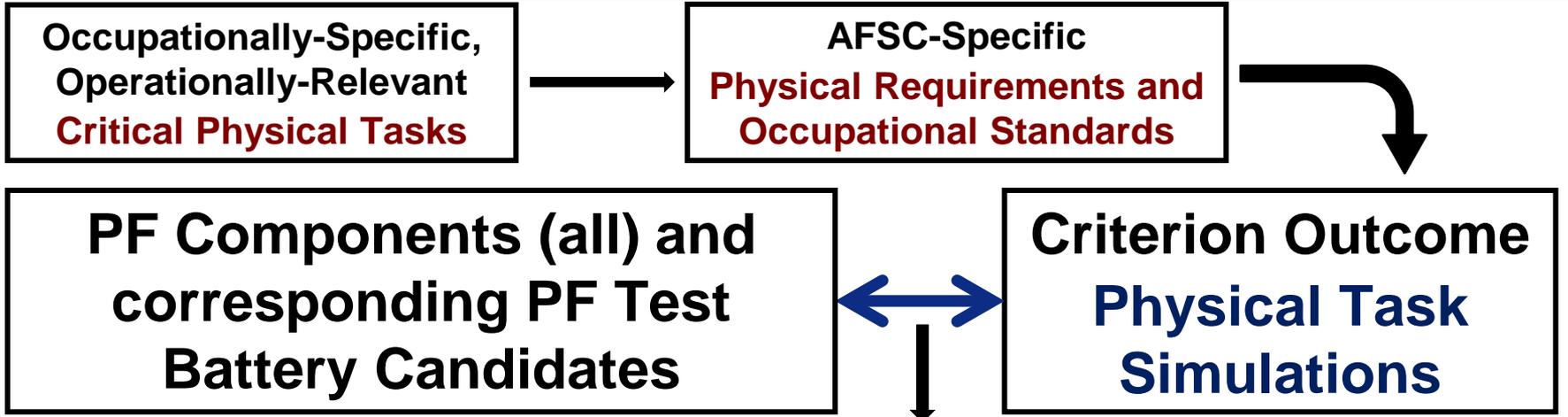
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- Validated AFSC Physical Requirements and Occupational Standards
  - Example: “Extract a 185 pound casualty and 65 pounds of equipment from a combat disabled vehicle to an operational vehicle while wearing combat load”
  - Based on AFSC’s **critical physical tasks (CPTs)**
- Methodology: Conduct physical demand analysis per “Bona Fide Occupational Requirements” process; develop AFSC-specific CPTs
  - Specifically, define and delineate duty tasks that are both physically demanding *and* critical to mission success
- Steps:
  - 1Pre - develop preliminary physical task lists (PPTs) from AFSC-specific source documentation
  - 1A - **Focus Groups** refine PPT lists to draft CPTs; objectively score task list
  - 1B - **Assessment/Survey** objectively score PT list, and provide data on non-physical performance dimensions
  - 1C - **Full Mission Profiles** observations; needs analyses
  - 1D - **Leadership Interviews** review final CPTs



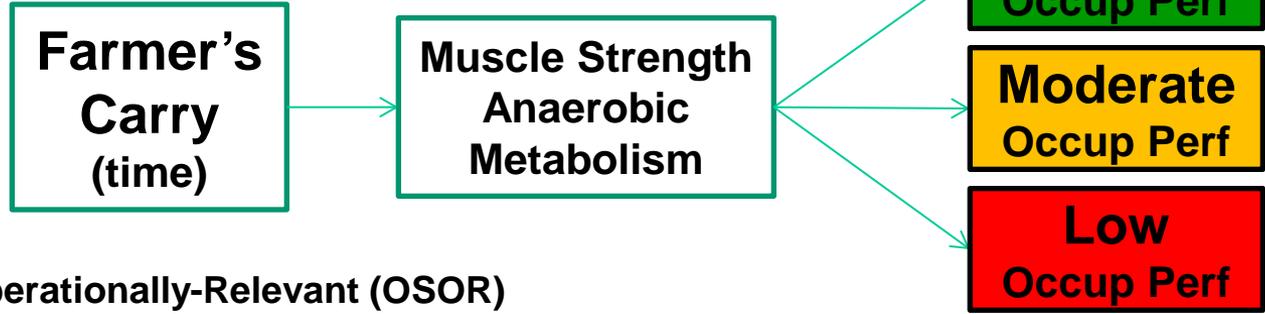
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# AF PF Tests and Standards Occupational Criterion Linkage



Predictive PF Tests and Standards

Example  
 PFC: Muscle Strength, Anaerobic Metabolism  
 Test: Farmer's Carry  
 Criterion Outcome: OSOR Performance\*



\*Occupationally-Specific, Operationally-Relevant (OSOR)

# Develop PTSs, Fit Tests; Test, Link

- Step 2A - identify valid and reliable PF tests per objective criteria
- Step 2B - develop and review PTSs per AFSC-specific CPTs
- Step 2C - conduct pilot work and main testing
- Step 2D - establish: Test-Performance Link and Minimal Effective Times

## PTS

### *Cross Load Personnel and Equipment*

- Cross load injured personnel, sensitive equipment (two rucks) and two weapons from damaged vehicle to operational vehicle
- Vest 30 lb
- Casualties 215 lb each (185 lb + 30 lb vest)



## Predictive PF Test

### *Farmer's Carry*

- PFCs: anaerobic metabolism, muscular strength
- Physical Descriptors: Velocity, Lift, Power, Isometric Contraction
- Run 100 yards while carrying two 50 lb sandbags





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# ***Developing OSOR PF Tests and Standards - Major Steps***

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- **Five major steps in developing, validating and establishing OSOR, science-based, criterion physical performance tests and standards**
  - **Step 1 - conduct job analysis, an AFSC-specific physical demand analysis to identify, describe and quantify physically demanding tasks/job requirements; Critical Physical Tasks [Occupational Standards]**
  - **Step 2 - develop tests to evaluate ability to perform physically demanding work; Test Battery (TB), Physical Task Simulations (PTSs)**
  - **Step 3 - define physical capacity to perform work; establish minimum test scores associated with successful job performance; validate and set physical tests and standards**
  - **Step 4 - implement test prototype, standardize test administration, verify tests and standards against ops performance, provide science-based exercise training principles and methods**
  - **Step 5 - public law adaptation period and study publications**

Constable S.H. and Palmer B., editors. The Process of Physical Fitness Standards Development. Human Systems Information Analysis Center State of the Art Report. Wright-Patterson Air Force Base, OH., 2000

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## ***Questions***



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