

Defense Advisory Committee on Women in the Services (DACOWITS)
8-9 December 2020: Public Comment Period

Thank you, ladies and gentlemen, for the opportunity to speak about a very important topic that is impacting our Service members, especially our female Service members. The topic is the current DOD Body Composition standards.

This topic has been of interest to DACOWITS in the past, having been featured in the 2019 Annual Report, but I'm hoping to provide additional context to help encourage change in the DOD. To help articulate these points, I will draw on data focused on the Marine Corps; however, similar data is likely to be found in the other Services.

First, it's important to point out that the current DOD body composition standard, codified in DODI 1308.3, is dated 2002 – nearly two decades ago, and well before the repeal of the Direct Ground Combat Definition and Assignment Rule which opened all jobs to women. But the current standard dates much further than that – to 1984 to be exact. The current DOD body composition standard is based on a 1984 study of Navy sailors. It's important to note that prior to 1976, women were involuntarily discharged from military service if they became pregnant, so this sample likely did not include any post-partum women, and if it did it would not have been an adequate sample to inform the results.

In 1984 the most intense military physical fitness standard for women at the time was the Marine Corps physical fitness test which included a 1.5 mile run, a flexed arm hang, and situps. A lot has changed in these nearly 40 years, and the Marines, and the other Services, now boast a uni-sex physical fitness standard. For Marines, this physical fitness standard now includes a 3 mile run, pull-ups, and crunches, along with a combat fitness test which is run in the second half of the year.

Physical expectations not only changed with our semi-annual physical fitness standard but also in our everyday execution of service as our gear increased in weight – from sappy plates to packs. In order just to keep up in a training environment, let alone a deployed environment, a woman needed to develop a stronger frame to carry a fighting load and help decrease injury.

Thanks to improvements in modern medicine, easier access to care, shifts in physical fitness styles, and advances in nutrition, it is very likely that the 1984 sample of sailors is anthropometrically different from today's Force.

The DOD Body Composition standard is comprised of two parts: a weight for height calculation and an estimation of body fat percentage.

The first part, the weight for height calculation, is a measurement of kilograms over meters, often called the Body Mass Index, or BMI. This standard was developed in the 1830s – nearly 200 years ago – by a Belgian astronomer using a Belgian sample. This sample was not diverse, nor reflective of today's Total Force. In fact, it's found to negatively impact people who have an athletic or muscular build – arguably the type of Service member we want – and negatively impact those not categorized as white, Caucasian. When this standard is applied to our athletic/muscular Service members, as well as our racially and ethnically diverse members, we find they are often categorized in the obese or morbidly obese category – that is when compared to the 1830 standard of Belgians.

The second part, the estimation of body fat percentage, is only used when a Service member fails to meet the weight for height standard, essentially serving as a "safety net" for Service members with a

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more muscular build. It is calculated by measuring men around the abdomen and the neck, but measuring women around the buttocks, the abdomen, and the neck.

The buttocks measurement is included as it is believed to hold the largest female deposit of fat – or so it did in 1984 when this measurement was developed. However, it must be noted the buttocks is a muscle group comprised of the largest muscle in the body, gluteus maximus, which makes up most of the muscle bulk in, and curve of, the butt. The butt measurement is identified by female Service members as the measurement which skews the tape test most since it is a muscle that they train, and thus gets larger as it gets stronger. Additionally, the butt measurement is not an indication of health, like an abdominal circumference infers, but rather an indication of body type. For this reason, the body fat estimation does not serve as a safety net for muscular women as it does for our male counterparts – especially as women train to compete for the same jobs.

In 2015, when the University of Pittsburgh conducted research alongside of the Marine Corps' Ground Combat Element Integrated Task Force, it measured body fat percentage in both the male and female Marine samples using the DOD measurement and a more technologically-advanced method known as the BodPod. Their research revealed that the DOD equation for estimating body fat, when compared to the BodPod, overpredicted body fat in 28% of the entire male sample, and 72% of the entire female sample. Let me restate this: the DOD equation for estimating body fat overpredicted fat in 72% of the female sample. On average, the DOD method overpredicted female Marine body fat percentage as 10-12% higher than the BodPod.

In one measurement that I personally conducted, a female Marine officer who earns very high first class physical fitness scores, and even competed twice on American Ninja Warrior, was measured above her allowable Marine Corps body fat despite being 20 lbs under her maximum allowable Marine Corps weight. It is important to note that most Services set their female weight for height nearly 10 lbs below the maximum allowable DOD weight. No data is available to support this reasoning.

If a tape test fails a female Service member when she is nearly 30 lbs below her allowable DOD weight, it cannot serve as a safety net for a Service member who is just 3 lbs over her max allowable weight.

Over the last 2 months I have briefed countless Marine leaders about this topic and I'm confident the Marine Corps will soon move forward with changes that will set the conditions for female Marines to be more successful.

But there are similar stories in each of the other Services, and this requires a holistic look from the Department of Defense.

Female Service members have long recognized the DOD tape test is wrong and does not provide the safety net it does to most male Service members, and thus they take extreme, often drastic, measures to make weight, at an expense to their health and the readiness of the Force.

In 2018, the Defense Health Agency released a study on eating disorders among Service members. The report reviewed military health records spanning from 2013-2017 and revealed that white, non-Hispanic female Service members had the largest rate of eating disorders in the DOD, but that these numbers were comparable to the civilian population. It must be noted; however, that an eating disorder diagnosis triggers a medical board, and likely medical separation, unlike in the civilian world, so the presumption of a much larger DOD issue of disordered eating is nearly guaranteed.

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Impacts to our Force readiness related to female Service member eating disorders include, but are not limited to: menstrual disturbance, low energy, low bone mass, increased stress fractures, infertility, early menopause, and disruption to mental health, such as anxiety and depression.

To put this in other words: female Service members are unknowingly doing irreversible damage to their bodies so as to avoid letting down the Service in which they serve, despite knowing the system was not built for their success.

Annual reviews of Service data by DACOWITS and the DOD will not reveal this information since women will do what they need to do to make weight, or self-select out of the military. Asking about how many failed a physical fitness test or how many are on a physical appearance improvement plan will never reveal what is really going on in our ranks.

Impacts on diversity and inclusion are even more alarming with Services levying adverse impacts on female Service members of non-Caucasian descents at rates of up to 5:1 when compared to the total population.

I must be clear that not every man or woman who raises their right hand and supports to defend the Constitution of the United States will remain fit enough to remain on active duty, but we cannot ignore that there exists a broken method of calculation that disproportionately impacts women, especially black and Hispanic women.

This issue has been admired – and subsequently brushed aside - for far too long. I am requesting DACOWITS' support with the following steps:

- 1) Request DOD immediately suspend the use of the current tape test for estimating body fat while it researches more effective measurement methods.
- 2) Request DOD immediately place the execution of the body composition program (weight for height and body fat percentage) under the responsibility of a competent medical team, vice at the unit level, so they can assist in screening for disordered eating, identifying Neuromusculoskeletal issues, and providing nutritional advice.
- 3) Request DOD develop a body composition program which reflects health and physical fitness performance vice arbitrary military appearance programs and antiquated physical standards.
- 4) Request DOD study the behavior of female Service members to meet height and weight standards, both before and after childbirth, and the long-term health consequences of these behaviors.

Ladies and gentlemen, there is little research that has been done on these topics, especially on female Service members – not just those who achieve elite physical fitness standards – but the everyday female Service member who helps ensure the defense of our Nation. This is an opportunity for the DOD to not only increase lethality by optimizing its talent, but also to lead internationally in providing groundbreaking research about female Service members.

Thank you for your time and attention to this matter – and for your tireless dedication to our Service members. I remain ready to answer any questions or assist in this initiative.

Semper Fidelis.