



Center for Military Readiness — Policy Analysis —

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Co-Ed Combat Tests Hazardous to Women's Health

Research Reveals High Costs of “Gender Diversity Metrics”

A few days before he retired as **Army** Chief of Staff, **General Raymond Odierno** announced that most field artillery positions would be open to women on a permanent basis. The general claimed that Army research and pilot programs, initiated to test ways to gender-integrate land combat units such as field infantry, were “*all going well.*”¹

It turns out, however, that in the Army's combat research “**Exception to Policy**” (ETP) experiments, female soldiers suffered twice as many injuries as men. Perhaps General Odierno didn't ask and no one told him about the un-equal, disproportionate damage done to women's health during tests involving more than 400 female volunteers since 2012.²

Last February the Michigan-based **Thomas More Law Center** assisted the **Center for Military Readiness (CMR)** in filing 40 **Freedom of Information Act (FOIA)** requests asking for information on how the Army research tests were going. Months later, Army Medical and Training Commands provided documents containing previously-undisclosed, show-stopping data. In military occupational specialties, (MOSs) such as field artillery, air defense artillery, and Bradley vehicle maintenance, female soldiers' injury rates averaged double those of men.

Two female officers have persevered in Army **Ranger** training, earning respect.³ But their experience should not allay concerns about disproportionate injuries among the majority of average-sized female soldiers, most of whom serve in enlisted ranks.

Before the Pentagon implements Obama Administration plans to order (not “allow”) female soldiers into combat arms units such as the **infantry**, **armor**, **cannon field artillery**, and **Special Operations Forces**, the Department of Defense and Congress need to seriously consider the consequences of physical inequality between men and women.

It is easy to take our military for granted – it is the best in the world. It will not stay that way, however, if officials combine severe budget cuts with misguided social experiments to achieve what former Joint Chief Chairman **Adm. Mike Mullen** called “*diversity as a strategic imperative.*”

What Members of Congress, and Military Women, Need to Know

Here are some examples of findings and logical conclusions that, until now, have been swept under the rug:

- The **U. S. Army Medical Command** compared male/female injury rates in formerly all-male units such as field and air defense artillery. Previously undisclosed data show

that female soldiers suffered injuries averaging *double* men's rates in specific MOSs. In the Field Artillery Surveyor Meteorological Crewmember MOS, for example, injuries for women were approximately **112%** higher than men's. In the Bradley fighting vehicle system maintainer MOS, the rate was **133%** higher. Details are in **Appendix A**.⁴

- Another document provided by the **U.S. Army Institute of Public Health** reports that in basic combat training, approximate average injury rates for women were **114%** higher than men's. In training for engineers and military police, they were **108%** higher. Details are in **Appendix B**.⁵

Defense Department laws and regulations governing physically dangerous experiments with humans require informed consent. A sample consent form provided to CMR described test requirements, but failed to provide information about disproportionate risks of injury and other health issues unique to women.⁶

Military women have a right to know about risks related to differences in physiology, which are not going to change. More than 30 years of studies in the United States⁷ have repeatedly confirmed what was stated in the most recent report from the **British Ministry of Defence**: *"In general, women have smaller hearts, about 30% less muscle, slighter skeletal structure and wider pelvic bones, resulting in less explosive power and upper body strength."*

Furthermore, *"There will be some women, among the physical elite, who will achieve the entry tests for GCC [ground close combat] roles. But these women will be more susceptible to acute short term injury than men: in the Army's current predominantly single-sex initial military training, women have a two-fold higher risk of musculoskeletal (MSK) injury."*⁸

Costly Assumptions and Mistakes

What will happen when large numbers of women are ordered into formerly all-male units, such as a tank battalion maintenance sections, but the assignments don't work out? According to documents CMR has obtained, reassignment and retraining would cost the Army **\$30,697** per soldier.⁹ Decisions to drop out would cost an additional **\$17,606** in basic training costs, not counting individual recruitment expenditures that are higher for women. Our shrinking Army will have to sacrifice more important things to cover these avoidable losses.

More importantly, personnel shortages could cost lives. Double risks of injury among women, combined with expected absences due to pregnancy and other gender-related issues, would be even more problematic in small combat units with 4 to 12 members, such as M1 tank crews, infantry rifle squads, or cannon artillery gun crews. The absence of female team members would compromise missions and put everyone's lives at greater risk.

Combat Realities Collide with "Amazon Warrior" Theories

Women have shown great courage in gender-integrated units that serve "in harm's way." **Female Engagement Teams (FETs)** and **Cultural Support Teams (CSTs)**, for example, have gathered intelligence while working with indigenous women and children in war zones.

These and other support units have been exposed to danger and incident-related combat, but their missions are not the same as **direct ground combat (DGC)** units such as the infantry, armor, and Special Operations Forces. In “tip of the spear” direct ground combat units, which seek out and destroy the enemy with deliberate offensive action, physical strength and endurance capabilities have to be extraordinarily high. Successful missions also depend on unit cohesion, which is properly defined as mutual trust for survival.¹⁰

Since female injuries averaged **100%** greater than men’s in recent tests, it is reasonable to expect that if women were assigned to direct ground combat units that deploy for months at a time, failure rates as well as injuries would rise even higher.

Marine Corps proxy tests done in 2013 revealed significantly higher failure rates for women performing tests simulating heavy lifting, long-distance load carriage, and other tasks common in direct ground combat MOSs. In a test simulating ordnance stowing, for example, “*Less than 1% of men, compared to 28.2% of women, could not complete the 155 mm artillery round lift-and-carry [95 lbs.] in the allotted time [2 min.].*” Furthermore, if trainees had to “*shoulder the round and/or carry multiple rounds, the 28.2% failure rate would increase.*”¹¹

Assignment policies cannot rely on a few “physical elites” who might join the Army - any more than the **82nd Airborne** division would rely on parachutes known to fail 28% of the time.

The December 2014 British report evaluating combat assignments for women expressed grave concern about higher risks of musculoskeletal (MSK) injuries: “*Roles that require individuals to carry weight for prolonged period are likely to be the most damaging.*” The report also notes that “*combat marksmanship degrades as a result of fatigue when the combat load increases in proportion to body weight and strength.*”¹²

Female injury rates double those of men would increase demands on the military medical system and the under-resourced **Veterans Administration (VA)**. Do we really need to increase the number of female disabled veterans in order to advance women’s rights in the military?

Pressures to Achieve “Success.”

Because the military follows orders, everything will be done to make gender integration work. Likely remedies and work-arounds to reduce female injuries, however, would make matters worse.

According to unofficial sources, in experimental ETP units since 2012, men have taken on heavy tasks that they know that women cannot do. Extending gender allowances into the combat arms would weaken morale, readiness, and mission effectiveness in time of war.

Despite constant promises that all standards will remain the same for men and women, such pledges cannot be sustained. This is because the administration and advocates of women in combat consider demographic “*gender diversity*” to be the paramount goal.

This mandate comes directly from the Pentagon-endorsed **Military Leadership Diversity Commission (MLDC)**, a largely-civilian committee that elevated “equal opportunity” above

military necessity. In a 2011 report, the MLDC recommended that gender diversity be advanced by dropping women's exemptions from direct ground combat. Instead of promoting individual merit and non-discrimination, the MLDC report recommended race and gender consciousness of demographic patterns. "Gender diversity metrics," another name for "quotas," would be enforced by accountability reviews and a Defense Department-level "Chief Diversity Officer" approving military promotions.¹³

The 1992 **Presidential Commission on the Assignment of Women in the Armed Forces** approved of gender-specific (normed) standards that are different for men and women, but only in basic, entry-level, and pre-commissioning training. Gender-normed standards must not be used to qualify for the combat arms.

Congressional mandates for "**gender-neutral occupational standards**" would not solve the problem, since "gender-neutrality" could be achieved by adjusting scores or dropping the most physically-demanding requirements. These changes would occur incrementally and without notice, with the result being training requirements that are equal but lower than before.¹⁴

Some military training programs already are redefining "equality" to mean *minimum* standards, even if higher-scoring men are displaced to achieve gender quotas. Extending such practices into the combat arms would deny men the tough training they need, and impose on women undeserved resentment for double standards no one wants.

TRADOC Focuses on Sociology, Theories, and Assumptions, not Facts

CMR will challenge denial of all relevant documents with litigation already in progress, but unredacted topic titles alone suggest that the drive for women in land combat is more about social science than it is about military readiness. The Army's sociological approach seems remote from combat realities and the purpose of the military: deterring or winning wars.

In 2013, officials announced that the Army would examine "*the institutional and cultural barriers related to integrating women into closed MOSs.*" The Pentagon-endorsed plan also focused on "*overcoming social and cultural barriers and preparing units for integration, to include educational materials . . .*"¹⁵

In response to CMR's FOIA request seeking more information about this social and cultural experiment, the Army sent an 8-page, heavily-redacted draft document titled "**U.S. Army Gender Integration Study Executive Report,**" produced by **Training & Doctrine Command (TRADOC)**, dated 5 May 2015.¹⁶

The truncated document and additional materials from the **Army G-1 (Personnel)** office appear to focus on attitudes, surveys, and unsupported assumptions that are contradicted by reality. Another TRADOC document obtained by CMR includes a list of these "Assumptions." One of them states, "*Sufficient quantities of female Soldiers will qualify for combat arms MOS and also desire to serve in the combat arms . . .*"

This unsupported belief, which current TRADOC Commander **General David Perkins** has since questioned,¹⁷ disregarded Defense Department youth surveys done after the January 2013 repeal of women's combat exemptions. The announced change in policy caused **12%** of male respondents and **20%** of females to say they would be less likely to join the military. In

addition, **19%** of male and **17%** of female parents and other influencers said they would be less likely to recommend military service.¹⁸

Social Science and National Defense

As described by its summary, the **Gender Integration Study (GIS)** is “*the product of a two-year investigation to identify . . . “institutional and cultural factors expected to impact the integration of women into previously closed units/specialties . . .”* Furthermore, the report “*incorporates the latest social science research*” into the “*culture of the Army.*”

The report’s Study Overview claims, “*First, TRADOC will develop, verify, and validate occupational physical requirements for all specialties.*” It adds, “*In support of gender integration planning, TRADOC is currently conducting this occupations review for the specialties previously closed to women: Combat Engineer, Cannon Artillery, Armor, and Infantry.*”

Given this stated mission, it is not reassuring to notice the document’s emphasis on sociological attitudes, feelings, and academic theories that deny gender differences. *Army Times* quoted **General Robert W. Cone**, then-TRADOC Commander, making a peculiar comment about the program’s assumptions and objectives: “*Because we are values-based . . . we can get over some obstacles that are oftentimes caused by a personal prejudice and bias and ulterior motives.*”¹⁹

The words “personal prejudice,” meaning pre-judgment, more accurately apply to officials who assume “ulterior motives” in any serviceman or woman who questions the wisdom of considering women and men interchangeable in the combat arms.

Concerns about the women-in-combat issue do not rise from prejudice, bias, or ulterior motives. If TRADOC leaders truly believe they do, this social experiment is headed for trouble.

Devil Is In the Details

CMR asked for information about official surveys of the troops that the Army has done since 2012, to include questions asked and answered. TRADOC responded with almost totally-redacted pages showing survey titles and general topics only. Failure to disclose troop survey results raises even more questions.

In February 2014, the Associated Press reported that in an official survey, **92.5%** of Army women said they did not want to be assigned to direct ground combat that are currently all-male.²⁰ We can only imagine what the male infantry combat veterans said on the same survey.

What else don’t we know about this social experiment? Documents CMR received indicate that the Army has prepared a **DOTMLPF-P Analysis**. The acronym stands for **Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities, and Policy** – wide-ranging issues that gender integration would dramatically affect.

Topics on the DOTMLPF-P list, which are not explained due to almost-total redactions, address only some of the major controversies likely to arise in coming years. A complete list should include cost estimates for a) Increased costs for recruiting and training, b) New separate-gender

facilities, c) Remedial training to purge attitudinal “barriers,” and d) Extra personnel to compensate for prolonged maternity leave and other lost time.

The list also should analyze: e) Additional social service/legal specialists to deal with sexual misconduct issues extended into the combat arms, f) Expanded medical care for active-duty injuries, and g) Increased medical costs for injured women and disabled female veterans.

By any measure, this is an expensive, unnecessary social experiment. Non-disclosure of the full consequences and costs prevents **Congress**, the media, and the general public from evaluating and criticizing policy changes that will affect every man and woman in the military.

Questionable decisions being made behind closed Pentagon doors, without congressional oversight, also will affect young civilian women who likely will become eligible for **Selective Service** obligations on an equal basis with men. ²¹

At a time when budget cuts are shrinking the Army to pre-**World War II** levels, Congress has a responsibility to hold long-overdue hearings before the administration’s misdirected priorities do great harm to military men and women alike.

CMR will challenge the Army’s refusal to provide information on these topics and more, but some observers believe that TRADOC will not produce substantive details for one simple reason: no one knows what the full costs of implementation will be and Congress doesn’t care enough to find out.

Time for a Reality Check

Female soldiers, whose courage is not in question, deserve more respect than this. In the **All-Volunteer Force**, everyone willingly accepts risks of injury or death. It is unfair and unseemly, however, for high-ranking generals to force female soldiers into military occupations beyond their physical strength, while withholding information about disproportionate health risks and injuries that could last a lifetime.

Policies that tolerate and invite extraordinary harm to women – especially at the hands of viciously misogynist enemies like ISIS – cannot be described as “pro-women.”

So why are men who run the Pentagon going along with this? Most advocates claim that land combat experience is necessary for career advancement. On the contrary, Defense Department data shows that for decades, women have been promoted at rates equal to or faster than men. ²² Generals Odierno and outgoing Joint Chiefs Chairman **Gen. Martin Dempsey** did not need Ranger tabs to advance the highest ranks in the Army.

In theory, gender integration is supposed to occur without lowering standards or combat effectiveness. That goal is on a collision course, however, with mandates to achieve “gender diversity metrics.” At risk are the best qualities of military culture: personal honor and courage, selfless commitment, honesty, integrity, and mutual trust for survival and mission accomplishment.

There is reason for grave concern about the future of the All-Volunteer Force, on which our national security depends. Sequestration budget cuts are taking essential resources away, while heavy burdens of social experimentation are being loaded on. Congress and the next President must intervene to reinforce the structure and culture of our military, before it is too late.

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1. Michelle Tan, *Army Times*, [Odierno: Army to Open Most Field Artillery Jobs to Women](#)” Aug. 3, 2015.
 2. **Army Training Requirements and Resource System, (ATRRS)** data on gender-specific [inputs and graduations](#), FY 2010 – 2015, in the following six units: **13M** - multiple launch rocket system (MLRS) high mobility artillery rocket system (HIMARS) crewmember; **13P** – MLRS operational fire director specialist; **13R** – Field artillery firefinder radar operator; **91A** – M1 Abrams Tank System Maintainer; **91M** – Bradley fighting vehicle system maintainer; and **91P** – Artillery mechanic. Documents were obtained via FOIA from **TRADOC G -6**, Fort Eustis, VA, email to **Erin Mersino, Esq.**, Thomas More Law Center, Jul. 30, 2015.
 3. Dan Lamothe, *Washington Post*, [History Made: Army Ranger School to Graduate Its First Female Students Ever](#)” Aug. 17, 2015. The selection process began in February when 113 female officers and enlisted attempted the two-week **Ranger Training Assessment Course (RTAC)** at **Fort Benning, GA**. Twenty qualified for the two-month Ranger course and eight needed to recycle (along with men) after the first phase. The Marine Corps also tested 29 women on the exceptionally tough 86-day **Infantry Officer Course (IOC)** at **Quantico, VA**, but none were able to succeed. More than 100 female enlisted Marines did pass the less-demanding **Infantry Training Battalion (ITB)** at **Camp Geiger, NC**. At **Parris Island, SC**, however, the Marines found it necessary to suspend a requirement that female enlisted boot camp trainees do at least three pull-ups because more than 55% of the women could not meet that male minimum.
 4. See tables in [Appendix A](#), which summarize data from the Army Institute of Public Health (USAPHC), [IET \(Individual Entry Training\) Injury Surveillance & Entry-Level AIT \(Advanced Individual Training\) at Forts Sill and Benning](#), FY 2010 – FY 2015, 12 May, 2015, obtained via FOIA from **Army Medical Command**, Fort Sam Houston, TX, July 30, 2015. Units surveyed included all of those listed in FN #1 above, plus **14S** – Air & missile defense crewmember; **14G** – Air defense battle management system operator; **14J** – Air defense C41 tactical operations center enhanced operator maintainer; **14E** – Patriot fire control enhanced operator/maintainer; **14T** – Patriot launching station enhanced operator/maintainer; and **14H** – Air defense enhanced early warning operator. Numbers used to calculate averages, which are approximate, can be viewed in Appendices posted with this article on [www.cmrlink.org](#)
 5. See tables in [Appendix B](#), which summarize data from the U.S. Army Institute of Public Health (USAPHC), [IET Injury & Fitness Surveillance](#), FY 2010 – FY 2013, **Injury Prevention Program**, 3 July 2014, obtained via FOIA from Army Medical Command, July 30, 2015.
 6. **U.S. Army Research Institute of Environmental Medicine (USARIEM)**, [“Consent to Participate in Research, Title: Development of Military Occupation-Specific Physical Employment Standards.”](#) Military Performance Division, USARIEM, Natick, MA 01760, sample copy obtained via FOIA, Jul. 30, 2013, 8 pages. Also see [Department of Defense Instruction 321602, Number 3216.02](#), Nov. 7, 2011, “Protection of Human Subjects and Adherence to Ethical Standards, in DoD-Sponsored Research,” p. 15.
 7. [Partial List of Studies and Reports Relevant to USMC Research on Women in Direct Ground Combat](#), published as Appendix B in Interim CMR Special Report, Oct. 2014.
 8. CMR Policy Analysis, [New British Report Shreds Case for Women in Ground Close Combat \(GCC\)](#) Feb. 2015, Section A, p. 3.
 9. [Resident Training Cost per Graduate](#), TRADOC-wide, Various School & Training Centers, Advanced Individual Training, obtained via FOIA from Army TRADOC, Jul. 30, 2015.
 10. Report of the Presidential Commission on the Assignment of Women in the Armed Forces, Nov 15. 1992, CF 2.5.1, p. C-8.

11. Interim CMR Special Report, [U.S. Marine Corps Research Findings: Where Is the Case for Co-Ed Ground Combat?](#) Oct. 2014, pp. 2-4.
12. CMR Policy Analysis, [New British Report Shreds Case for Women in Ground Close Combat \(GCC\)](#), *supra*.
13. Kristy N. Kamarck, Congressional Research Service, [Women in Combat: Issues for Congress](#), Jul. 14, 2015, pp. 10-11.
14. As stated by Joint Chiefs Chairman Gen. Martin Dempsey at a Pentagon briefing on January 24, 2013, “*If a standard is so high that a woman couldn’t make it, the burden is now on the service to come back and explain . . . why is it that high? Does it really have to be that high?*” To achieve “gender diversity metrics,” the answer will be *No*.
15. [Department of Defense Report to Congress](#), Jul. 2013, p. 5 and Appendix, p. 22.
16. [U.S. Army Gender Integration Study Executive Report](#), Draft 5 May 2015, obtained via FIOA from TRADOC, Office of the G-6, Fort Eustis, VA. CMR will appeal denial of the full document under exemption codes that have no relevance to the CMR FOIA request.
17. Laurent Barthelemy, Agence France Press, [Number of Women in U.S. Combat Roles Unlikely to Boom: Official](#), Jul. 1, 2015.
18. TRADOC Analysis Center briefing, 10 May 2012, and **Joint Advertising, Market Research, and Studies (JAMRS)**, “The Female Recruiting Market,” June 2014. Also, correspondence with Senior Market Research Scientist, JAMRS, Oct. 2014, on file with CMR.
19. *Army Times*, “Your Army,” Feb. 5, 2015. (One observer noted that the since the Army is a “can do” organization, officials always proclaim “success” and never admit mistakes.)
20. AP and *USA Today*: [Few Women Want Combat Jobs, Survey Says](#), Feb. 24, 2014.
21. In its 1981 *Rostker v. Goldberg* decision, the Supreme Court found that since women are exempt from ground combat positions, male-only Selective Service registration was constitutional. Litigation challenging this decision under new women-in-combat policies could succeed in overturning *Rostker*. Presidential Commission Finding #4.3, p. C-125.
22. [Report to Congress on the Review of Laws, Policies and Regulations Restricting the Service of Female Members in the U.S. Armed Forces](#), Feb. 2012, p. 4.



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