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PILOT QUESTIONNAIRE TO CHARACTERIZE NECK PAIN RELATED TO FORWARD HELMET CENTER OF GRAVITY (U.S. AIR NATIONAL GUARD)

QUESTIONNAIRE PILOTE POUR CARACTÉRISER LA DOULEUR EN COUCHE LIEE AU CENTRE DE GRAVITE DE L'AVANT (GARDE NATIONALE US AIR)

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Introduction: Neck pain in the fighter pilot community has been documented for over 30 yr. High +Gz maneuvers and awkward head and neck positions combined with large helmet weights and helmet modifications that displace the center of gravity all contribute to a high risk of fatigue, pain, and injury in the population. The overall goal of this effort is to characterize neck injury, collect prevention and treatment methods used, and assess effectiveness of these methods on preventing, reducing, and eliminating neck pain within the Air National Guard (ANG) fighter pilot community.

Methods: A questionnaire will be developed and administered to several ANG fighter pilot squadrons to collect data in the following five areas: 1) pilot information such as physical characteristics, age, rank, flying experience, etc.; 2) approved preventative activities performed prior to flying, such as stretching, exercise, and the perceived effectiveness of those activities; 3) neck pain history, including reported and unreported incidents, duration, severity, location, type, etc.; 4) flight-incurred or flight-related injury, its effect on performance, and possible causes/trends of neck pain; and 5) corrective actions taken, both standard and non-standard, and impact on completion of mission. The target populations are the ANG fighter pilot communities.

Results: Ninety four percent of the respondents reported neck pain in the past 90 days of completing the questionnaire, and 100% reported increased difficulty in performing within the jet due to neck pain. While 28% reported being on duties not to include flying, 59% reported removing themselves from the flight schedule due to neck pain. Respondents reported 78% knew other pilots who were receiving medical and therapeutic treatment outside of the U.S. Air Force (USAF) medical services.

Discussion: By collecting information on current preventive measures and the associated efficacy, possible prophylactic treatments or engineering solutions may be revealed that could change guidelines for pilot training and injury prevention.