

115TH CONGRESS  
2D SESSION

# S. 2883

To require the Secretary of Defense to submit a plan to improve research and development on therapies for traumatic brain injury and post-traumatic stress disorder, to document information on blast exposures in service records of military personnel, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

MAY 17, 2018

Ms. WARREN (for herself and Mrs. ERNST) introduced the following bill;  
which was read twice and referred to the Committee on Armed Services

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## A BILL

To require the Secretary of Defense to submit a plan to improve research and development on therapies for traumatic brain injury and post-traumatic stress disorder, to document information on blast exposures in service records of military personnel, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Blast Exposure and  
5 Brain Injury Prevention Act”.

1 **SEC. 2. MEASURES TO MITIGATE TRAUMATIC BRAIN IN-**  
2 **JURY AND POST-TRAUMATIC STRESS DIS-**  
3 **ORDER.**

4 (a) PLAN ON IMPROVEMENTS TO RESEARCH AND  
5 DEVELOPMENT ON THERAPIES FOR TRAUMATIC BRAIN  
6 INJURY AND POST-TRAUMATIC STRESS DISORDER.—Not  
7 later than 180 days after the date of the enactment of  
8 this Act, the Secretary of Defense shall submit to the con-  
9 gressional defense committees a report setting forth the  
10 following:

11 (1) A plan for the Director of the Defense  
12 Health Agency, in collaboration with the Secretary  
13 of Veterans Affairs, the National Institutes of  
14 Health, and appropriate institutions of higher edu-  
15 cation and private entities, to accelerate cooperative  
16 research and development on therapies for traumatic  
17 brain injury and post-traumatic stress disorder, in-  
18 cluding the following:

19 (A) Actions to be taken by the Director to  
20 maximize the coordination and use of scientific  
21 research and development efforts on such thera-  
22 pies that is carried out by other elements of the  
23 Department of Defense, the National Institutes  
24 of Health, the Department of Veterans Affairs,  
25 and such institutions and entities.

1 (B) Other actions and processes to be  
2 taken or developed by the Director to accelerate  
3 research and development on and delivery of  
4 such therapies.

5 (2) If legislative or administrative action is re-  
6 quired to carry out the plan, such recommendations  
7 for such legislative or administrative action as the  
8 Secretary of Defense considers appropriate.

9 (b) DOCUMENTATION OF INFORMATION ON BLAST  
10 EXPOSURES IN SERVICE RECORDS OF MILITARY PER-  
11 SONNEL.—

12 (1) IN GENERAL.—In accordance with such  
13 guidance as the Secretary of Defense shall issue for  
14 purposes of this subsection, each Secretary of a mili-  
15 tary department shall include in the military service  
16 records of members of the Armed Forces under the  
17 jurisdiction of such Secretary appropriate docu-  
18 mentation of information on any blasts to which  
19 such members are exposed during service in the  
20 Armed Forces (whether in combat or training), in-  
21 cluding the following:

22 (A) The date of exposure.

23 (B) The duration of exposure, and the  
24 blast pressures experienced during exposure.

1           (C) Whether exposure occurred during  
2 combat or training.

3           (D) Whether a weapon was the source of  
4 the blast, and, if so, the type of weapon.

5           (E) Such other information on the expo-  
6 sure as the Secretary of Defense shall specify in  
7 the guidance.

8           (2) REPORTS.—Not later than one year after  
9 the date of the enactment of this Act, and annually  
10 thereafter, the Secretary shall submit to the Com-  
11 mittees on Armed Services of the Senate and the  
12 House of Representatives a report on information in-  
13 cluded in military service records under paragraph  
14 (1) during the one-year period ending on the date of  
15 such report. Each report shall include summary de-  
16 scriptions of the information specified in each sub-  
17 paragraph of paragraph (1) that was included in  
18 such records during the year covered by such report.

19           (c) REVIEW OF GUIDANCE ON BLAST EXPOSURE  
20 DURING TRAINING.—

21           (1) INITIAL REVIEW.—Not later than 180 days  
22 after the date of the enactment of this Act, the As-  
23 sistant Secretary of Defense for Health Affairs, in  
24 coordination with each Assistant Secretary for Man-  
25 power and Reserve Affairs of a military department,

1 shall review the firing limits for heavy weapons dur-  
2 ing training exercises.

3 (2) ELEMENTS.—The review required by para-  
4 graph (1) shall take into account current data and  
5 evidence on the cognitive effects of blast exposure  
6 and shall include consideration of the following:

7 (A) The impact of exposure over multiple  
8 successive days of training.

9 (B) The impact of multiple types of heavy  
10 weapons being fired in close succession.

11 (C) The feasibility of cumulative annual or  
12 lifetime exposure limits.

13 (D) The minimum safe distance for observ-  
14 ers and instructors.

15 (3) UPDATED TRAINING GUIDANCE.—Not later  
16 than 180 days after the date of the completion of  
17 the review under paragraph (1), each Secretary of a  
18 military department shall update any relevant train-  
19 ing guidance to account for the conclusions of the  
20 review.

21 (4) UPDATED REVIEW.—

22 (A) IN GENERAL.—Not less frequently  
23 than once every two years after the initial re-  
24 view conducted under paragraph (1), the Assist-  
25 ant Secretary of Defense for Health Affairs, in

1 coordination with each Assistant Secretary for  
2 Manpower and Reserve Affairs of a military de-  
3 partment, shall conduct an updated review  
4 under such paragraph, including consideration  
5 of the matters set forth under paragraph (2),  
6 and update training guidance under paragraph  
7 (3).

8 (B) CONSIDERATION OF NEW RESEARCH  
9 AND EVIDENCE.—Each updated review con-  
10 ducted under subparagraph (A) shall take into  
11 account new research and evidence that has  
12 emerged since the previous review.

13 (5) BRIEFING REQUIRED.—The Assistant Sec-  
14 retary of Defense for Health Affairs, in coordination  
15 with each Assistant Secretary for Manpower and Re-  
16 serve Affairs of a military department, shall brief  
17 the Committees on Armed Services of the Senate  
18 and the House of Representatives on a summary of  
19 the results of the initial review under paragraph (1),  
20 each updated review conducted under paragraph (4),  
21 and any updates to training guidance and proce-  
22 dures resulting from any such review or updated re-  
23 view.

24 (d) RESEARCH ON IMPROVED PERSONAL PROTEC-  
25 TIVE EQUIPMENT.—

1           (1) IN GENERAL.—The Under Secretary of De-  
2           fense for Research and Engineering shall establish a  
3           research and development program to improve the  
4           efficacy of personal protective equipment to reduce  
5           blast pressure or protect against brain injury from  
6           exposure to blast pressure waves.

7           (2) REPORT REQUIRED.—Not later than one  
8           year after the date of the enactment of this Act, the  
9           Under Secretary of Defense for Research and Engi-  
10          neering shall submit to the Committees on Armed  
11          Services of the Senate and the House of Representa-  
12          tives a report on the efficacy of existing personal  
13          protective equipment to protect against blast pres-  
14          sure, and recommendations for follow-on research  
15          into technology advancements that could further im-  
16          prove protection from blast pressure.

17          (3) ELEMENTS.—The report required by para-  
18          graph (2) shall include the following:

19                 (A) An assessment of existing helmet de-  
20                 signs, including commercially available helmets,  
21                 to determine their efficacy against blasts of var-  
22                 ious sizes and locations.

23                 (B) A determination of whether certain  
24                 configurations and materials better protect

1           against specific types of exposure, including  
2           from explosions and heavy weaponry.

3           (C) A review of existing personal protective  
4           equipment requirements, including helmets, to  
5           determine the adequacy of requirements to pro-  
6           tect against blast overpressure.

7           (D) An assessment of the feasibility of  
8           modifications to existing personal protective  
9           equipment, including improved helmet design.

10          (E) An assessment of the trade-offs be-  
11          tween improved blast pressure protection and  
12          other factors, including weight, field of vision,  
13          cost, and other factors as appropriate.

14          (F) Recommendations for modified or ad-  
15          ditional requirements for personal protective  
16          equipment, including helmets, to protect against  
17          blast overpressure.

18          (G) Recommendations for additional re-  
19          search into personal protective equipment ad-  
20          vancements that show promise, including new  
21          materials, technologies, and passive and active  
22          off-board measures.

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