

10 November 2004

Safety

Leaders Guide to Accident Prevention in Physical Training Running Formations

*This pamphlet supersedes USAREUR Pamphlet 385-17, 3 November 1999.

For the CG, USAREUR/7A:

E. PEARSON
Colonel, GS
Deputy Chief of Staff

Official:



GARY C. MILLER
Regional Chief Information
Officer - Europe

Summary. This pamphlet provides standard accident-prevention guidelines for leaders to use when planning physical training running formations.

Applicability. This pamphlet applies to U.S. Army elements stationed or training in the Army in Europe.

Forms. AE and higher-level forms are available through the Army in Europe Publishing System (AEPUBS).

Records Management. Records created as a result of processes prescribed by this pamphlet must be identified, maintained, and disposed of according to AR 25-400-2. Record titles and descriptions are available on the Army Records Information Management System Web site at <https://www.arims.army.mil>.

Suggested Improvements. The proponent of this pamphlet is the USAREUR G1 (AEAGA-S, DSN 370-8124). Users may suggest improvements to this pamphlet by sending DA Form 2028 to the USAREUR G1 (AEAGA-S), Unit 29351, APO AE 09014-9351.

Distribution. A (AEPUBS).

CONTENTS

1. Purpose
2. References
3. Explanation of Abbreviations
4. Risk Management
5. Risk Assessment
6. Hazard Control

Appendix

- A. Running Formation Safety Standards

Tables

- A-1. Causes of Injuries and Preventive Measures
- A-2. Causes of Traffic and Visibility Hazards and Preventive Measures
- A-3. Causes of Slips, Trips, and Falls, and Preventive Measures
- A-4. Causes of Improper Running-Formation Procedures and Preventive Measures

Figure

- A-1. Risk-Assessment Worksheet

Glossary

1. PURPOSE

This pamphlet identifies types and causes of accidents that frequently occur during physical training (PT) running formations and provides measures for leaders to take to help prevent these accidents.

2. REFERENCES

a. Publications.

- (1) AR 25-400-2, The Army Records Information Management System (ARIMS).
- (2) AR 385-10, The Army Safety Program.
- (3) AR 385-55, Prevention of Motor Vehicle Accidents.
- (4) FM 4-25.11, First Aid.
- (5) FM 21-20, Physical Training Fitness.
- (6) Technical Bulletin MED 81, Cold Injury.
- (7) Technical Bulletin MED 507, Heat Stress Control and Heat Casualty Management.
- (8) USAREUR Regulation 385-55, Prevention of Motor Vehicle Accidents.

b. Form. DA Form 2028, Recommended Changes to Publications and Blank Forms.

3. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

4. RISK MANAGEMENT

a. Accidents that cause injuries can also seriously affect mission accomplishment. In the Army in Europe, an average of 1 workday is lost every 3 days from a PT running formation injury. These injuries cost the Army millions of dollars and thousands of lost workhours every year. Since not all PT-related injuries are reported through the accident-reporting system, the number of injuries may be higher than statistics show.

b. Leaders are encouraged to use the risk-management process to determine hazards associated with soldiers running in PT formations. Risk management is a subjective evaluation of hazards. It is not a “science” that provides leaders with a precise course of action; nor is it just “common sense” or “something good leaders have always done.” Leaders practice risk management when they think about the factors that affect safety and mission accomplishment.

c. Leaders will—

(1) Determine if a proposed formation run falls within acceptable risk limits by identifying and measuring risks, assigning values to the risks, combining the values, and deciding which precautions are appropriate.

(2) Take the appropriate action, when time and flexibility permit, to reduce risk. With little or no effect on the mission, leaders can reduce risk if they reduce or eliminate hazards.

5. RISK ASSESSMENT

a. Different missions involve different elements that can affect safety. The risk-assessment worksheet (app A, fig A-1) lists six elements that may affect the safety of running in PT formation. Also listed are several hazards associated with each element. Leaders will use this worksheet to assess overall risks. The six elements listed are equipment, planning, route, terrain, time, and weather.

b. Leaders will evaluate each element and assign a number between 1 and 6. The numbers correspond to the level of risk; the lower the risk, the lower the number. After leaders have assessed each element, they will total the values to determine the overall risk. An activity with a risk value of between—

(1) 1 and 12 has a low risk.

(2) 13 and 24 has a moderate risk and should be given special consideration if 2 or more elements have significantly raised the overall level.

(3) 25 and 36 has a high risk and requires coordination with the next higher level of command.

c. Leaders will use the risk-assessment worksheet and the risk-approval authority in figure A-1 to determine which command level has approval authority for PT running formations.

d. Appendix A, tables A-1 through A-4, identify the most frequent causes of accidents that troops have while running in formation and provide measures that leaders may take to reduce accident potential.

e. There are no rules for assessing risks. Leaders have flexibility to plan and execute PT running formations to reduce the probability and severity of accidents.

6. HAZARD CONTROL

Commanders should ensure the following measures are taken to eliminate or reduce hazards of running in formation:

a. If possible, eliminate the hazard or substitute a less hazardous alternative.

b. Contain or reduce the risk so that it has little effect on the formation run.

c. Change the operating procedures to lower exposure to the risk in relation to the importance of the formation run.

d. Train and motivate personnel to recognize, avoid, and control hazards.

e. Brief leaders and personnel on potential hazards and their acceptable risk level.

**APPENDIX A
RUNNING FORMATION SAFETY STANDARDS**

The glossary defines abbreviations used in this appendix.

EQUIPMENT (flashlights, lighted batons, reflective vests) 1 _____ → 6 Available Unavailable																					
PLANNING (guidance, preparation time, training) 1 _____ → 6 Adequate Inadequate																					
TERRAIN (dry, icy, muddy, paved, rutted) 1 _____ → 6 Adequate Inadequate																					
TIME (dawn, day, dusk, night) 1 _____ → 6 Light Dark																					
ROUTE (none or low-, medium-, high-density traffic) 1 _____ → 6 None or light Heavy																					
WEATHER (clear, cold, hot, rain, snow) 1 _____ → 6 Good Bad																					
TOTAL (overall risk):																					
Risk Level Guideline																					
<table border="0"> <tr> <td>Overall Risk Total</td> <td>Risk Level</td> </tr> <tr> <td>1 - 12</td> <td>Low</td> </tr> <tr> <td>13 - 24</td> <td>Moderate</td> </tr> <tr> <td>25 - 36</td> <td>High</td> </tr> </table>		Overall Risk Total	Risk Level	1 - 12	Low	13 - 24	Moderate	25 - 36	High												
Overall Risk Total	Risk Level																				
1 - 12	Low																				
13 - 24	Moderate																				
25 - 36	High																				
Risk-Approval-Authority Determination																					
<table border="0"> <tr> <td>Risk Level</td> <td>Squad</td> <td>Platoon</td> <td>Company</td> <td>Battalion</td> </tr> <tr> <td>Low (1-12)</td> <td>sqd ldr</td> <td>plt ldr</td> <td>co cdr</td> <td>bn cdr</td> </tr> <tr> <td>Moderate (13-24)</td> <td>plt ldr</td> <td>co cdr</td> <td>bn cdr</td> <td>bde cdr</td> </tr> <tr> <td>High (25-36)</td> <td>co cdr</td> <td>bn cdr</td> <td>bde cdr</td> <td>div cdr</td> </tr> </table>		Risk Level	Squad	Platoon	Company	Battalion	Low (1-12)	sqd ldr	plt ldr	co cdr	bn cdr	Moderate (13-24)	plt ldr	co cdr	bn cdr	bde cdr	High (25-36)	co cdr	bn cdr	bde cdr	div cdr
Risk Level	Squad	Platoon	Company	Battalion																	
Low (1-12)	sqd ldr	plt ldr	co cdr	bn cdr																	
Moderate (13-24)	plt ldr	co cdr	bn cdr	bde cdr																	
High (25-36)	co cdr	bn cdr	bde cdr	div cdr																	

Figure A-1. Risk-Assessment Worksheet

Table A-1 Causes of Injuries and Preventive Measures		
Injury	Causes	Preventive Measures
Animal bites	Uncontrolled dogs or rabid animals	<ul style="list-style-type: none"> • Establish guidelines for selecting routes. • Check the route before running. Select safe routes. • Instruct soldiers not to try to outrun dogs, but to slow down to a walk and leave the area. Do not make sudden moves or stare at the dog. • Report dogs that are a continual problem to the military police or local police.
Blisters and infections	Running in improper or poorly fitted boots or shoes	<ul style="list-style-type: none"> • Emphasize the importance of wearing good running boots or shoes.
Cardio-vascular	Participation by individuals who have had heart attacks or who have inherent heart problems	<ul style="list-style-type: none"> • Ensure that soldiers who have a profile of heart problems are medically released from exercise. • Provide progressive physical training.
Cold	Concealing early frostbite and other cold-weather injury symptoms	<ul style="list-style-type: none"> • Provide training for soldiers on early frostbite and cold-weather symptoms. • Develop and enforce reporting procedures for soldiers with cold-weather symptoms.
	Wearing a PT uniform not suited to cold-weather conditions	<ul style="list-style-type: none"> • Use wind-chill index (TB MED 81). • Specify appropriate PT uniform for cold-weather conditions. • Provide first-aid training and refresher training for soldiers.
Heat	Dehydration	<ul style="list-style-type: none"> • Ensure soldiers increase fluid intake and get enough rest. Soldiers should not drink alcoholic beverages the night before the run. • Provide training for soldiers on water use and procedures for dropping out of formation.
	Disregarding temperatures and acclimatization standards	<ul style="list-style-type: none"> • Ensure soldiers use the wet-bulb globe temperature index (TB MED 507). • Ensure soldiers follow procedures to adapt to local weather conditions. Identify newly assigned soldiers and provide separate training until they adapt to local weather conditions. A 14-day period to adapt to local weather conditions should be allowed before newly assigned soldiers participate in runs longer than 3 miles.
	Wearing a PT uniform not suited to hot-weather conditions	<ul style="list-style-type: none"> • Specify appropriate PT uniform for hot-weather conditions. • Provide first-aid training and refresher training for soldiers.
Muscle and skeletal	Improper running techniques	<ul style="list-style-type: none"> • Conduct warm-up and stretching exercises before running.
	Improper warm up and cool down	<ul style="list-style-type: none"> • Conduct cool-down and stretching exercises after running. Cool-down and stretching exercises should be similar to warm-up exercises.

Table A-1 Causes of Injuries and Preventive Measures		
Injury	Causes	Preventive Measures
Sprains and strains	Running on rough or rutted terrain	<ul style="list-style-type: none"> ● Establish guidelines for selecting routes. ● Check the route before running. Select safe routes. ● Inform lead runners of potential obstacles and instruct them to call out warnings to other runners. ● Adjust running speed to route and weather conditions. ● Provide first-aid training and refresher training for soldiers.
Stress fractures	Concealing injuries until aggravated	<ul style="list-style-type: none"> ● Provide training for soldiers on stress-fracture symptoms. ● Develop and enforce procedures for soldiers to report injuries.
	Running with improper technique	<ul style="list-style-type: none"> ● Provide training for soldiers on proper running technique.
	Running in new or improper boots or shoes	<ul style="list-style-type: none"> ● Emphasize the importance of wearing good running boots or shoes and breaking them in before regular PT running.
	Running on hard surfaces	<ul style="list-style-type: none"> ● Establish guidelines for selecting routes. Avoid running on hard surfaces.

Table A-2 Causes of Traffic and Visibility Hazards and Preventive Measures	
Causes	Preventive Measures
Selecting unsafe routes	<ul style="list-style-type: none"> ● Establish guidelines for selecting routes. Specify requirements for determining on- and offpost routes. (Do not select routes that cross public roads.) ● Check the route before running. Identify potential hazards, such as blind spots, construction sites, curves, and heavy traffic. Select the safest route possible. Check the route the same time of day as the planned formation run. ● Erect barricades to divert traffic on U.S.-controlled installations. (Conduct formation runs within installation boundaries as much as possible.)
Running in bad weather (failure to see or to be seen)	<ul style="list-style-type: none"> ● Adjust running speed to weather conditions, such as dust, mud, rain, and wind. Avoid running in formation on icy or snow-packed roads. ● When road conditions are other than “green” (USAREUR Reg 385-55), running formations should be limited to U.S.-controlled installations or canceled. ● Instruct soldiers to wear light-colored clothing. ● Ensure road guards wear reflective vests and carry either flashlights or lighted batons during periods of limited visibility. Front road guards should carry light devices pointing forward. Rear guards should carry light devices pointing rearward. ● Provide training to road guards on how to alert oncoming traffic to the formation.
Running in the dark or during dawn and dusk; wearing dark clothing	<ul style="list-style-type: none"> ● Ensure road guards wear reflective vests and carry either flashlights or lighted batons. Front road guards should carry light devices pointing forward. Rear road guards should carry light devices pointing rearward. ● Instruct soldiers to wear light-colored clothing.

Table A-3 Causes of Slips, Trips, and Falls, and Preventive Measures	
Causes	Preventive Measures
Running on poor surfaces, such as rough or rutted terrain	<ul style="list-style-type: none"> ● Establish guidelines for selecting routes. ● Check the route before running. Identify irregular surfaces, holes, and other hazards. Select safe routes. ● Inform lead runners of potential obstacles and instruct them to call out warnings to other runners.
Running too fast for conditions	<ul style="list-style-type: none"> ● Adjust running speed to route and weather conditions. ● Instruct lead runners to slow down and shorten strides on wet surfaces. ● Emphasize importance of wearing good running boots and shoes.
Inattention (soldiers not watching where they are running)	<ul style="list-style-type: none"> ● Instruct soldiers to pay attention to obstacles and hazards and to call out warnings to other runners.

Table A-4 Causes of Improper Running-Formation Procedures and Preventive Measures	
Causes	Preventive Measures
Lack of written running-formation procedures and standards	<ul style="list-style-type: none"> ● Develop an SOP for troops running in formation. Ensure soldiers read and understand the SOP. Enforce procedures.
Failure to follow procedures	<ul style="list-style-type: none"> ● Develop and publicize policy for motor vehicles passing troops running in formation on U.S.-controlled installations. Post speed-limit and other signs to alert drivers of running formations. Enforce policy and publicize host-nation traffic laws for running in formation on U.S.-controlled installations. (NOTE: U.S. personnel are not authorized to direct local traffic off post.) ● Ensure the unit SOP includes running-formation standards, such as road-guard requirements and procedures, including use of reflective vests and flashlights or lighted batons during hours of darkness and limited visibility. For example: Four road guards are recommended for running formations: two in the front and two in the rear, or one in the front and three in the rear (one guard stays with the formation and the other two secure side roads). Road guards should run about 20 meters ahead of and behind the formation. Road-guard duties should include stopping traffic at intersections on U.S.-controlled installations and alerting oncoming traffic to the formation. ● Keep formation size at three abreast with not more than one soldier positioned on the left to call cadence. The caller should wear a reflective vest and carry a flashlight or lighted baton. ● Establish procedures for dropouts and stragglers. Dropouts and stragglers should leave the road immediately and run or walk on the sidewalk, or cross the street or road when it is clear and run or walk against traffic. ● Ensure running formations run on the right side of traffic in the same direction as the flow of traffic. Formations of fewer than five soldiers should run on sidewalks and against traffic.

GLOSSARY

AR	Army regulation
bde	brigade
bn	battalion
cdr	commander
co	company
CPR	cardiopulmonary resuscitation
div	division
FM	field manual
G1	Office of the G1, HQ USAREUR/7A
HQ USAREUR/7A	Headquarters, United States Army, Europe, and Seventh Army
ldr	leader
plt	platoon
PT	physical training
SOP	standing operating procedure
sqd	squad
TB	technical bulletin
U.S.	United States
USAREUR	United States Army, Europe