

University of Lynchburg

U.S. Military Type-1 Diabetic (T1D) Policies Violate Civil Liberties and Common Sense

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INTRODUCTION

In July of 2020, General Mark A. Milley of the U.S. Army and Chairman of the Joint Chiefs of Staff stated, “There is no place our armed forces for manifestations or symbols of racism, bias or discrimination” (Garamone) when questioned about the military role of the armed forces in the wake of the killing of George Floyd. However, what the Chairman failed to mention is that while the U.S. military does not discriminate on grounds of race, ethnicity, or race, it does discriminate on grounds of non-debilitating, yet legally defined “disabilities”. Specifically, for over 50 years the U.S. military has discriminated against those that have been diagnosed with diabetes mellitus on the grounds that it is a “disqualifying health condition” (“Can a Person”) to serving in the U.S. military.

These regulations were initially necessary and problematic because until fairly recently (e.g., the past 50 years), diabetes care was extremely new and unpredictable. However, current technologies such as the Insulin Pump, Continuous Glucose Monitor (CGM), and the Artificial Pancreas have made such regulations moot because of the increased ability to control diabetes in stressful situations, to include the physical as well as the often-sedentary rigors of the U.S. military. Despite this, the military refuses to enact this change when other militaries such as Finland and Israel have both accepted diabetics into the ranks of their military (Amir and Sane).

The overall influence of the following research paper is of critical importance to America due to our county’s pledged importance of civil liberties and human rights and the violations to these liberties that are currently occurring at the expense of millions of diabetic citizens. Many diabetics have the ability to perform just as well as their non-diabetic counterparts, and so should be allowed to serve our country in uniform if they choose and if they pass the qualifying athletic tests. In the meantime, the diabetic population of the U.S. is 11% (“By The Numbers”) and is

growing exponentially. “Experts are predicting that the current population of nearly 40 million diabetics will increase by 54% between 2020 and 2030” (“By The Numbers”). In addition, the military is currently under-strength; the Army fell short of its recruitment goal in 2022 by over 25% (I. Thomas). One potential, though admittedly partial solution to this shortfall includes recruiting from the diabetic population of the United States.

This paper will analyze the various intricacies of this issue concerning the discrimination of diabetics from the U.S. military by examining the following factors. First, it will analyze the different types of diabetes mellitus, associated symptoms, and how technology plays a role in mitigating these dangers to the point that it is safe as well as appropriate for diabetics to serve in the military if they so choose to volunteer. Second, this paper will summarize and analyze the legal basis for discrimination of diabetics by the U.S. military and why such discrimination it is inherently flawed and biased. Third, it will analyze other militaries around the world that accept diabetics into its ranks and how those diabetic soldiers have performed in those foreign militaries. Fourth, it will argue that the U.S. military should integrate diabetics into its ranks on a moral, civil liberties, legal, medical, economic, and demographic basis, and that this integration will not only benefit the diabetics of the U.S. who wish to serve their country, but also the military itself.

Background on Diabetes Mellitus

Before delving into why those afflicted with diabetes mellitus should be allowed to serve in the U.S. military, one must define what exactly is diabetes mellitus. Diabetes mellitus is an auto immune disease where the body can no longer produce insulin at its normal rate. There are two primary variations of diabetes mellitus that have different rates of insulin production: Type-1 and Type-2. Type-1 Diabetes (T1D), commonly called Juvenile Diabetes, is developed mostly in

children between the ages between 4 and 14 years old and it occurs when the pancreas completely stops insulin production in the body because the immune system thinks that the Beta Cells which produce the insulin are invaders that are trying to harm the body, and so our auto-immune system kills the Beta Cells even though they are not harmful (“What is Type-1 Diabetes”). The lack of insulin results in uncontrolled blood glucose (sugar) levels that need to be controlled using artificial insulin injected by syringes, pens, or an insulin pump, all of which provide insulin to the body manually. If blood glucose levels are not controlled using artificial insulin, then Hyperglycemia occurs, which is when there is too much sugar in the blood. This can be easily remedied with insulin injections. Short-term side effects of hyperglycemia include dizziness, while long term side-effects include decreased lifespan from negative effects on kidneys, nerves and heart (“What is Type-1 Diabetes”). Alternatively, the injection of too much insulin results in hypoglycemia, which is when glucose levels go too low. This is most easily remedied by drinking some juice or eating a piece of candy.

Type-2 Diabetes (T2D) is the more common of the two diabetes variations. Of the roughly 40 million diabetic Americans, 38 million have T2D while only 1.45 million have T1D (“By The Numbers”). This is because T2D is developed later in life, mostly in adults, due to a poor lifestyle such as obesity, alcoholism, smoking, or increased age (very old). All of these lead to the pancreas overworking itself and not able to produce as much insulin as needed to control glucose levels. T2D patients require diet adjustment, exercise, and in more extreme measures, the use of insulin-enhancement pills. In the most extreme cases, insulin injections are needed to control the glucose levels. Even though some T2Ds inject insulin, it is important to note that they still have a working pancreas that produces at least a tiny bit of insulin. However, their bodies

are so unhealthy that the pancreas cannot keep up with their lifestyle resulting in the need for that extra insulin (“Type-2 Diabetes”).

Out of the two types of diabetes mellitus, T1D is more dangerous because T1D’s require a steady supply of insulin to survive due to the pancreas in their body being useless. T2D’s can live without insulin as their pancreas is still producing insulin. They just won’t be as healthy as they would be if they had that extra dose of insulin. In extreme cases, a T2D will suffer amputations, loss of sight, and other side-effects.

T1D’s are also generally more fit than T2D’s primarily because T1D’s do not get diabetes out of their own choice, but instead are afflicted from a genetic propensity similar to some families having a history of breast cancer, etc. As a result, while T2D’s develop diabetes from their own actions (e.g., poor lifestyle or just old age), T1D’s are often incredible athletes or just very physically fit since exercise is the best way to naturally control blood sugar without insulin. This leads many T1D’s to pursue such athletics feats as joining the NFL, NBA, summiting Mt. Everest and competing in marathons and triathlons (see pages 13-14). Said differently, if T1Ds choose to be fit, and choose to closely monitor their glucose, they can aspire to whatever athletic objective as anybody else; no exceptions. It is this latter premise that serves as one of the primary reasons T1D’s should be integrated to serve in the U.S. military and is the primary proposal of this new policy outlined in the following pages.

LITERATURE REVIEW

Israel and the IDF Permit T1Ds to Serve

Several research studies conducted by experts highlight how T1D’s are capable of sustaining themselves in a military environment and both the physical and mental demands of that lifestyle. Amir (1994) and Carter (2005) both agree that diabetes is not a disqualifying factor

in carrying out military service. Amir's study was conducted under the auspices of the Israel Defense Force (IDF) which is the army of the Israel state. The IDF is among the very few militaries in the world which allows T1D's into its ranks and as such has a unique position to study how effective diabetic recruits are in a military environment.

One study performed by took place between 1978 and 1986 (Amir) where of the 145 T1D patients under the hospitals care, 77 (45 men, 32 women) chose to volunteer for service in the Israeli army and 60 responded to a questionnaire asking about their service conditions upon completion; these young individuals compromised group A of the study. Of the 68 patients who did not volunteer for service (20 men, 48 women), 44 patients comprised Group B (10 men, 34 women). Group A and Group B were compared in regard to their diabetes history and diabetes management and control during two periods, 17-18 years, and 18-20 years. Group A was also evaluated regarding military employment, working and accommodation conditions and diabetes management during army service. Group A subjects came from a higher socioeconomic level ($p < 0.009$) and had a significantly higher educational level ($p < 0.008$). The men in Group A achieved significantly better diabetes control, as evaluated by HbA1, in both periods compared to all the others in both groups. This was most likely due to their privileged socioeconomic background allowing them to grow up knowing how to manage their diabetes (Amir). This was only reinforced when patients Group A underwent fewer hospitalizations than the others and only two of them developed complications, whereas among those in Group B, five patients developed complications. Overall, the Amir (1994) study demonstrated that recruits with Type 1 diabetes can maintain satisfactory diabetes management and control and can function not only adequately, but often far beyond, in the stressful situations with which they are confronted within the rigid authoritative system of military service. The data also indicated an extraneous discovery

in that diabetic patients wishing to volunteer for such service constitute a selected group with a higher socioeconomic background and a higher motivation to prove themselves.

Carter (2005) came to a similar conclusion about T1D's serving in a military capacity. However, Carter's study was conducted through the lenses of fighter pilots in the Israel Air Force who had been diagnosed with T1D while in service. Carter argues that the main concern of most air forces in T1D is hypoglycemia, which could impair flight effectivity in mid-flight which is why most air forces ban T1D's. The five pilots within this study had each been diagnosed in the last 15 years and each of their hba1c levels were tested every three months. The results found that 4 of the pilots could perform their duties adequately with only 1 being disqualified, none experienced hypoglycemia or incapacitation. These two studies conclude that although T1D is a medical condition, it does not impair the physical or mental capabilities of soldier and pilots in the IDF and Israel Air Force and that T1D military personnel can perform their duties adequately and even exceed their non-diabetic counterparts.

U.S. Army Permits T1Ds to Remain Serving

Choi (2018) studied a group of 50 U.S. Army soldiers diagnosed with T1D after they had already joined the service and were serving in the Army. Each of the soldiers were equipped with advanced technologies such as an insulin pump and CGM upon diagnosis. The average age of soldiers was 29, and of the 50 soldiers who were diagnosed, 18 desired to stay on active duty and passed the Army's physical requirements to receive a medical waiver (Choi 856). In addition, five soldiers had deployments while one soldier was denied deployment because of the stated lack of access to refrigerator to store Insulin. Extreme environments with temperatures >90 did not preclude deployment. All soldiers completed their tours with no incidences of hypoglycemia except one who had an incidence in a non-deployed setting when on leave. Table 1 below

displays some of the medical symptoms that these soldiers experienced as T1D's while serving on active duty in the Army and shows how the majority were cleared for deployment despite their T1D (Choi 855).

Table 1. Guidance on Deployment of Soldiers With Diabetes.

Factor	OK to deploy	Should not be deployed
HbA1c (for patient)	At target	Not at target
Monofilament discrimination	Present	Absent
Autonomic neuropathy	Absent	Present
Knowledge of sick day rules	Sufficient	Insufficient
Proliferative diabetic retinopathy	Absent	Present
Macular edema	Absent	Present
Severe hypoglycemia (an episode requiring another person's assistance)	Infrequent	Frequent
History of diabetic ketoacidosis in previous 6 months	No	Yes
Self-management skills	Good	Poor
Hypoglycemia unawareness	Absent	Present
Parameters of permanent profile can be followed	Yes	No
Significant comorbidities (for example, congestive heart failure, chronic kidney disease, significant coronary artery disease, poorly controlled hypertension) requiring intensive management	Absent	Present
Risk of hypoglycemia is high if meals are missed or delayed	No	Yes
Duty will place the soldier in an OCONUS-isolated area where appropriate medical care and means to monitor and support him/her are not available	No	Yes

Source: Army Regulation 40-501, Table 5-I. OCONUS, outside continental United States.

Table 1: Medical Symptoms Monitored by Choi for T1Ds Serving on Active Duty (Choi)

Drug Companies' Misinformation on Shelf Life

Recent research has shown that pharmaceutical companies' suggestions and mandates to use insulin within 28 days after removal from refrigeration to be either massively conservative (e.g., wrong) or perhaps bordering on criminal since such practices certainly result in the price of

insulin remaining very high (Campbell). Specifically, recent research has shown that insulin is good for at least 60 days, and perhaps for as long as 120+ days. (Campbell). As a result of this fallacy being well known to the diabetic community, it is inevitable that this fallacy being promoted by the drug companies will someday be formally repealed. In the meantime, it is important to keep these facts in perspective since one of the primary arguments posed by the military justifying their ongoing prejudice against T1D service members is their stated inability to provide adequate refrigeration. Properly stated, this requirement should not be based on identifying refrigeration within a four-month period while ensuring the insulin does not get hotter than 90 degrees. Of course, this is easily accomplished, which is why other countries such as Israel have discarded these false notions and arguments discriminating against T1D service members (Amir and Carter).

U.S. Regulations and Laws Precluding T1D Military Service

There are a number of law and regulations that protect diabetic discrimination from government employers, but the military is exempt. Specifically, the Rehabilitation Act of 1973 was signed into law by President Nixon so as to prevent any discrimination by federal agencies on the basis of discrimination including the Department of Defense (DoD). However, the Rehabilitation Act states, “It is the policy of the Government of the United States to provide equal opportunity in employment for all persons, to prohibit discrimination in employment because of race, color, religion, sex, national origin, age or handicap” (V. Thomas 2). Furthermore, Section 29 of the Code of Federal Regulations (C.F.R.) 1614.103(b)(1) (2008)) states that this policy also applies “military departments”, but it does not apply to “uniformed members of the military departments”. Specifically, Section 29 C.F.R. 1614.103(d)(1) (2008)) states that this policy precluding discrimination applies to “only civilians” (V. Thomas 2).

The exemption of the military from the Rehabilitation Act is articulated in case law when interpreting the statutory language in which the various courts on the federal and military level ruled that all physical requirements within the uniformed services are allowed to discriminate on the basis of disability due to the nature of those positions within the U.S. military and that these physical requirements override the legal requirements outlined within the Rehabilitation Act.

In particular, the Supreme Court case *Chappell v. Wallace* ruled “The special status of the military has required, the Constitution has contemplated, Congress has created, and this court has long recognized two systems of justice... one for civilians and one for military personnel” (V. Thomas 6) (462 U.S. 296, 303-04 (1983)). In addition, according to DoD Directive 1350.2 (4.2) (August 18, 1995) while the armed forces states that any discrimination based on sex, race, color, religion, or national origin “shall not be condoned” (V. Thomas 7), disabilities are not considered or factored into this anti-discriminatory policy. As a result of these court cases, an overall blanket ban on “...those with a current diagnosis or verified past medical history of diabetes mellitus is among the medical conditions listed as disqualifying” (V. Thomas 10) (DoD Instruction 6130.4 (E1.23.2) (January 18, 2005)).

However, despite this blanket ban, and as mentioned before in the previous study at Fort Bragg, the military regulations do not discriminate against those diagnosed with T1D while in service (V. Thomas 12) and as such each branch of the armed forces has different regulations when this occurs.

U.S. Army Diabetes Regulations

Under the Army regulations, a “current [diagnosis] or history of diabetes mellitus is disqualifying” (V. Thomas 12) for enlistment, appointment, or induction, although individuals may request a waiver of the medical fitness standards. However, Army regulation 40-501 states

“the Secretary of the Army” has “authority to grant a waiver of the standards in individual cases for applicable reasons” (V. Thomas 12). However, these waivers can only be granted if the applicant meets the requirements of retention when the Army when diagnosed with Diabetes mellitus while in the Army. These retention requirements of diabetic servicemembers being “Servicemembers with diabetes mellitus will be referred to an MEB “unless hemoglobin A1c can be maintained at < (less than) 7% using only lifestyle modifications (diet, exercise).” Army Regulation 40-501, “Standards of Medical Fitness,” 3-11(d) (January 14, 2008)” (V. Thomas 13). In other words, any diabetic that is not Insulin dependent (Type-2 diabetics and pre-diabetics) can gain a waiver from the Secretary of the Army if they can meet requirements of retention in the army can enlist even when having diabetes prior to enlistment with limited deployment options. Unfortunately, this still means that no matter what, T1D’s will always be disqualified from initially joining the U.S. Army because, by definition of “Type-1 Diabetic”, they need Insulin to control their diabetes (V. Thomas 14).

U.S. Air Force Diabetes Regulations

The U.S. Air Force has a variety of medical standards both appointment and retention. U.S. Air Force regulations stipulate that “current or history of diabetes mellitus... is disqualifying” (V. Thomas 17) (Air Force Instruction 48-123, Volume 2). For retention in the air force after diabetes diagnosis, U.S. Air Force regulation outlines that a MEB waiver is needed for retention in the service. However, what is interesting about the air force regulations is that even if a member with diabetes is found unfit for deployment, they can still remain on active duty: “Unless noted in... Officer Classification or... Enlisted Classification, the ability to deploy is NOT a requirement to hold an AFSC [Air Force Specialty Code, i.e., Military Occupational Specialty] or serve in any component of the USAF [United States Air Force]. Unless expressly

stated in these instructions, medical disqualification from an AFSC may not be based on a member's ability or inability to deploy" (V. Thomas 19).

Navy, Marines and Coast Guard Diabetes Regulations

No research or documentation could be found on the specific regulations for these services other than their websites stating that diabetes was "...a disqualifying condition" (V. Thomas 11). In addition, no research articles about diabetics being retained after diagnosis while in service were found so it can be assumed that these services have the same regulations as the army and air force meaning if a MEB finds the servicemen medically qualified to stay in service with diabetes then a waiver will be given (V. Thomas 11). This is anecdotally proven correct as there are several instances on Facebook and other social media where T1Ds continue to serve in the Navy despite their T1D diagnosis.

DISCUSSION

Jim Crow, LGTBQ, and Women Suffrage Analogies

The overall purview of all U.S. military regulations concerning diabetes is on a departmental basis: "Secretaries of the various military departments are directed to each apply the DoD Medical Standards, resulting in separate, but similar standards for each military department" (V. Thomas 10), per DoD Instruction 6130.4 (4.3) (January 18, 2008). It is for this reason that the Army seems to be more relaxed in terms of diabetics' enlistment by allowing diabetics to enlist if they gain a waiver than the Air Force or most likely the Navy, Marine Corps and Coast Guard.

These regulations are both inappropriate and unfair to the T1D minority group who have a right to serve their country just as much as any non-diabetic. The U.S. military, and the U.S., have a deep history of discrimination such as the Jim Crow era and the U.S. militaries earlier

“don’t ask, don’t tell” policy against LGBTQ+ individuals (“Repeal of Don’t Ask Don’t Tell”). These policies survived for decades because the established status-quo leadership and our culture refused to review the discriminatory narratives stating that “gay men could not serve in the military because they would make other members uncomfortable” or that “women could not vote because they could not think for themselves”. The problem with these lines of logic is that there was no basis of fact in these narratives: just pure conjecture, and general thinking of the population at the time without any scientific or factual basis. It is the same case with T1D discrimination in the U.S. military where no one is currently questioning the facts upon which T1Ds are disqualified from joining. Although T1Ds can selectively be allowed to remain on active duty if diagnosed while already serving, the current universal ban on T1D’s joining the U.S. military is completely unfounded, unfair, discriminatory, and illogical and as a result should be lifted immediately for the reasons outlined in the following sections.

Technology Advances

First, medical technology used to control diabetes has made tremendous advances in the past 20 years. Prior to the invention of the Continuous Glucose Monitor (CGM), it was nearly impossible to do anything physically rigorous with T1D as whenever the T1D had a high blood sugar or a low blood sugar, they had to get out a Glucose monitor and test strips to measure the glucose level manually (Didyuk 676). This required one to stop whatever exercise was occurring such as running or swimming and taking a break, to do this. However, the invention of the CGM has eliminated this impediment in the physical ability of T1D’s as a CGM allows a T1D to check their glucose levels by just looking at their phone which transmits a Bluetooth signal from a medical transmitter attached to the T1D’s body that continuously monitors glucose levels for a period of two weeks before replacing the transmitter (Didyuk 677). As a result, if a T1D is

running, or swimming or, if in the military, is doing some drill or duty, it only takes mere seconds for them to know what their glucose level is and can then take care of themselves (by ingesting a piece of candy) and get back to whatever physical activity they were doing. Note that there are rarely, if ever situations where extra insulin injections are required during exercise. This is counter intuitive. Nonetheless, if required, an insulin injection requires about 15 seconds, which is not much different than somebody wear glasses dropping their glasses, and then stooping down to pick them up.

As with the CGM, insulin injections were previously difficult to do when there was physical activity and high stress environments because close attention was needed when drawing the Insulin out of a vial. However, the development of Insulin Pens as well as the Insulin pump and the Hybrid Closed Loop has now made this issue moot. The Insulin Pump allows one to merely dial the correct amount of Insulin on one's pump device should there be need to take Insulin. Insulin Pens are extremely portable and allow quick and accurate injection within a minute or less (Didyuk 678).

In 2018, the Hybrid Closed Loop System was released which establishes a communication system between the CGM and the Insulin Pump creating an artificial pancreas that requires no monitoring (Didyuk 676). For example, if the glucose level is high, then the pump will be told to give Insulin, while if it is low, it will be told to limit Insulin injections. As a result, glucose levels when the T1D uses the Hybrid Closed Loop system is almost always an A1C (average glucose levels) of less than 5.0 which is the same as non-diabetics (Didyuk 677).

Examples of T1D Athletic Performance

These medical advances have made it possible for T1D's to do extraordinary things. For example, the alpine climber Chris Wills, who was diagnosed with T1D at age six in the 1970's,

is the first T1D to summit Mt. Everest in 2006 as well as the other six highest peaks on all seven continents (Liebermann). He was also the first T1D to reach the north and south poles (Liebermann). In addition, numerous T1D's are currently in the NFL: Mark Andrews, Blake Ferguson and Chad Muma (Petra) and the NBA: Adam Morrison and Chris Dudley (Petra), and the Olympics with Chris Jarvis being a 2004 Olympic rower and high intensity endurance races (Toomey). In fact, a 27-year-old T1D completed a double Iron Man 30-hour endurance race with no significant instances of hypoglycemia or hyperglycemia (Vlahek 306).

Overall, these medical advances and the many examples of T1D athletic prowess prove that today is a grossly different era from when the Medical Rehabilitation Act was passed. T1D's now have medical technology that allows them to accomplish such feats that even regular military personnel would find difficult to achieve such as competing in an Ironman, summiting Everest, playing Offensive Lineman in the NFL, or jamming a basketball in the NBA. To be frank, this dialogue becomes increasingly absurd and the discrimination more upsetting the longer we study the situation. If T1D's can achieve those incredible physical and high intensity feats, then why can't they serve their country in the U.S. military when so many military positions are sedentary while 99% of the remainder require general (and not superhuman) fitness?

T1Ds are Serving in Other Militaries and Performing Well

Second, it would be a different scenario if this policy on T1D integration into the U.S. military was novel, but this is not the case. There have already been proven cases of success in T1D's serving in the military; both at home and abroad. The Israeli military currently allows T1D's to join its ranks, and there have been numerous studies analyzing the effects of T1D on those soldiers such as the previous studies mentioned (Amir).

To reiterate, the first study (Amir, 1994) titled “the Young Diabetic Subjects in the Israel Army”, observed 77 T1D’s in the IDF and found that all patients were able to maintain control of their glucose levels during service and could perform their duties as soldiers to the full. Even our own military which allows T1D’s who are diagnosed while in service to continue serving has discovered that they can maintain stable glucose levels even in service and duty such as the study conducted by Sammy Choi in 2005 at Fort Bragg in which 50 US Army soldiers were diagnosed with T1D and all continued serving with 5 even being deployed to extreme environments of >90 degrees Fahrenheit.

Last, the Finnish military, which, just like Israel, also accepts T1D’s into the military, conducted a study in which 47 young male volunteer conscripts receiving insulin therapy was carried out at the Signal Regiment in Riihimäki from January 2001 to July 2005 in which 1/3 of those conscripts’ found difficulties in military training with Insulin injections and glucose testing (Sane 88). While five events of severe hypoglycemia and one ketoacidosis event occurred during this study, we must keep in mind this was prior to the invention of the Insulin pump or CGM. This is analogous to discussing marksmanship between a Navy SEAL and his sniper rifle... and a Minuteman from Boston using a musket. The change in technology has been that dramatic. Additionally, we must keep in mind that Finland has one of the most rigorous physical training regimens for militaries in the world, and despite this, only six out of 47 recruits had these severe cases of hypo and hyperglycemia. The study also found that “46 per cent of conscripts with diabetes were chosen for leadership training compared to 20 per cent of all conscripts” (Sane 89). The study concluded that T1D is not a discriminatory factor from the Finnish military and that T1D’s can be just as capable if not more capable than non-diabetic soldiers if highly motivated to monitor their diabetes closely while in service (Sane 89).

These studies prove that this issue of T1D's serving in the military is not an issue of the T1D's, because it is clear that T1D's can sustain the physical and mental rigors of both training and deployment in both the U.S. military (Choi) and foreign militaries (Amir, Carter and Sane), but is instead an issue of the U.S. military refusing to change a policy that while may have been the right choice to be enacted 50 years ago (or even ten years ago), is no longer needed, and is now just senseless and biased discrimination on the basis of disability.

Does the U.S. Stand for Civil Liberties . . . or for Discrimination?

Third, one of our country's most famous founding fathers envisioned the U.S. to be a "Shining City on the Hill" (Jefferson) for the world to follow where our foundational principles of democracy, freedom and acceptance of all races, ethnicities and disabilities was something that other countries could emulate. However, on the issue of T1D's being allowed to serve their country in the military, the U.S. is falling behind Israel and Finland which allow T1D's to serve. On top of this, the reasoning behind this disqualification, as mentioned before, is completely irrelevant and baseless from both a medical, policy, legal and moral perspective for the reasons mentioned above. It is time for the U.S. to renew its commitment to its founding principles, and like we did with the Civil Rights Act and the repeal of "Don't ask Don't Tell", remove these laws/regulations that are no longer based in scientific fact, but instead upon archaic and biased discriminatory policies. We need to be the Shining City on the Hill for so that other countries following our current discriminatory and archaic policies can follow our example.

Mitigate U.S. Military Recruiting Shortfalls

Fourth, the U.S. military is currently going through the worst recruiting crisis since 1973 due to, in large part, because of 1) the unpopularity of the conflicts in the Middle East leading to a lack of interest in serving 2) the rise in obesity rates and other health issues in the United States

leading to an inability for recruits to pass the physical requirements for the U.S. military. There have been numerous suggested solutions to this problem with one naval officer in an article published by the U.S. Naval Institute proposing that, “The Navy should reclassify occupations based on the actual requirements of the job to enable recruiting the appropriate people to fill those positions; specifically, an unnecessary focus on physical fitness for jobs that do not require someone to do more than sit at a desk” (Schweers). The author’s overall main point is that each specific role in the military should have specific physical/medical requirements befitting of that role. For example, a desk job would essentially have no physical requirements while a Navy SEAL would have extreme physical/medical requirements. While this approach does have its merits, such as an increase in recruits and more inclusion, it will also result in many military personnel who are obese and would not be able to operate in case of an emergency with lives on the line. It should also be worth noting that obesity and a poor lifestyle are the primary drivers of Type-2 Diabetes, a worldwide phenomenon that is easily classified as a pandemic. Hence, one way or another, we will eventually need to deal with the question of “do we discriminate against insulin dependent diabetics from joining the U.S. Military”?

What do Naysayers Say about T1Ds Joining the U.S. Military?

This proposal will definitely face many challenges and detractors who believe that T1D’s, even after all the previous points made, should still be disqualified from serving in the U.S. military. These people may claim T1D’s would be a liability to other servicemen as even though T1D’s as individuals might be able to serve, they might still endanger the other servicemember that are fighting alongside them either in battle or just in daily activities. Sammy Choi, who conducted the U.S. Army study at fort Bragg analyzing soldiers’ performance who were diagnosed with T1D concluded: “Our experience at Fort Bragg, North Carolina...describes

our attempts at optimization of soldier performance and unit readiness when a highly motivated team of soldier, medical staff, and unit support is available. Individualization is key... Each soldier and their military occupational specialty, location of unit, training mission, and deployment must be carefully considered. (It is) overall in the best interest of the unit particularly during deployment to utilize a soldier with type 1 diabetes” (Choi 858).

To further answer this question, we need to look at Mark Thompson, a T1D who was diagnosed while serving in the U.S. Army at the outbreak of the Iraq War in 2004 (Brown). After diagnosis, he was allowed to stay in the Army and graduated at the top of his class in the physical fitness test and on top of this was cleared for a one-year tour of combat duty in Iraq. During his tour, he served in combat with the only incident being that his insulin pump stopped working forcing him to use insulin shots (Brown). While this may be alarming, he still had Insulin, and since then, technology has progressed to a far greater degree with the artificial pancreas and CGM both of which were not invented prior to Thompson’s tour. On top of this, even though his pump broke, he still nonetheless had access to insulin and performed his duties just as well as his non-diabetic comrades proving that T1D’s are not a liability in combat.

Some people may claim that T1Ds, themselves, are not fit for service because of their medical condition, and that serving their country is too hard. This has already been covered, but even if this claim was true and that T1Ds did, in fact, face a tougher challenge in the military than others, it is still a T1D’s right to serve their country no matter how safe or dangerous it is. Furthermore, it is just as dangerous for a T1D to serve on a sinking destroyer or submarine as a non-T1D, no matter what they are going to die on that vessel, whether they have insulin or not. This same argument used to be made about women serving on ships, in submarines, or in combat. The bottom line is that sometimes people get hurt and/or die. This is going to happen

whether or not they are a man or a woman, and whether or not they are T1D or not. If a T1D wants to serve their country, then they should be allowed, even if they might die in combat, but that is the case with almost all servicemen and that is what it means to “serve” one’s country, and that right is being denied to the T1D community.

POLICY PROPOSAL AND NEXT STEPS

Demand that Insulin Manufacturers Properly Identify Shelf Lives

One of the military’s strongest arguments against allowing insulin diabetics to join the service is based upon the false narrative concerning insulin access and storage. The drug companies posted disclaimers state that insulin should be destroyed 28 days after being removed from refrigeration. Yet, extensive research has shown this mandate to be massively conservative, to the point of being potentially criminal. There is simply no need for this degree of caution when anecdotal as well as formal research confirms the insulin being good for “two to four+ months after removal” (Campbell). Despite the false narratives promoted by drug companies an argument can easily be made that the current 28-day precaution is sufficiently permissive to allow an individual to deploy on a ship, fly a plane, or deploy on a submarine. Every single ship has multiple refrigerators for food as well as other drugs that must be kept refrigerated. Every shore command has access to a military or civilian hospital (to access a refrigerator). Note that the military’s current position on this matter becomes more difficult to defend as we dig deeper into operational facts and capabilities. In short, today is 2024 and not 1984 nor 1924. The military was correct in its past precautionary practices, but today such activities remind us of the Jim Crow restrictions after the Civil War; they are simply inappropriate and wrong.

Legislation, Service Regulation Modification, or Presidential Executive Order

Legislation is required to immediately lift the current blanket ban on Type-1 Diabetes being a disqualification for military service. I have already mentioned the reasons why this ban should be lifted, and this would be the first step towards full integration of T1D's into the U.S. military. This would require either a bill passed by Congress repealing the disqualification, or an amendment made to the Rehabilitation Act making the U.S. military not exempt from its provisions when it comes to T1D.

Congressional bills are notorious for being slowed by bureaucratic processes and personal rivalries. Hence, congressional legislation would possibly take many years to pass and even more to enact. A second method to achieve this could be through the various Secretaries (Army, Navy Air Force etc.), but this would require the process to go by a departmental basis making it even more slow and tedious than the congressional process. Although Secretary of the Navy Carlos Del Toro recently did this for the Navy concerning LGTBG, he did so in concert with all of the other services acting in concert and as a result of the President directing such action.

The most effective and efficient method to lift the blanket ban would be an Executive Order by the President of the United States. The President's position as Commander in Chief makes any decision final so an act such as this would be unquestionable and seen as legitimate by the armed forces meaning its enactment would be essentially immediate.

CONCLUSION

There should continue to be a single set of physical requirements for joining the military. T1D's do not need nor desire any type of relaxation, and have already been proven to be just as fit as non-diabetics if not more, both in the military (see previous studies conducted in Finland

and Israel), and in the civilian world through the Olympics, triathlons and mountain climbing. Instead, all roles where there is immediate access to a supply of insulin will be made available to T1D's to serve in, both at home and when deployed. This includes both traditional combat roles such as infantrymen or sailor on a destroyer, or non-combat roles such as a lawyer or engineer. The reasoning behind this is because as long as T1D's have access to insulin, then they can perform just as well if not better than non-diabetic recruits. As a result, if a T1D is serving on destroyer or submarine, since there is essentially an entire pharmacy on those vessels full of insulin (as well as other drugs), then they can serve to their fullest capability. The same is true for soldiers in the army as each base abroad has an entire pharmacy of insulin for all soldiers stationed at that base. Now, if a T1D is in the middle of nowhere in the mountains for months on end with no access to insulin such as with the SEALs, then they cannot necessarily serve in these roles. Here, the T1D assignment will be on a case basis. However, with all other roles where there is immediate access to insulin, T1D's will be allowed to serve as long as they can meet 100% of all of the other physical, medical, academic, and performance requirements.

The current regulations disqualifying T1D's from serving in the U.S. military are baseless and discriminatory. Medical advances in diabetes have made it such that T1D's can serve in the military just as competently as non-T1D's. In addition, there have already been several cases of T1D's serving in the U.S. military after being diagnosed while in service and being just as able to serve as before diagnosis. By the same token, several militaries around the world do not list T1D as a disqualifying medical condition and those T1D's have proven to be just as capable or superior as their non-T1D counterparts. It is time for the United States military to stand by America's founding principles of acceptance and inclusion of all races, ethnicities, disabilities,

and religions and give the T1D community the right to serve their country as members of the U.S. military and put a stop to this the current discriminatory policies.

REFERENCES

- Amir, Shoshana, et al. "The Young Diabetic Subjects in the Israel Army." *Diabetes & Metabolism*, vol. 20, no. 3, 1994, pp. 297-302, pubmed.ncbi.nlm.nih.gov/8001719/. Accessed 10 Feb. 2024.
- Brown, Chuck. "Diabetic Soldier Returns from Iraq, Inspires Others." *Newsroom*, University of Nebraska Medical Center, 19 May 2006, www.unmc.edu/newsroom/2006/05/19/diabetic-soldier-returns-from-iraq-inspires-others/
- "By the Numbers: Diabetes in America." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 25 Oct. 2022, www.cdc.gov/diabetes/health-equity/diabetes-by-the-numbers.html.
- Campbell, Patrick. "Study: Insulin Shelf Life Could Be 4 Times Longer than Previously Reported." *HCP Live*, HCP Live, 12 Apr. 2023, www.hcplive.com/view/study-insulin-shelf-life-could-be-4-times-longer-than-previously-reported.
- "Can a Person Join the Military If They Have Diabetes?" *Medical News Today*, MediLexicon International, www.medicalnewstoday.com/articles/can-you-join-the-military-with-diabetes#is-it-possible. Accessed 20 Mar. 2024.
- Carter, Dan, et al. "Diabetes Mellitus Type-1 in Five Military Aviators: Flying with Insulin." *Aviation, Space, and Environmental Medicine*, vol. 76, no. 9, 2005, pp. 861-862, <https://pubmed.ncbi.nlm.nih.gov/16173683/>. Accessed 10 Feb. 2024.

- Castro, Carl, and Jeremy Goldbach. "A Brief History of LGBT Military Policy and Improving Acceptance, Integration and Health among LGBT Service Members." *USC Suzanne Dworak-Peck School of Social Work*, 18 Aug. 2018, dworakpeck.usc.edu/news/brief-history-of-lgbt-military-policy-and-improving-acceptance-integration-and-health-among. Accessed 10 Feb. 2024.
- Choi, Y Sammy et al. "Telemedicine in US Army soldiers with type 1 diabetes." *Journal of telemedicine and telecare* vol. 21,7 (2015): 392-5. doi:10.1177/1357633X15583425.
- Choi, Sammy, and Jon Cucura. "U.S. Army Soldiers with Type-1 Diabetes Mellitus." *Journal of Diabetes Science and Technology*, vol. 12, no. 4, 2018, pp. 854-858, www.ncbi.nlm.nih.gov/pmc/articles/PMC6134313/. Accessed 10 Feb. 2024
- Didyuk, Olesya et al. "Continuous Glucose Monitoring Devices: Past, Present, and Future Focus on the History and Evolution of Technological Innovation." *Journal of diabetes science and technology* vol. 15,3 (2021): 676-683. doi:10.1177/1932296819899394
- Garamone, Jim. "No Place for Racism, Discrimination in U.S. Military, Milley Says." *U.S. Department of Defense, DOD News*, 9 July 2020, www.defense.gov/News/News-Stories/Article/article/2269438/no-place-for-racism-discrimination-in-us-military-milley-says/.
- Gray, Gary, and John Dupré. "Diabetes Mellitus in Aircrew—Type-I Diabetes in a Pilot." *Aviation, Space, and Environmental Medicine*, vol. 66, no. 5, 1995, pp. 449-452, <https://pubmed.ncbi.nlm.nih.gov/7619040/>. Accessed 10 Feb 2024.
- Grossman, Alon et al. "Blood glucose awareness training helps return insulin-treated aviators to the cockpit." *Aviation, space, and environmental medicine* vol. 76,6 (2005): 586-8.
- "Insulin Resistance and Diabetes." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 20 June 2022, www.cdc.gov/diabetes/basics/insulin-resistance.html.
- Liebermann, Oren. "Diabetes Can't Stop You from Climbing Everest." *CNN, Cable News Network*, 5 May 2017, www.cnn.com/2017/05/05/health/diabetes-liebermann/index.html.
- "LGBTQ Military History." *National Parks Service*, U.S. Department of the Interior, www.nps.gov/goga/learn/historyculture/lgbtq-military-history.htm. Accessed 12 Oct. 2023.
- Patra, Kevin. "Chiefs' Noah Gray Managing Type 1 Diabetes as He Lives out NFL Dream." *NFL.Com, NFL*, 10 Feb. 2024, www.nfl.com/news/chiefs-noah-gray-managing-type-1-diabetes-as-he-lives-out-nfl-dream.

- “Repeal of ‘Don’t Ask, Don’t Tell’ - HRC.” *Human Rights Campaign*, Human Rights Campaign Magazine, www.hrc.org/our-work/stories/repeal-of-dont-ask-dont-tell. Accessed 16 Mar. 2024.
- Sane, Timo, et al. “Experiences of Patients with Insulin-Treated Diabetes in Conscript Military Service.” *Diabetic Medicine: A Journal of the British Diabetic Association*, vol. 24, no. 1, 2007, pp. 87-90, pubmed.ncbi.nlm.nih.gov/17227329/. Accessed 10 Feb. 2024.
- Sullivan, Kate. “Biden Lifts Transgender Military Ban.” *CNN Politics*, 25 Jan. 2021, www.cnn.com/2021/01/25/politics/loyd-austin-transgender-military-harris-biden/index.html. Accessed 10 Feb. 2024.
- Thomas, Ian. “The U.S. Army Is Struggling to Find the Recruits Its Needs to Win the Fight over the Future.” *CNBC*, 26 Oct. 2022, www.cnbc.com/2022/10/26/us-army-struggles-to-find-recruits-its-needs-to-win-fight-of-future.html. Accessed 10 Feb. 2024.
- Thomas, Victoria. “Diabetes Discrimination and the Department of Defense.” *American Diabetes Association*, diabetes.org/search?keywords=military+discrimination#gsc.tab=0&gsc.q=military%20discrimination&gsc.sort=, www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKewjayIm8gKSEAxXQD1kFHx58B8UQFnoECA8QAw&url=https%3A%2F%2Fdiabetes.org%2Fsites%2Fdefault%2Ffiles%2F2023-10%2FDiabetes%2520Discrimination%2520and%2520the%2520Department%2520of%2520Defense.pdf&usg=AOvVaw2147jRzP4wig2tSOYWGF&opi=89978449. Accessed 10 Feb. 2024.
- Toomey, Stephanie. “5 Olympians That Didn’t Let Diabetes Slow Them Down.” *Pops Diabetes Care*, 11 Oct. 2021, popsdiabetes.com/olympians-with-diabetes/.
- “Type 2 Diabetes.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 18 Apr. 2023, www.cdc.gov/diabetes/basics/type2.html.
- Vlahek, Pavao et al. “Sweet 452 km--a report on the first type 1 diabetes patient to finish Double Ironman, a 30-hour endurance triathlon race.” *Croatian medical journal* vol. 54,3 (2013): 306-7. doi:10.3325/cmj.2013.54.306
- “What Is Type 1 Diabetes?” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 5 Sept. 2023, www.cdc.gov/diabetes/basics/what-is-type-1-diabetes.html.
- World, Michael J. “Diabetes Mellitus and the Armed Forces” *The British Journal of Diabetes and Vascular Disease* vol. 8, issue 2 (2008): pp. 55-104. <https://journals.sagepub.com/doi/epdf/10.1177/14746514080080020101>.