MASTER

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Safety
PHYSICAL TRAINING RUNNING FORMATIONS

FOR THE COMMANDER:

DISTRIBUTION:
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History. This pamphlet publishes the first issue of this pamphlet.

Summary. This pamphlet provides commanders and leaders standardized accident prevention guidelines to use when planning physical training running formations.

Applicability. This pamphlet applies to staff principals, installations, subordinate commands and activities of the U.S. Army Military District of Washington (MDW). It also applies to tenant activities that are assigned to or supported by MDW.

Suggested Improvements. The proponent of this pamphlet is the MDW Safety Office. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, MDW, ATTN: ANOS, Bldg 41, Fort Lesley J. McNair, Washington, DC 20319-5050.

1. Purpose

This pamphlet identifies the most frequent causes of accidents that occur during physical training running formations and provides actions that commanders and leaders can use to reduce the potential for accidents.

2. References

Related publications are listed below.

a. Army Regulation 385-10, The Army Safety Program.

b. Army Regulation 670-1, Wear and Appearance of Army Uniforms and Insignia.

c. Army Regulation 385-55, Prevention of Motor Vehicle Accidents.

d. Field Manual 21-20, Physical Training Fitness.

e. Field Manual 21-11, First Aid for Soldiers.

f. Technical Bulletin Medical 81, Cold Injury.

g. Graphic Training Aid 8-5-45, Wet Bulb Globe Temperature Index.

3. General

Safety risk management is not a "science" in the sense that it provides leaders with a precise course of action. Neither is it just "common sense" or "something good leaders have always done." It is an important new tool that is intended to be fully integrated in established Army systems for the conduct of training and combat. It is an "art," but an art based on systematic procedures and specific techniques.

4. Risk Assessment

a. Risk assessment is a subjective evaluation of hazards. The act of consciously evaluating a mission results in the commander's or leader's thinking through the factors which affect

mission falls within acceptable risk parameters by identifying and measuring the various risks, assigning values to the risks, combining their values, and making a value judgment of what safety precautions are appropriate. The commander or leader then can take the appropriate action to reduce the risk as time and flexibility permit.

b. Different missions involve different elements that can affect mission safety. Six elements have been identified for troops running in physical training (PT) formations: mission, weather, time, terrain, traffic, and equipment. The risk assessment matrix and worksheet (Appendix a and b, respectively) are provided for commanders' and leaders' use in assessing the overall risk associated with running formations. Tables 1 through 4 identify the most frequent cause of accidents that occur during troops running in formations and provide actions that commanders and leaders can use to reduce the potential for these accidents.

c. After all risks have been assessed, the values are totaled and applied to the risk level guidelines.

(1) Operations with a value from 0-12 would be considered low risk.

(2) A value of 13-24 would be considered moderate risk and should be given special consideration if two or more elements have significantly raised the overall level.

(3) High risk operations assessed at a value of 25-36 require coordination/approval with the next higher level of command of the organization making the assessment.

(4) Extremely high risk operations assessed at a value of 37-48 require coordination with the next higher level of command of the organization making the assessment and approval from the MDW Deputy Commander (Operations).

d. There are no hard or fast rules for assessing risks. The bottom line is that commanders and leaders have some flexibility in planning and executing their missions and operations which can reduce the probability or severity of an accident.

Table 1
Injuries

Injury	Most Frequent Causes	Actions to Take
Heat	Deviations from established standards regarding temperature and acclimatization	- Use wet bulb globe temperature index (GTA 8-5-45). - Ensure full use of acclimatization procedures. Identify newly assigned soldiers and provide separate training until soldiers are acclimated. (A 14-day acclimatization period should be the standard before allowing newly assigned soldiers to participate in runs exceeding 3 miles).
	Dehydration	- Ensure soldiers increase fluid intake, as well as receive adequate rest and abstain from alcohol night before a long run. - Provide training for soldiers on water use and guidelines for dropping out of formation.
	Failure to prescribe a uniform consistent with hot weather conditions	- Specify appropriate PT uniform. - Ensure first-aid refresher training is provided to soldiers.
Cold	Failure to prescribe a uniform consistent with cold weather conditions	- Use wind chill index (Technical Bulletin Medical 81). - Specify appropriate PT uniform.
	Concealing from Noncommissioned Officers early frostbite and other cold weather injury symptoms	- Provide training for soldiers on early frostbite and other cold weather symptoms. - Develop and enforce procedures for soldiers reporting cold weather symptoms.
Stress Fractures	Running in new boots, improper shoes, and on hard surfaces; poor running techniques.	- Provide training for soldiers on proper running techniques. - Stress importance of obtaining and wearing good running shoes.
	Soldiers conceal injury until it's aggravated	- Provide training for soldiers on stress-fracture symptoms. - Develop and enforce procedures for soldiers to immediately report all injuries.

Table 1
Injuries--Continued

Injury	Most Frequent Causes	Actions to Take
Sprains/ Strains	Rough or rutted terrain when running in formation	- Establish route selection guidelines. - Conduct route checks prior to running; select safest routes. - Brief lead runners on potential obstacles and instruct them to call out warnings to other runners. - Adjust running speed to route/ weather conditions. - Provide training for soldiers on what to do when someone falls; ensure first-aid refresher training is provided to soldiers.
Blisters/ Infections	Wearing of improper, poorly fitted running shoes	- Stress importance of obtaining and wearing good running shoes.
Muscle-Skeletal	Improper warm up/warm down and running technique	- Conduct warm up and stretching exercises prior to running. - Conduct warm down and stretching exercises after running. Warm down and stretching should be similar to warm up exercises.
Animal Bites	Uncontrolled dogs or rabid animals	- Establish route selection guidelines. - Conduct route checks prior to running; select safest routes. - Instruct soldiers not to try to outrun dogs, but to slow down to a walk and then stop.
Cardio-vascular	Usually involves individuals with inherent heart problems	- Provide progressive physical training. - Ensure first-aid refresher training is provided to soldiers on cardiopulmonary resuscitation procedures. - Establish emergency notification procedures.

Table 2
Traffic/Visibility Hazards

Most Frequent Causes	Actions to Take
Running during hours of darkness, dawn, and dusk; wearing dark clothing	- Instruct soldiers to wear light-colored clothing/physical training (PT) uniforms. - Ensure road guards wear reflective vests and carry either flashlights or lighted batons. Front road guards should carry light devices pointing forward; rear guards should carry light devices pointing rearward.
Improper route selection	- Establish route selection guidelines; specify requirements determining on/off post routes (do not select routes that cross public roads). - Conduct route checks prior to running (identify potential hazards, such as heavy traffic, blind spots, curves, etc.); select safest route free from these hazards; conduct route checks same time of day as the planned formation. - Conduct formation running within installation boundaries as much as possible. - Coordinate with local provost marshal office for additional information and control measures before large-scale runs on an MDW installation.
Running in inclement weather conditions (failure to see and/or be seen)	- Adjust running speed to weather conditions, such as rain/mud and wind/dust; avoid running formations on icy or snow packed roads. - When road conditions are other than "green", running formations should be limited to installations only. - Instruct soldiers to wear light-colored clothing/PT uniforms. - 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.

Table 3
Slips, Trips, and Falls

Most Frequent Causes	Actions to Take
Running on poor surfaces, such as rough or rutted terrain	- Establish route selection guidelines. - Conduct route checks prior to running (identify irregular surfaces, holes, and other hazards); select safest routes. - Brief lead runners on potential obstacles and instruct them to call out warnings to other runners.
Running too fast for conditions	- Adjust running speed to route and weather conditions. - Instruct lead runners to slow down and shorten strides on wet surfaces. - Stress importance of obtaining and wearing good running shoes.
Inattention - soldiers not watching where they're running	- Instruct soldiers to pay attention where they are running and to call out warnings to other runners of identified obstacles and hazards.

Table 4
Running Formation Procedures

Most Frequent Causes	Actions to Take
Lack of written procedures; failure to follow procedures	- Develop Standard Operating Procedures (SOP)on troops running in formations; ensure soldiers understand SOP; enforce established procedures. - Develop and publicize policy on motor vehicles passing troops running in formations on MDW installations; post speed limit and other signs to alert drivers to running formations and speed limits; enforce policies. - Publicize local traffic laws for running in formations off post. (Note: personnel are not authorized to direct local traffic off post).
Lack of written running formation standards	- Ensure unit SOP includes running formation standards, such as: - Road guard requirements and procedures to include use of reflective vests and lighting devices (flashlights or lighted batons) during hours of darkness and limited visibility (four road guards are recommended for running formations - two in front/two in rear, approximately 20 meters before and after formation or one permanent guard in the front and three guards in the rear - one stays with formation, other two secure side roads). - Road guard duties, such as stopping traffic at intersections on installations and alerting oncoming traffic to the formation. - Abreast formation size (three abreast with no more than one soldier positioned on the left to call cadence is recommended; caller should wear reflective vest and carry a flashlight). - Procedures for dropouts and stragglers. - Position of running formation requirements (formations should run on the right side of traffic lane with flow of traffic; four soldiers or less should use sidewalks and/or run against the flow of traffic).

Appendix A
Risk Assessment Matrix

Effect		Hazard Probability				
		Frequent A	Likely B	Occasional C	Seldom D	Unlikely E
Catastrophic	I	EXTREMELY HIGH		HIGH		MODERATE
Critical	II				MODERATE	
Moderate	III	HIGH	MODERATE		LOW	
Negligible	IV	MODERATE				

Effect

CATASTROPHIC..Death or permanent total disability, system loss, major property damage.

CRITICAL.....Permanent partial disability, temporary total disability in excess of three months, major system damage, significant property damage.

MODERATE.....Minor injury, lost workday accident, compensable injury or illness, minor system damage, minor property damage.

NEGLIGIBLE....First aid or minor supportive medical treatment, minor system impairment.

Probability

FREQUENT.....Occurs often in career/equipment service life. Continuously experienced.

LIKELY.....Occurs several times in career/equipment service life. Occurs frequently.

OCCASIONAL....Occurs sometime in career/equipment service life. Occurs sporadically, or several times in inventory service life.

SELDOM.....Possible to occur in career/equipment service life. Remote chance of occurrence; expected to occur sometime in inventory service life.

UNLIKELY.....Can assume will not occur in career/equipment service life. Possible, but improbable; occurs only very rarely.

RISK LEVELS

Extremely High..Loss of ability to accomplish mission.

High.....Significantly degrades mission capabilities in terms of required mission standards.

Moderate Risk...Degrades mission capabilities in terms of required mission.

Low Risk.....Little or no impact on mission accomplishment.

Appendix B
Risk Assessment Worksheet

ELEMENTS	LOW (1-2)	MODERATE (3-4)	HIGH (5-6)	EXTREMELY HIGH (7-8)
MISSION - preparation time/guidance (Adequate -----> Inadequate)				
WEATHER - hot, cold, rain, snow (Good -----> Bad)				
TIME - dawn, day, dusk, night (Light -----> Dark)				
TERRAIN - rutted, muddy, icy (Adequate -----> Inadequate)				
TRAFFIC - route selection, density (None/light -----> Heavy)				
EQUIPMENT - reflective vest, lighted batons, flashlights (Available -----> Unavailable)				
TOTALS				

OVERALL TOTAL:_____

Risk Level Guideline

<12 Low, 13-24 Moderate, 25-36 High, >37 Extremely High