

**WHAT IS ANTHROPOMETRY?**

Anthropometry is the study of physical dimensions in people, including the measurement of human body characteristics such as size, breadth, girth, and distance.

**SURVEY OBJECTIVES**

MC-ANSUR will develop a comprehensive USMC anthropometric database that can be used to support statistically optimized design, sizing, and tariffing of USMC clothing and equipment; computer aided design of USMC workstations, workspaces, and vehicles; and 3D solid modeling of body curvatures and shapes for enhanced personnel protection. Natick Soldier RD&E Center is part of the Army's Research, Development and Engineering Command (RDECOM) and is located in Natick, Massachusetts.

**MARINE PAYOFFS**

- Enhanced safety and performance through better fitting infantry clothing and equipment (ICE) and workstations
- Reduced life cycle costs through enhanced efficiency of sizing systems and ergonomic design criteria
- Reduced risk of human factors failures in fast track acquisitions and innovative exploratory development



**U.S. MARINE CORPS  
ANTHROPOMETRIC  
SURVEY  
(MC-ANSUR)**

**US ARMY NATICK SOLDIER  
RESEARCH, DEVELOPMENT & ENGINEERING  
CENTER (NSRDEC)**

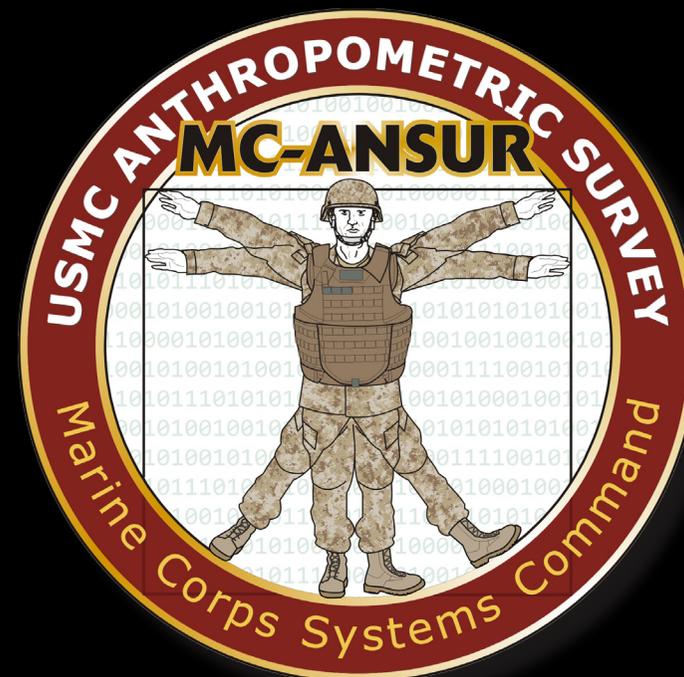
Joint Service Anthropometric Survey (JSAS)  
Program Office  
Attn: RDNS-WSH-J  
15 Kansas Street  
Natick, MA 01760

**ON THE WEB:**

[nsrdec.natick.army.mil/mc-ansur/](http://nsrdec.natick.army.mil/mc-ansur/)

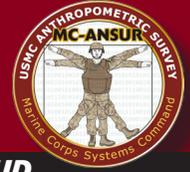
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# U.S. MARINE CORPS ANTHROPOMETRIC SURVEY (MC-ANSUR)



**THE FEW. THE PROUD.**

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## THE PROBLEM

- Current tariffs are inaccurate; the USMC has had to purchase extra infantry clothing and equipment (ICE) to accommodate deploying units.
- Sizing systems for different components of the same combat ensemble are incompatible.
- Anthropometric data used for designing ICE for Active Duty and Reserve Marines are no longer valid.



## THE CHALLENGE

- There are no statistically valid anthropometric data representative of the current USMC population for design and sizing of ICE.
- Current Army-USMC differences are so great that modeling Marines using updated Army anthropometry would be unwise.
- Currently no 3D data are available for USMC design and modeling applications.



## THE SOLUTION

- Conduct a multistage stratified anthropometric survey of Active Duty and Reserve Components.

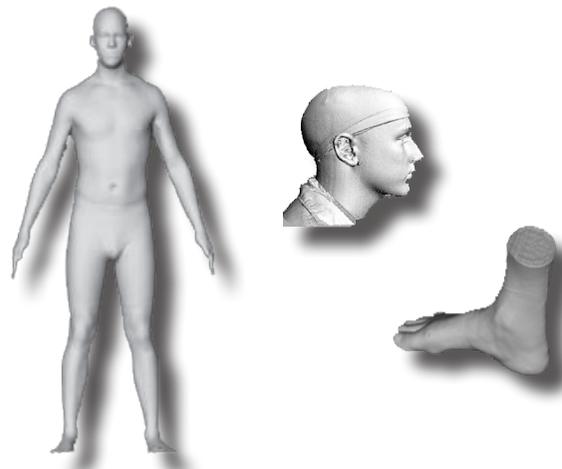
## SURVEY DATA

- Biographical data (e.g. age, sex, racial/ethnic group, rank, MOS)
- 95 standardized body measurements
- 3D whole body, head/face and foot scans



## QUALITY CONTROL

- NSRDEC field supervisor and USMC military liaisons on-site at all times
- One measuring team, two measurers per station
- On-site computerized data entry and real time outlier identification
- Inter-observer error checked daily, corrected as necessary



## MEASURING SITES

- Quantico, VA
- Camp Pendleton, CA
- Camp Lejeune, NC

## PRODUCTS

- Statistically valid, representative samples of male and female, Active Duty and male Reserve Marines; a total of approximately 3,600 will be measured
- Methods and Summary Statistics Report to be used for requirements development and clothing and equipment design guidance
- Electronic anthropometric databases with subject demographic data, 2D measurements, and 3D scans for each subject

