

# REPORT DOCUMENTATION PAGE

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<b>6. AUTHOR(S)</b> K.L. Reynolds, P.J. Amoroso, J.R. Dettori, C.E. Witt, J.J. Knapik and P.T. Lavin	
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<b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b> U.S. Army Research Institute of Environmental Medicine Natick, MA 01760-5007	<b>8. PERFORMING ORGANIZATION REPORT NUMBER</b>
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<b>13. ABSTRACT (Maximum 200 words)</b> <p><b>PURPOSE:</b> To examine the effect of tobacco use on injuries sustained during a physically demanding 100-mile road march.</p> <p><b>METHODS:</b> A study was conducted with 212 infantry soldiers who marched with an Army backpack (mean weight 28.3+4 kg) 20 miles per day for five days. Prior to the march, all soldiers completed a demographic (i.e. age, race) and tobacco use questionnaire. All march-related injuries were recorded by physician assistants when a soldier reported to a medical station along the road march course. In addition to the overall analysis of injury, foot blisters were also analyzed separately. A logistic regression model was used to examine the interrelationships between several factors: smoking habits (current smokers, quitters), chewing tobacco use, age, race, and fitness (maximum number of situps in two minutes, maximum numbers of pushups in two minutes, and a two-mile timed run).</p> <p><b>RESULTS:</b> Mean age was 21.4+3.9 years. Thirty-three percent (70/212) of the soldiers suffered one or more injuries (63.0% of these were blisters). Odds ratios and confidence intervals for any injury and blisters were calculated. The odds of (truncated after 200 words)</p>	
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1. Report/Presentation Title: Association of Tobacco Use with Injuries Among Infantry Soldiers Carrying Loads on a 100-Mile Road March

2. Authors: KL Reynolds, Amoroso, PJ, Dettori, JR, Witt, CE, Knapik, JJ and Lavin, PT

3. Type of Document:  Abstract  Poster  Presentation  Book Chapter  Journal Article  Technical Report  Review Article

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5. Meeting name, dates & location: Third International Conference on Injury Prevention and Control, 18-22 Feb 96, Melbourne, Australia

6. The attached material ~~contains~~/does not contain classified material. It ~~does~~/does not contain any potentially sensitive or controversial material.

KL Reynolds UTG, mc Paul J Amoroso  
First Author Second Author  
\_\_\_\_\_  
Signatures of Other USARIEM Authors

7. Editorial Comments ~~have~~/have not been requested:

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Technical Editor Date

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Dettori Research Division Chief  
Jan A. Vogel Research Director AMJ

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11. USARIEM Clearance Number P95-57 (Abs) by RPOD 6 Mar 95 (Date)

514 - Monday Poster
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*Presenter: Reynolds, Katy*

**ASSOCIATION OF TOBACCO USE WITH INJURIES  
AMONG INFANTRY SOLDIERS CARRYING LOADS ON  
A 100-MILE ROAD MARCH**

*Reynolds KL; Amoroso PJ; Dettori JR; Witt CE; Knapik JJ;  
Lavin PT*

*Occupational Medicine Division, United States Army Research  
Institute of Environmental Medicine, Natick, MA., USA.*

**PURPOSE:** To examine the effect of tobacco use on injuries sustained during a physically demanding 100-mile road march.

**METHODS:** A study was conducted with 212 infantry soldiers who marched with an Army backpack (mean weight 28.3±4 kg) 20 miles per day for five days. Prior to the march, all soldiers completed a demographic (i.e. age, race) and tobacco use questionnaire. All march-related injuries were recorded by physician assistants when a soldier reported to a medical station along the road march course. In addition to the overall analysis of injury, foot blisters were also analyzed separately. A logistic regression model was used to examine the interrelationships between several factors: smoking habits (current smokers, quitters), chewing tobacco use, age, race, and fitness (maximum number of situps in two minutes, maximum number of pushups in two minutes, and a two-mile timed run).

**RESULTS:** Mean age was 21.4±3.9 years. Thirty-three percent (70/212) of the soldiers suffered one or more injuries (63.0% of these were blisters). Odds ratios and confidence intervals for any injury and blisters were calculated. The odds of incurring injuries was significantly higher in current smokers (controlling for age and race).

	Any Injuries OR (95%CI)	Blisters OR (95%CI)
Current smoker	2.57(1.41,4.68)	2.23(1.11,4.50)
Quitters	0.60(0.06,5.50)	1.03(0.11,9.60)
Current chewer	1.16(0.62,2.18)	0.93(0.44,1.95)

**CONCLUSION:** The incidence of injuries is high during a physically demanding activity such as an endurance road march. Current smokers were at a higher risk for injuries. No significant effect from chewing tobacco was demonstrated in this population.