SAFETY PERFORMANCE
FY 03

Purpose

The purpose of this briefing is to provide an overview of the TRADOC accident experience and trends for FY 03.

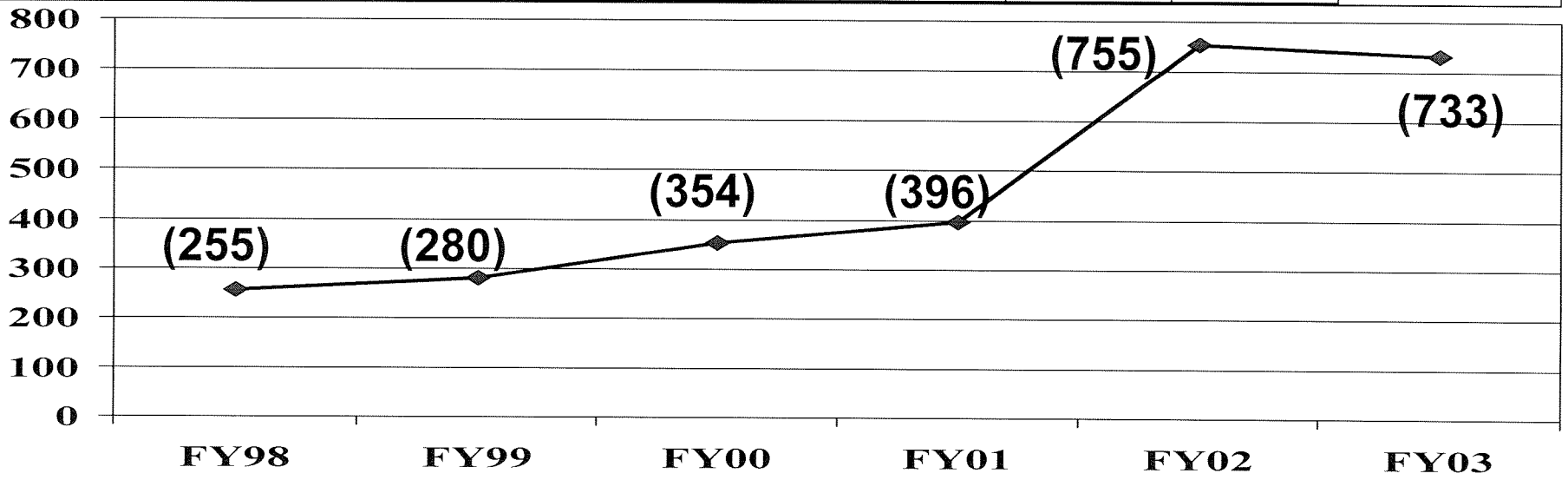
AR 385-40 Accident Classification

CLASS A	$1,000,000 Equipment or property Fatality Permanent Total Disability
CLASS B	$200,000<$1,000,000 Equipment or Property Permanent Partial Disability 3 or more Personnel Hospitalized
CLASS C	$20,000<$200,000 Equipment or Property Lost Duty Day
CLASS D	$2,000<$20,000 Equipment or Property

Performance at a Glance
FY 98 to FY 03

Performance at a Glance
FY 98 to FY 03

Class A-D Military Accidents							FY03 vs FY98-02 average
Category	**FY 98**	**FY99**	**FY00**	**FY01**	**FY02**	**FY03**	
Aviation	11	27	20	22	28	20	**22** ⇩
Gnd on duty	151	162	255	268	628	603	**293** ⇧
Gnd off duty	93	91	79	106	99	110	**94** ⇧
TOTAL	**255**	**280**	**354**	**396**	**755**	**733**	**408** ⇧

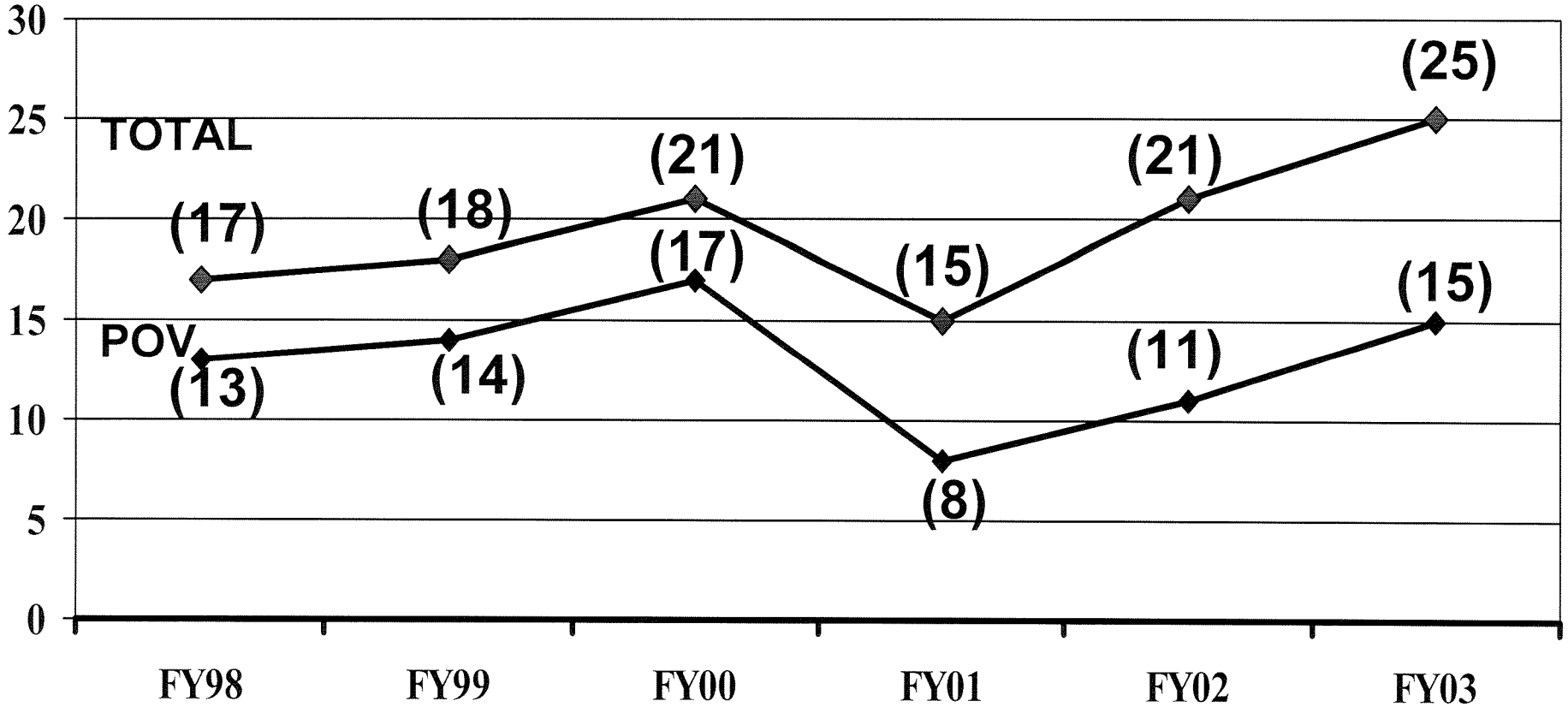


Performance at a Glance
FY 98 to FY 03

Class A Military Accidents							FY03 vs FY98-02 average
	FY 98	**FY99**	**FY00**	**FY01**	**FY02**	**FY03**	
On duty	1	3	4	2	5	6	4
Off duty	16	15	17	13	16	19	14
TOTAL	**17**	**18**	**21**	**15**	**21**	**25**	**19**

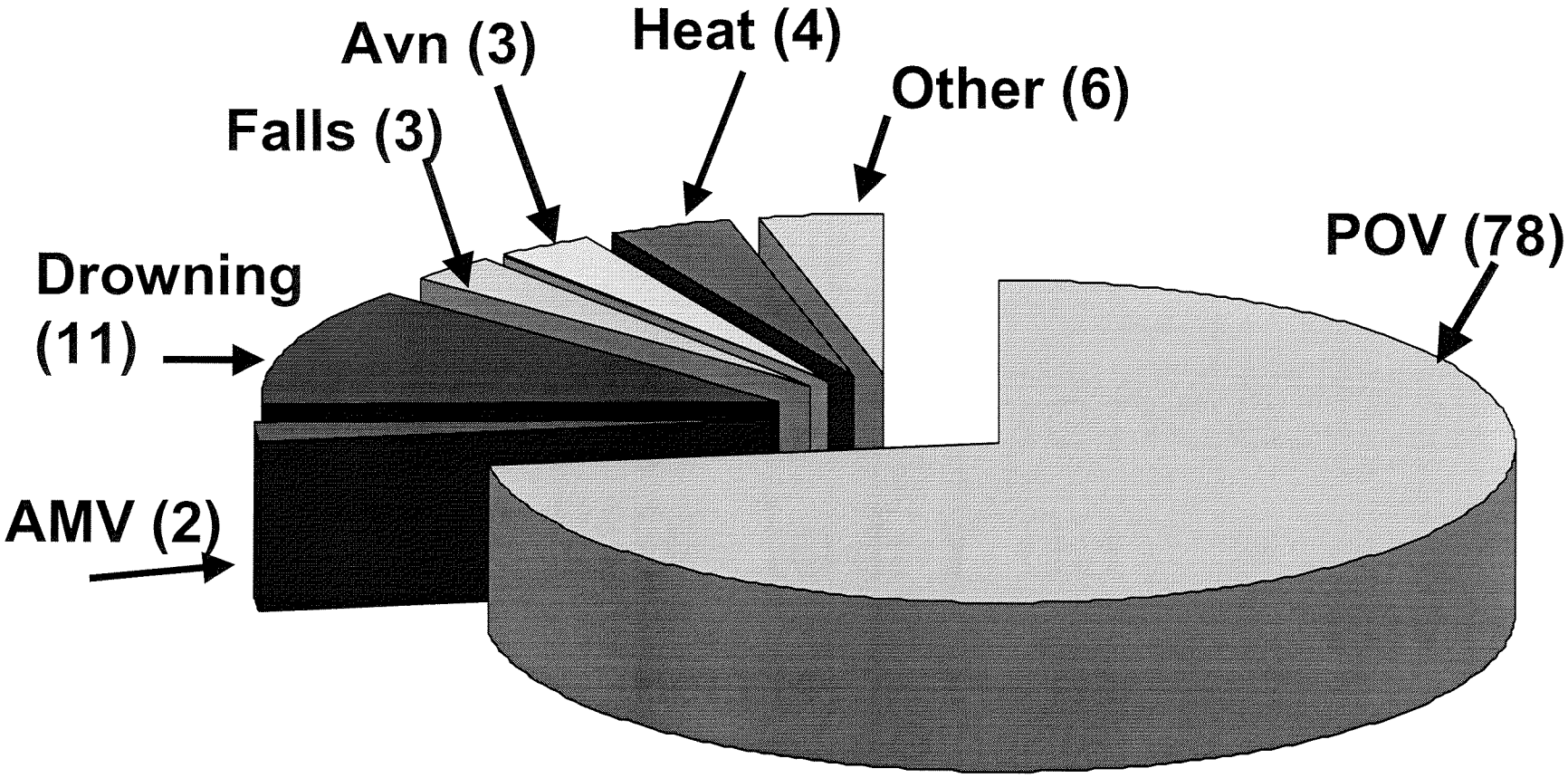
Class A Accident Fatalities							
Aviation	0	0	0	0	1	2	<1
POV	13	14	17	8	11	15	13
Drowning	2	0	1	2	3	3	2
Other	2	2	2	3	3	3	2
	17	**16**	**20**	**13**	**18**	**23**	**17**

Performance at a Glance
Class A Accidents
FY 98 to FY 03



Fatality Experience

FY 98 to FY 03



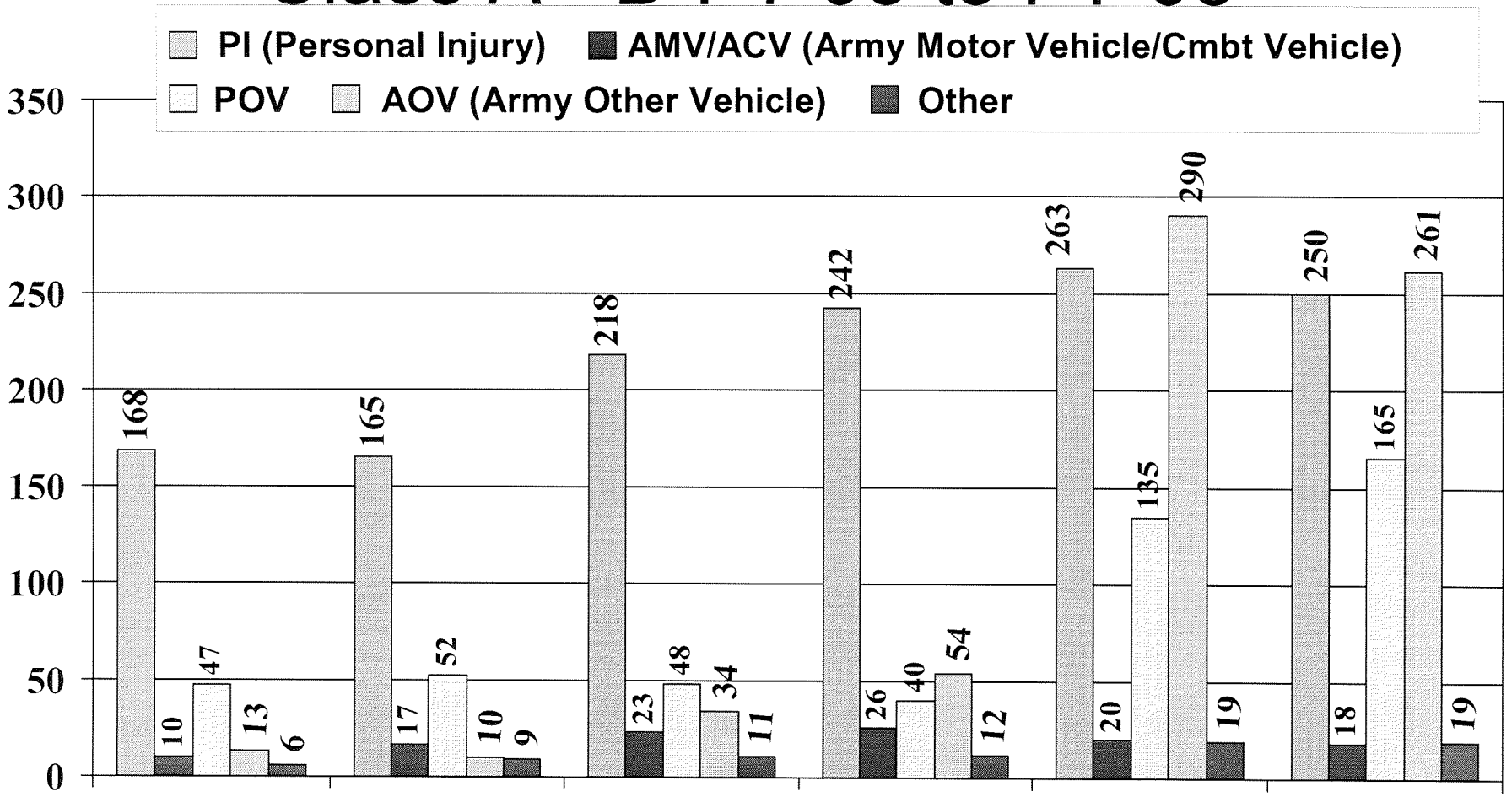
Total Fatalities - 107

Ground Accident Experience

FY 98 to FY 03

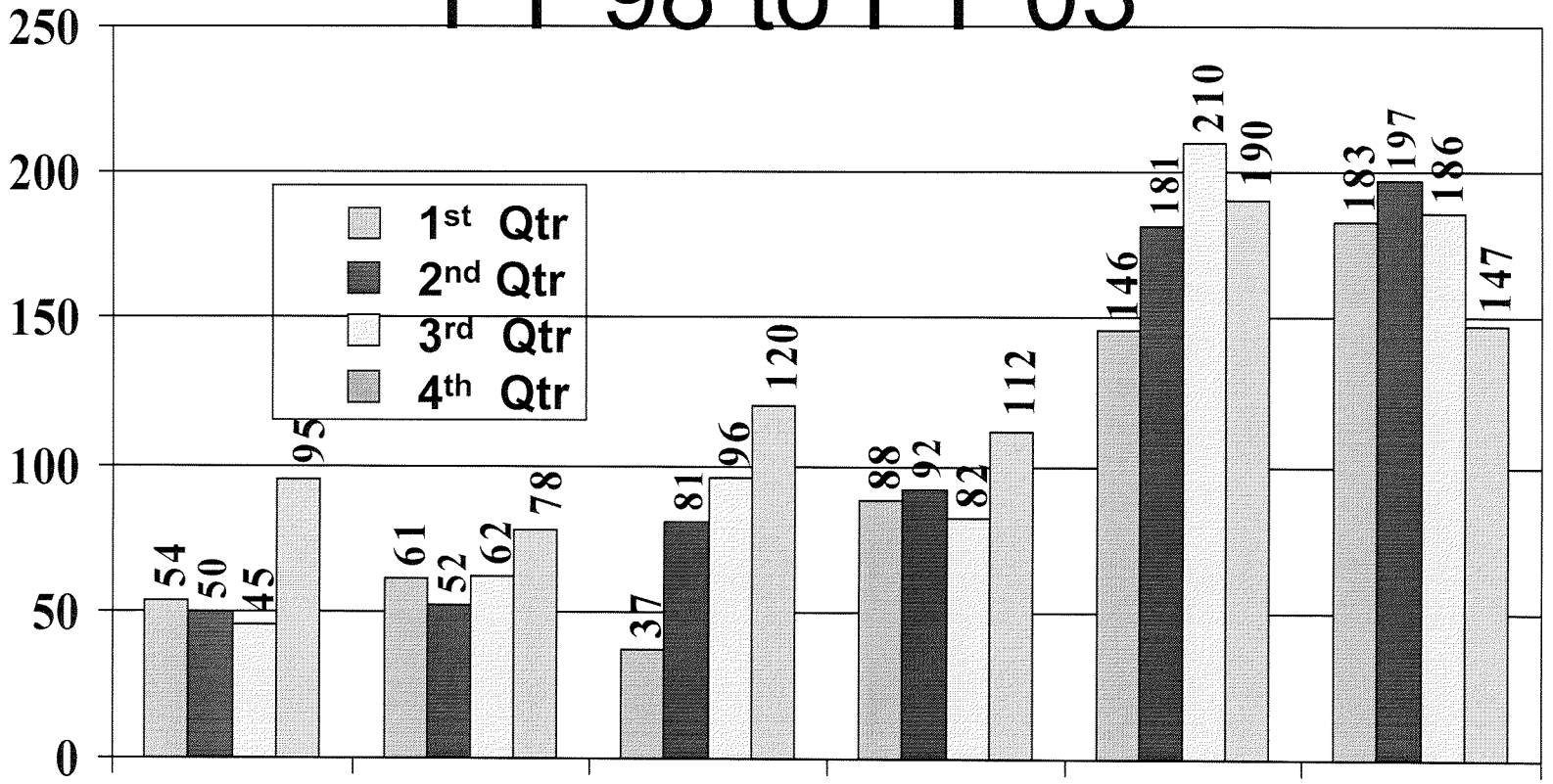
Ground Accident Experience

Class A - D FY 98 to FY 03



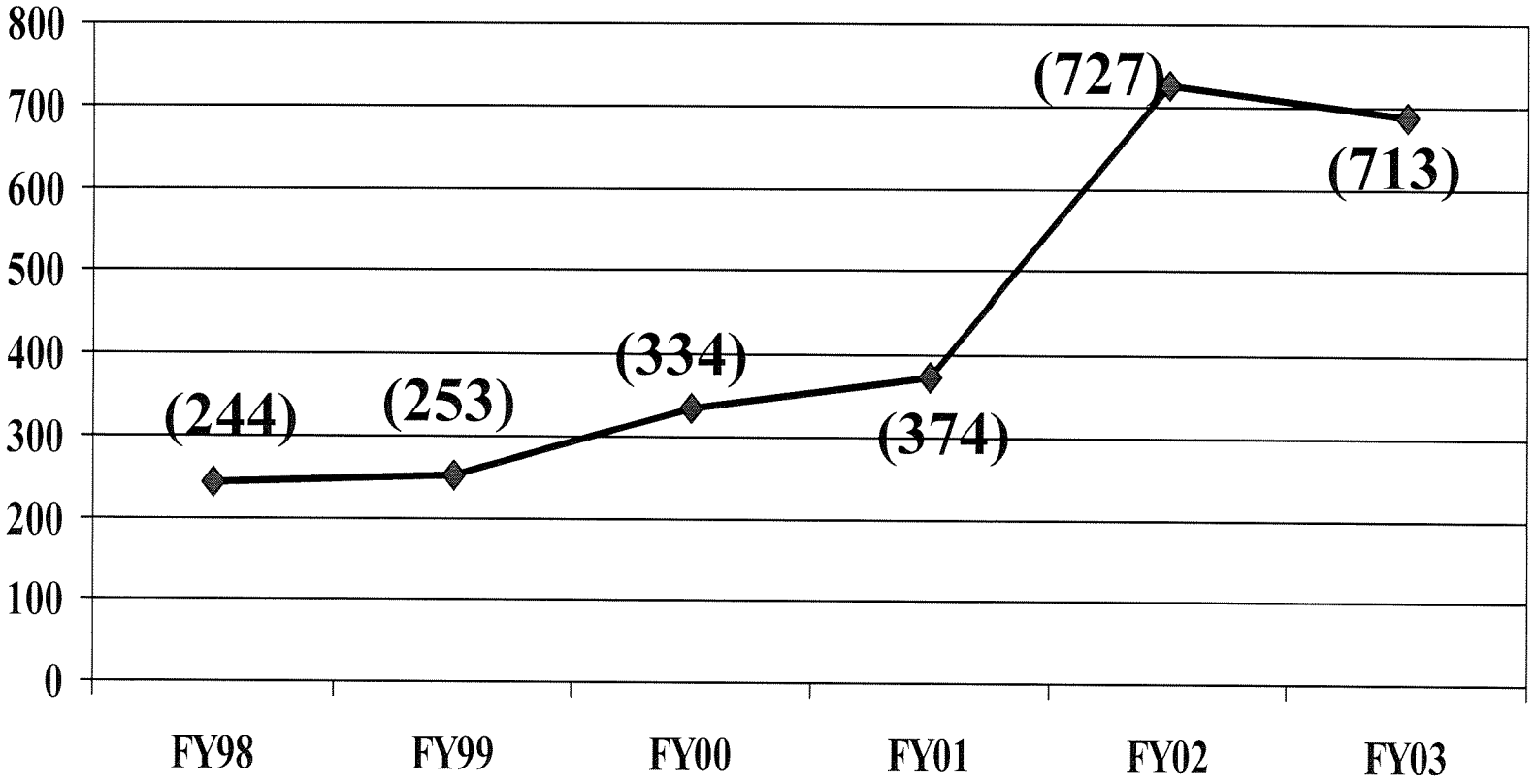
	FY98	FY99	FY00	FY01	FY02	FY03
Fatal	17	16	20	13	17	21
Total	244	253	334	374	727	713

Performance at a Glance
Class A-D Ground Accidents
FY 98 to FY 03



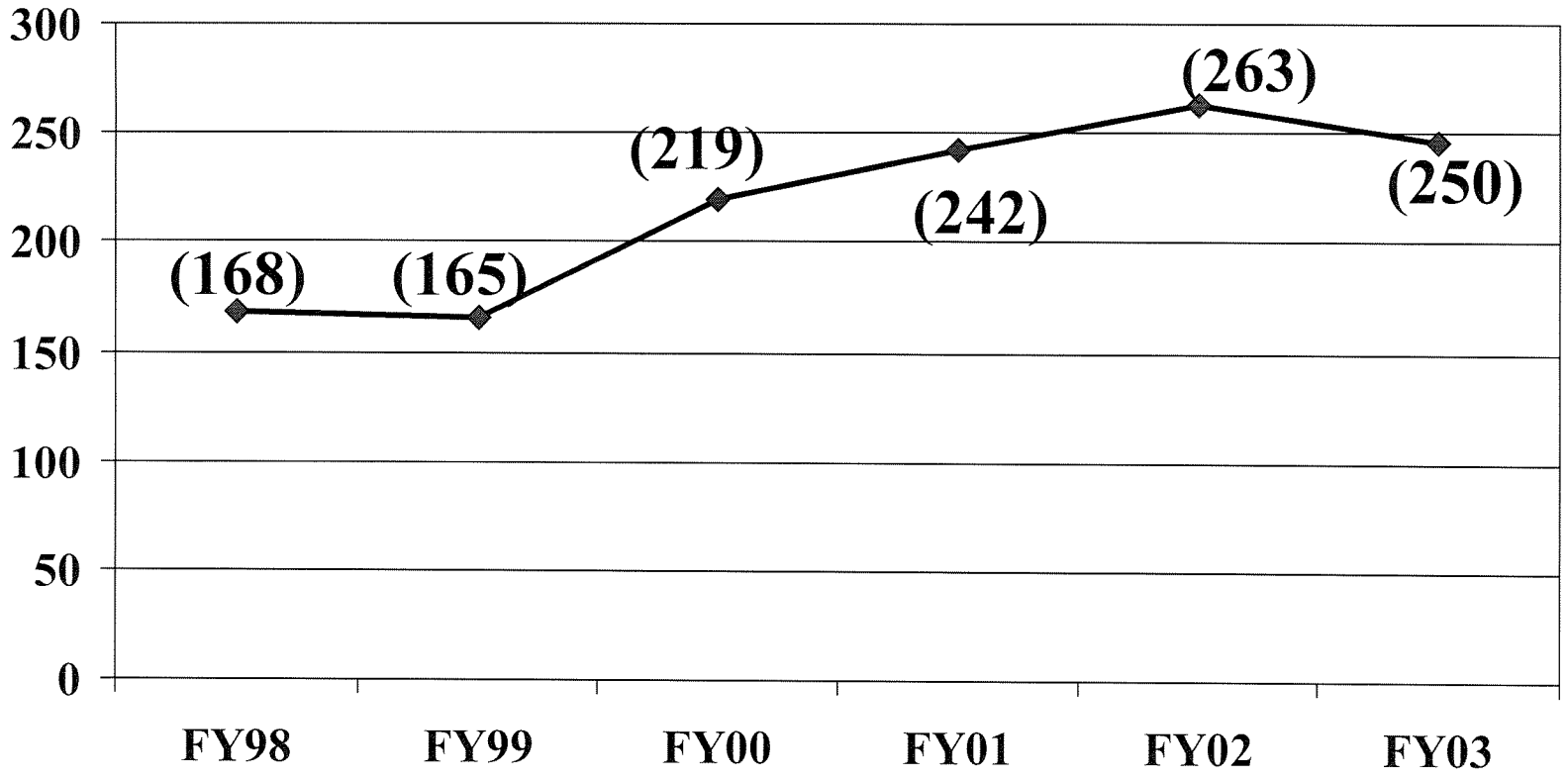
	FY98	FY99	FY00	FY01	FY02	FY03
Fatal	17	16	20	13	17	21
Total	244	253	334	374	727	713

Performance at a Glance
Class A-D Ground Accidents
FY 98 to FY 03

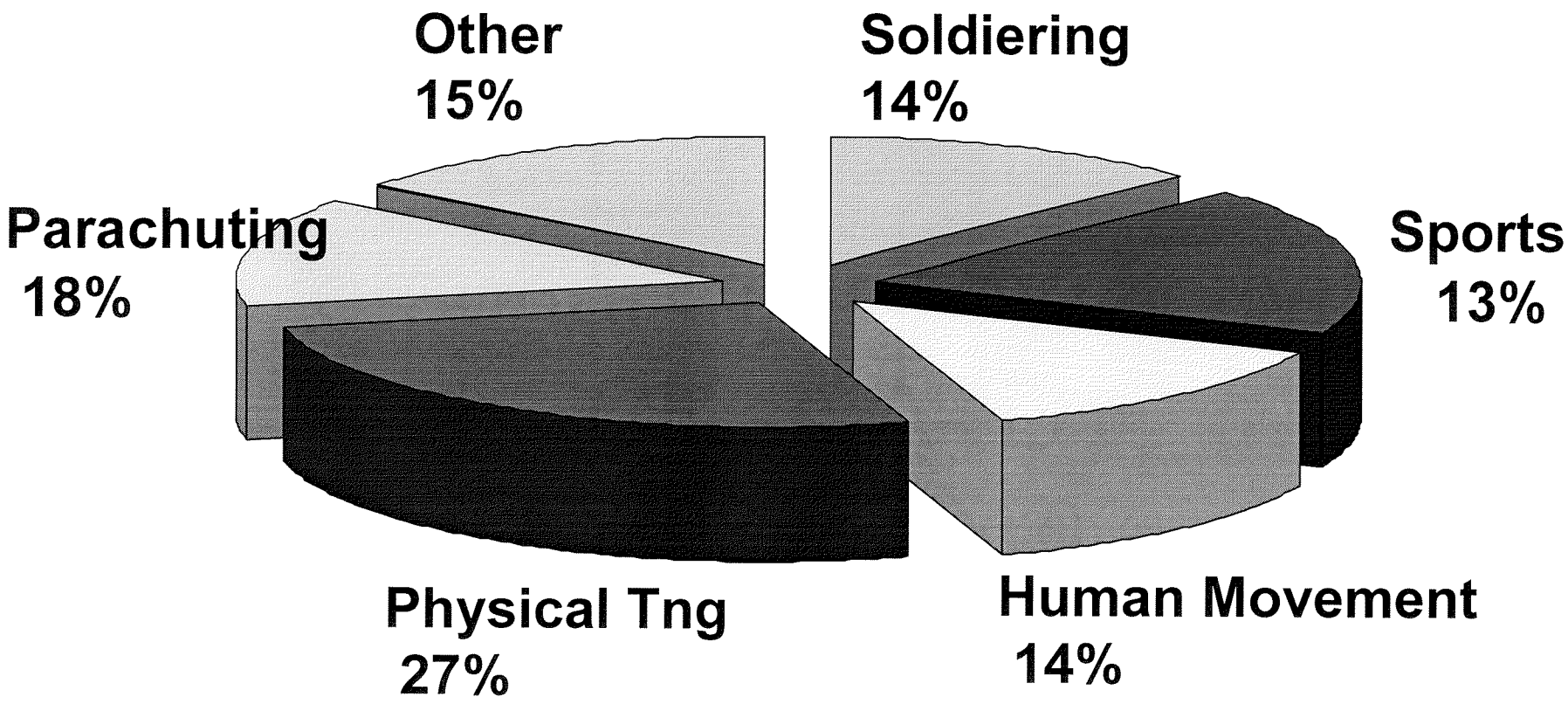


Ground Accident Experience Personal Injury

Personal Injury
Class A- D
FY 98 to FY 03

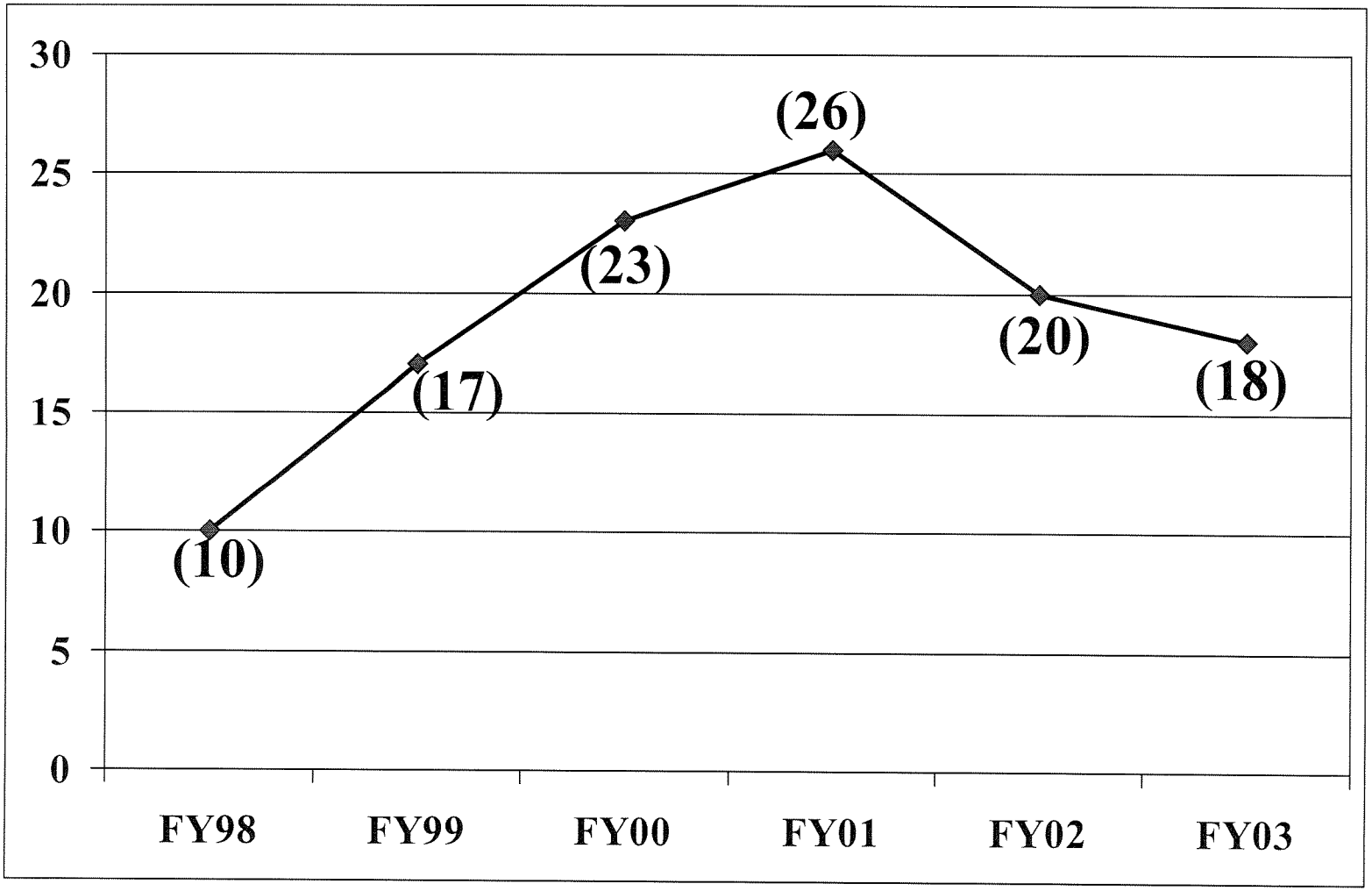


Personal Injury by Activity
Class A- D
FY 98 to FY 03

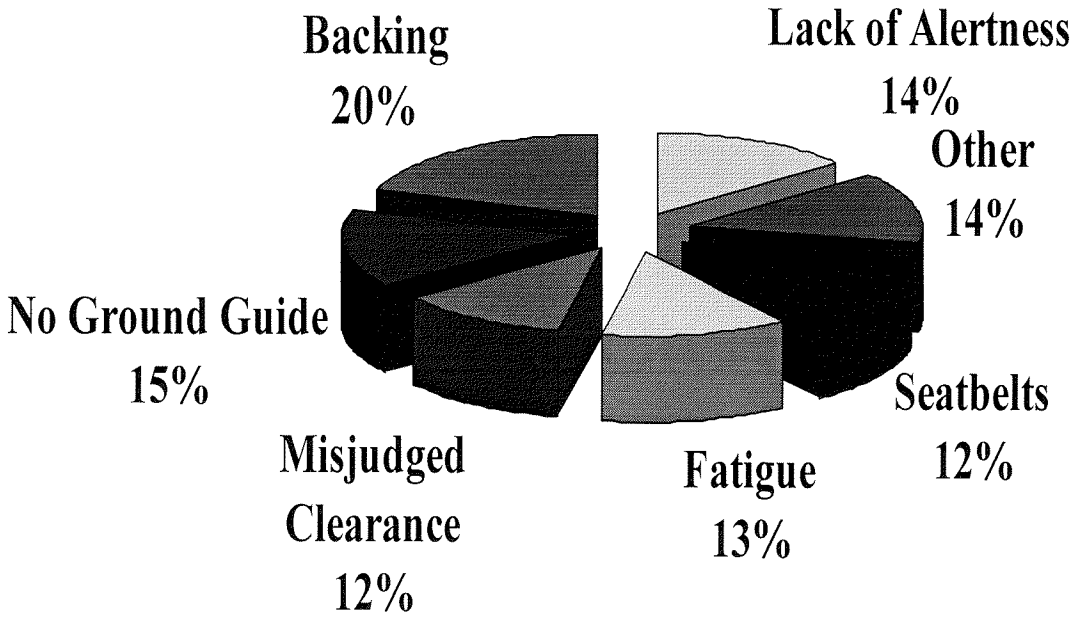


Ground Accident Experience
Army Motor Vehicles

AMV/ACV Accident History
FY 98 to FY 03
Class A-D



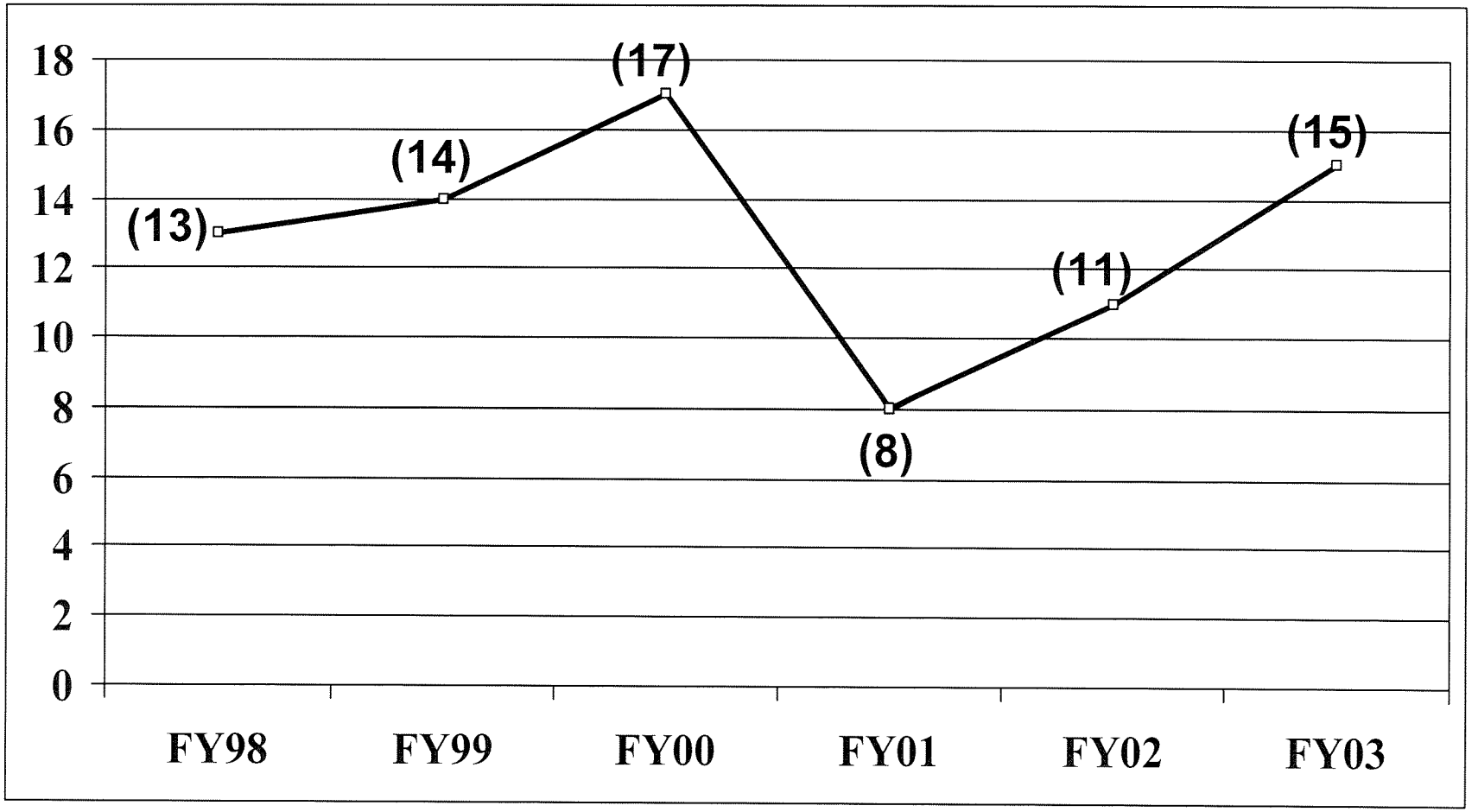
AMV/ACV Accident Causation
FY 98 to FY 03



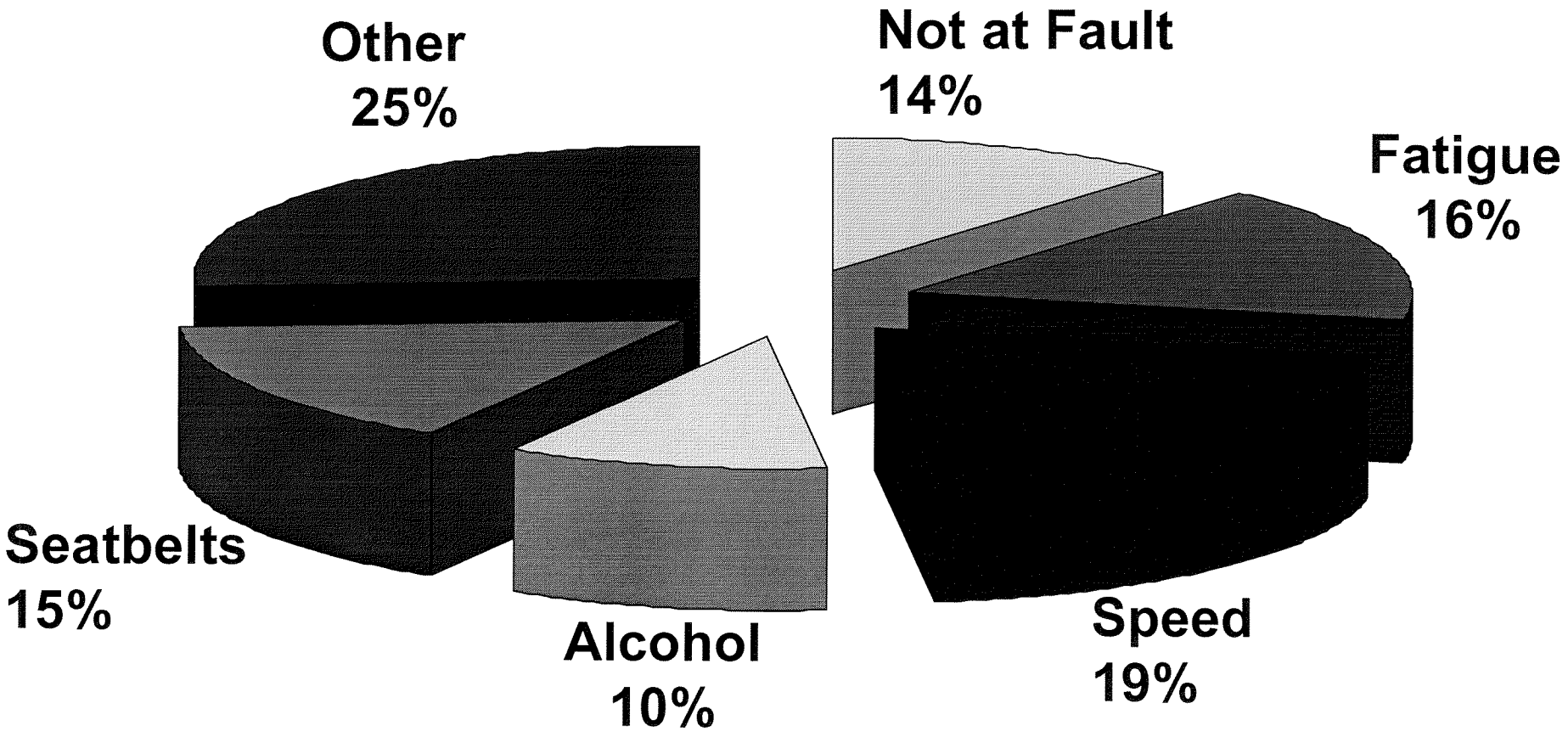
Ground Accident Experience

Privately Owned Vehicles

POV Fatalities
FY 98 to FY 03



POV Fatality Causation
FY 98 to FY 03



POV Fatality Profile
FY 98 to FY 03

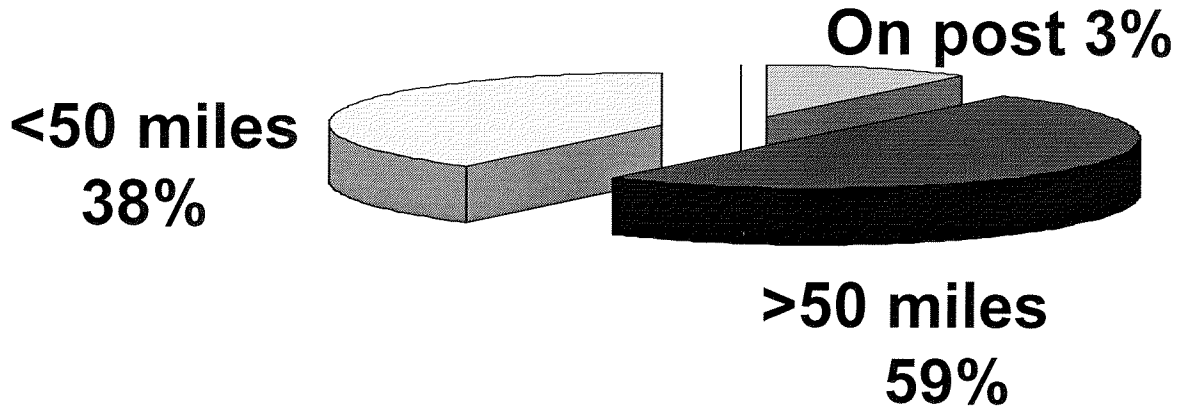
WHO

- ***E-1 to E-5, Male***
- ***19-26 years of age***

WHEN

- ***Fri to 0400 hrs Monday***

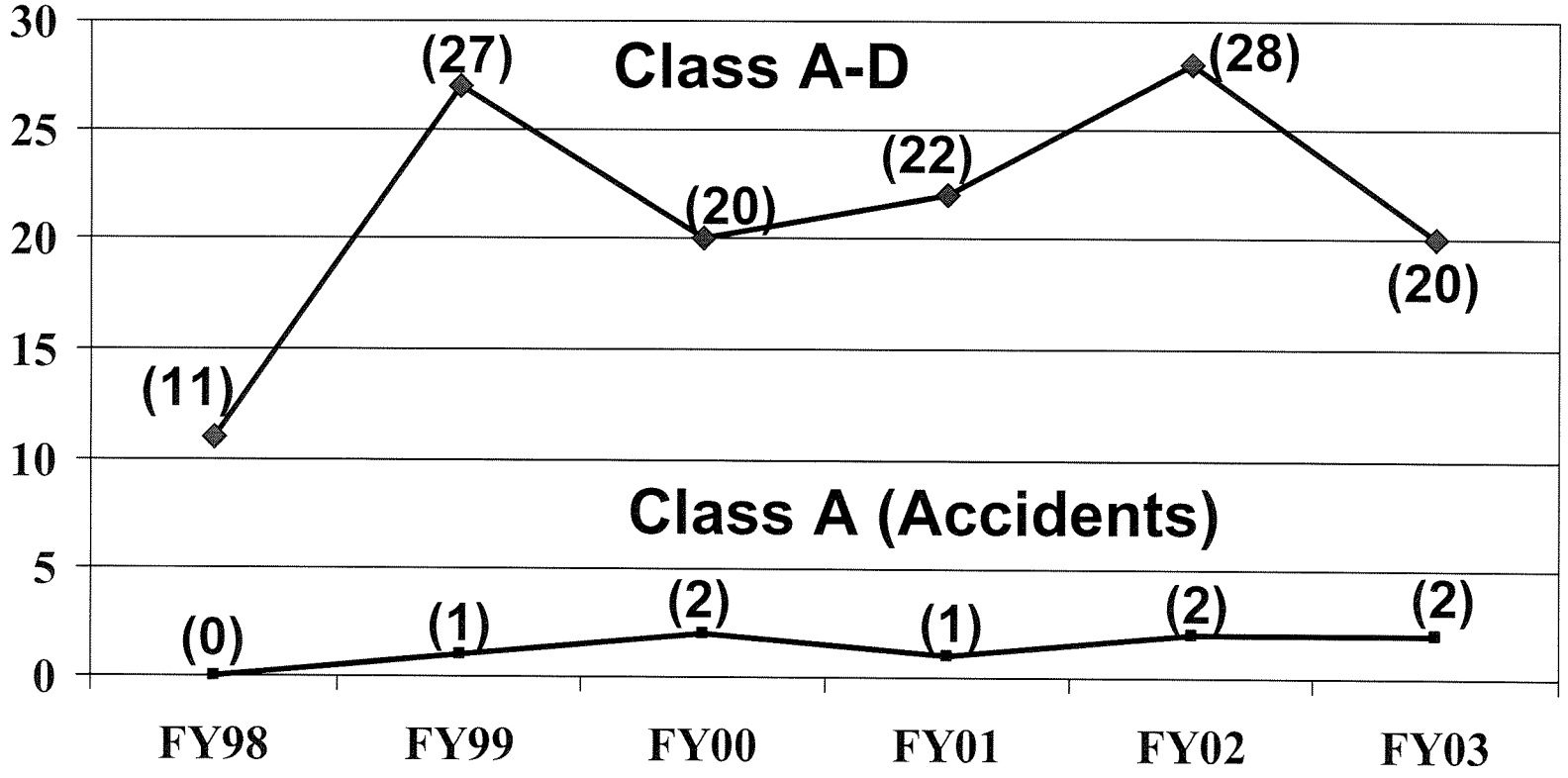
WHERE



Aviation Accident Experience

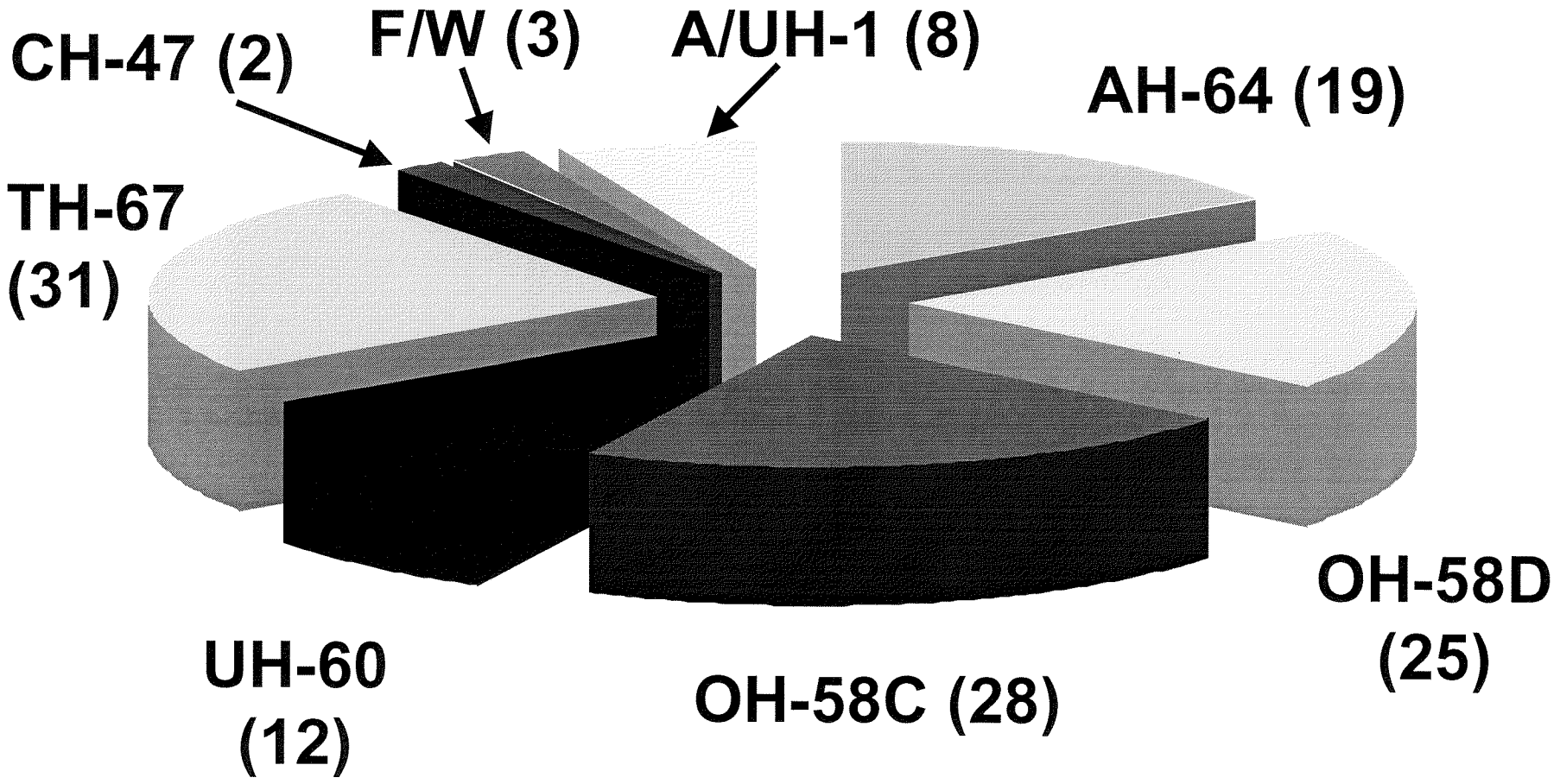
Aviation Accidents Class A-D

FY 98 to FY 03

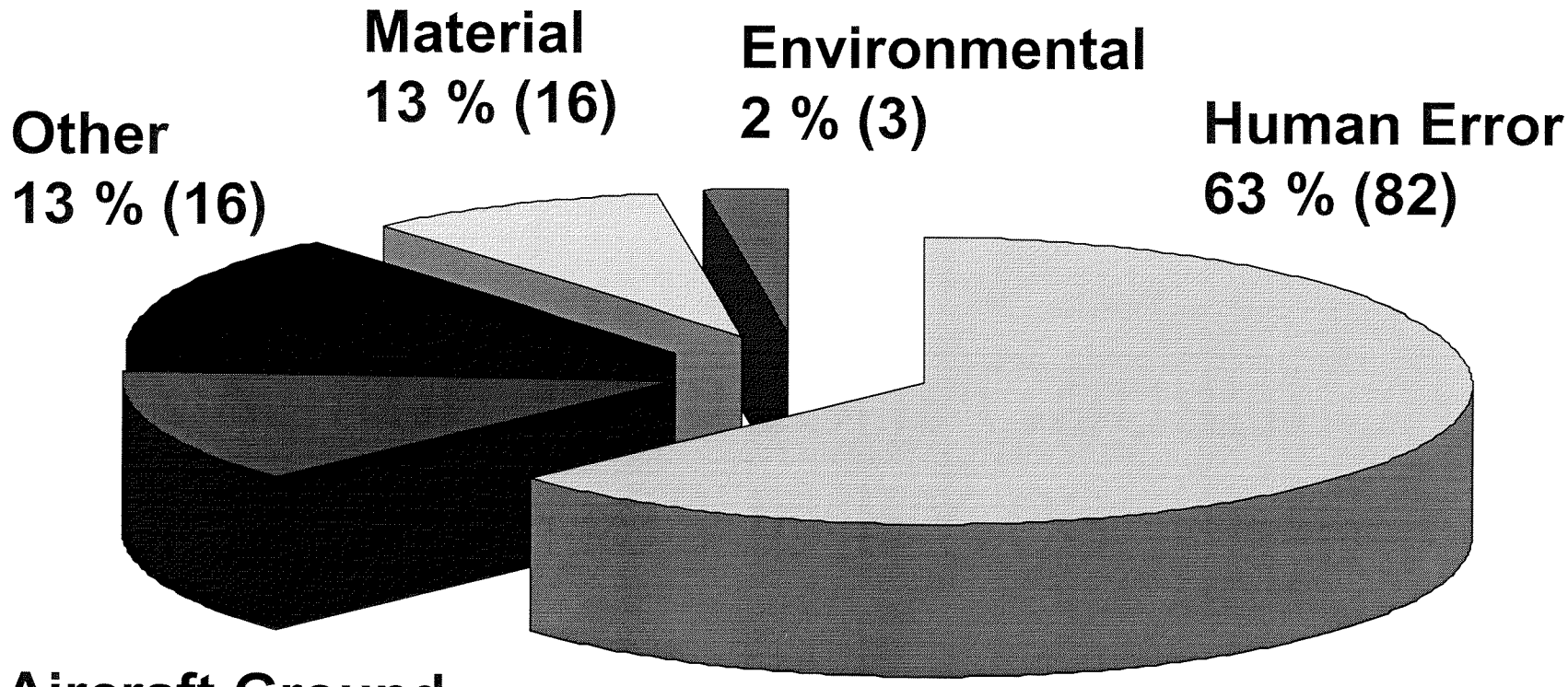


Aviation Accidents by Aircraft

FY 98 to FY 03



Aviation Accident Causation
FY 98 to FY 03



Total Accidents - 128

Trends/Analysis and Recommendations

Analysis

- Accident trends are increasing.
- POV accidents leading cause of death.
- Drowning is the number 2 cause of death.
- Heat injuries and sudden exertion and over-use injuries increasing.

Goals

- 50% reduction in accident rates in next 2 years (Secretary of Defense directed).
- Reduce incidence of sudden exertion and over-use injuries.
- Reduce incidence of drowning and water related accidents.

Recommendations

- Continue command emphasis/support.
  - Safety as special staff
  - Lifeguards at natural beaches
  - Aviation safety at installation airfields
- Reconstitute Executive Safety Council.
- Mission manpower study.
- Systems Safety requirements.
- Increase emphasis on medical screening to identify soldiers at risk for heat or over-exertion related injuries.

COLD WEATHER SAFETY

Command Surgeon's Office
MAJ Ron Ellyson, TRADOC Senior P.A.
US Army Training and Doctrine Command
9 Dec 03

Agenda

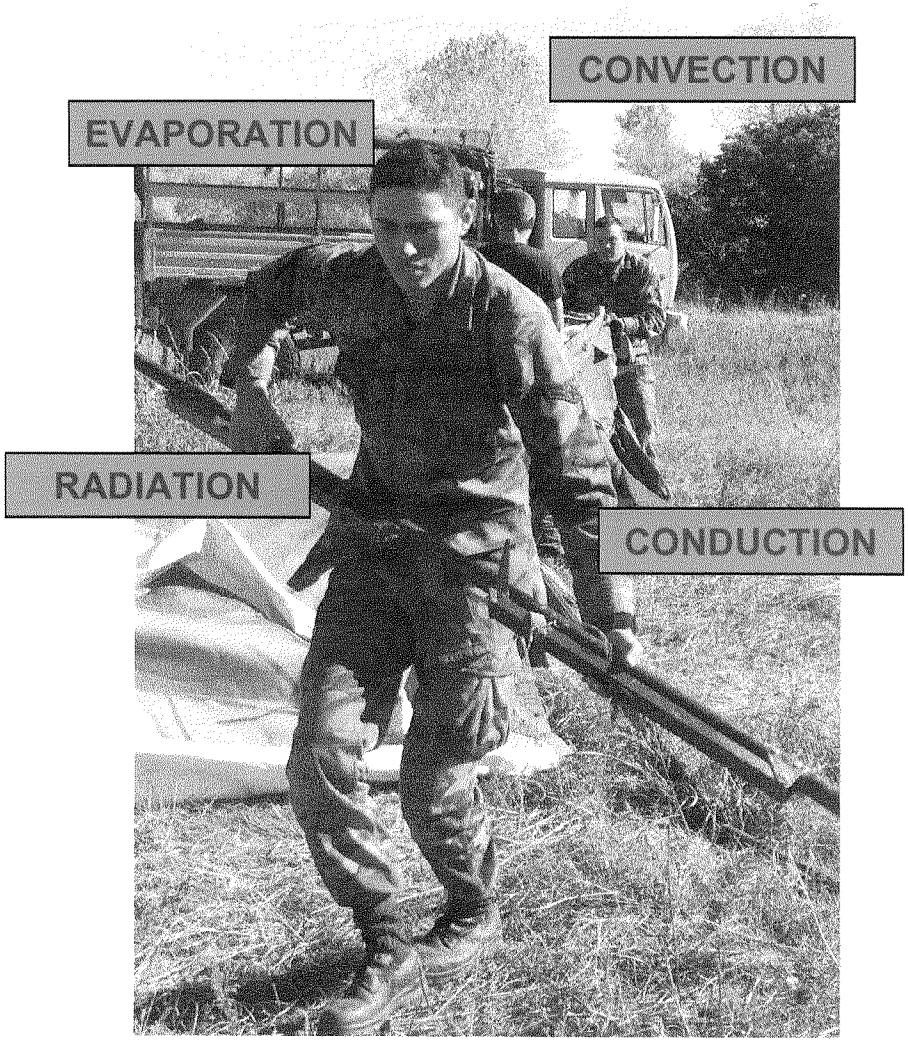
- Discuss the physiologic effect of cold on the human body, and the body's physiologic responses

- Describe the types of cold weather injuries

- Discuss risk control measures to prevent cold injuries

- Discuss appropriate preventive measures available to TRADOC soldiers and leaders

Physiologic Effects of Cold Exposure



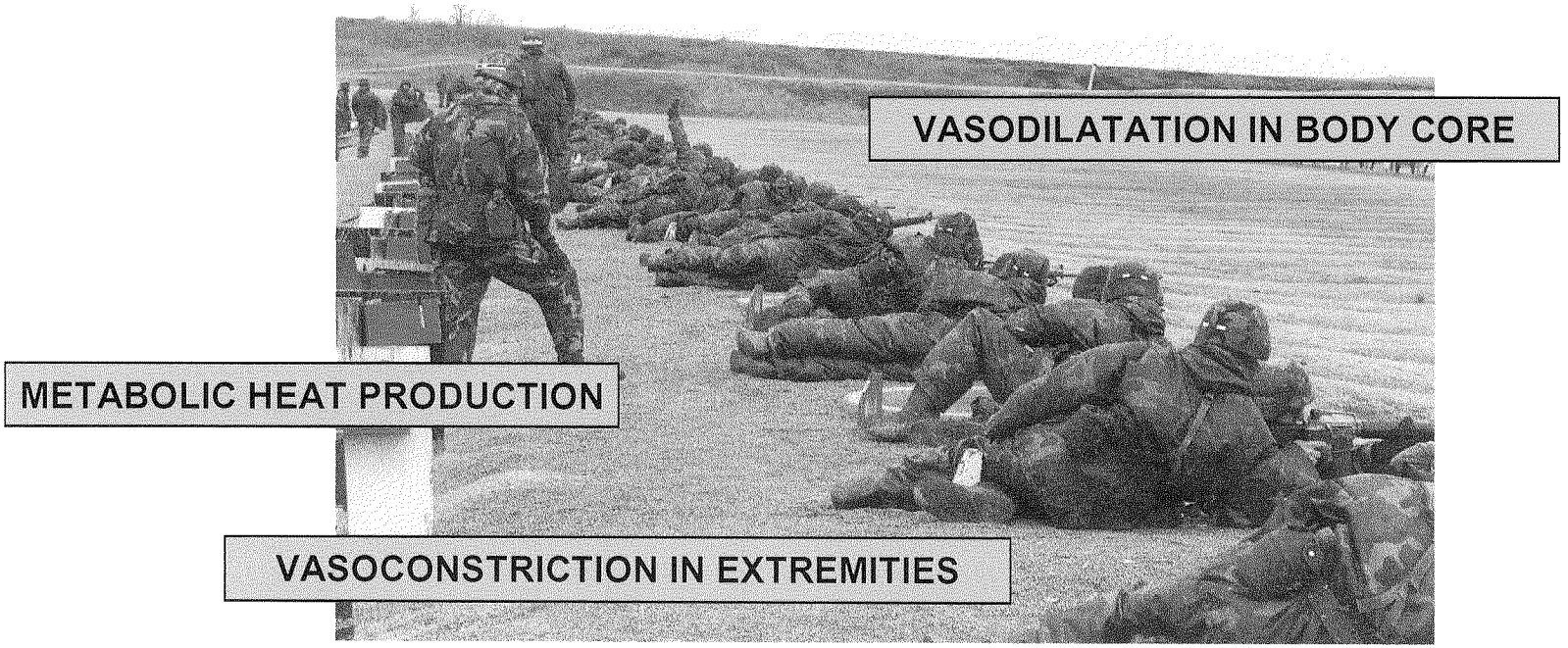
Convection—The body loses heat from air current

Conduction—The body loses heat from direct contact with object

Evaporation—Causes the body to cool from sweating

Radiation—The body loses heat by energy expenditure

Physiologic Response to Cold Exposure



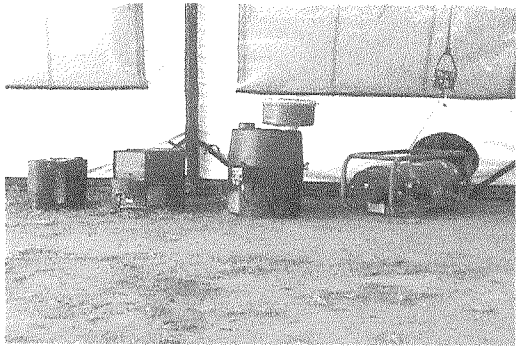
Vasoconstriction—Cold causes decreased circulation to the extremities (arms and legs, especially hands and feet)

Vasodilatation—Cold increases circulation to the vital organs

Metabolic heat production—Someone in good health, with adequate nutrition and hydration, physical activity, and shivering all increase the body's internal temperature

Types of Cold Weather Injuries

- **COLD INJURY**—Damage to body tissue from the effect of cold
  - Freezing injury
    - **Frostbite**
  - Non-freezing injury
    - **Immersion foot**
- **HYPOTHERMIA**
- **CARBON MONOXIDE POISONING**



Incidence of Cold Weather Injuries
TRADOC – 2002-2003 Season

Frostbite	1
Immersion-type	9
Hypothermia	0
Carbon monoxide poisoning	0

Criteria for Relative Risks of Cold Injury
Types of Cold Weather Injuries

Wind Chill Temperature Table

Wind Speed (mph) ↓	Air Temperature (°F)																	
	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
0	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95

RISK OF FROSTBITE (see times on chart below)

GREEN LITTLE DANGER (frostbite occurs in >2 hours in dry, exposed skin)
YELLOW INCREASED DANGER (frostbite could occur in 45 minutes or less in dry, exposed skin)
RED GREAT DANGER (frostbite could occur in 5 minutes or less in dry, exposed skin)

Prototype Risk Management Worksheet

A. Mission or Task:	B. Date/Time Group:	C. Date Prepared:
Train the Army's soldiers	1 Oct 03 - 31 Mar 04	9-Dec-03

D. Prepared By: Command Surgeon's Office, USATRADOC

E. Task	F. Identify Hazards	G. Assess Hazards	H. Develop Controls	I. Determine Residual Risk	J. Implement Controls ("How To")*
Prevent cold injuries, hypothermia, and carbon monoxide poisoning	Cold (40° F or less) Wet environment or wet clothes Wind (5 mph or more) Lack of adequate shelter/clothing Lack of provisions/ water Host factors (prior cold injury; skipping meals; low activity; fatigue; sleep loss; lack of experience; dehydration; minor illness; medications; mission-focused)	(M)	Ensure that soldiers have serviceable, properly-fitted clothing, especially footgear, headwear, and handwear; ensure clothing is kept Clean; that soldiers avoid Overheating; that clothing is worn Loosely and in layers; and that clothing is kept Dry. Ensure soldiers use lip balm and sunscreen Provide sheltered transporation and warming areas Enforce regular meal consumption, water and fluid intake, rest periods, physical activity, and change of clothes Watch soldiers with minor illnesses and/or taking medications; utilize the buddy system	(L)	Review local standing operating procedures (SOP) regularly Review local risk management worksheets regularly and accept risk at the appropriate level Maintain the buddy system Post stove watch in tents; ensure sleeping areas are well-ventilated Do not permit sleeping in or near running vehicles

K. Determine overall mission/task risk level after controls are implemented (circle one)

(LOW (L)) MODERATE (M) HIGH (H) EXTREMELY HIGH (E)

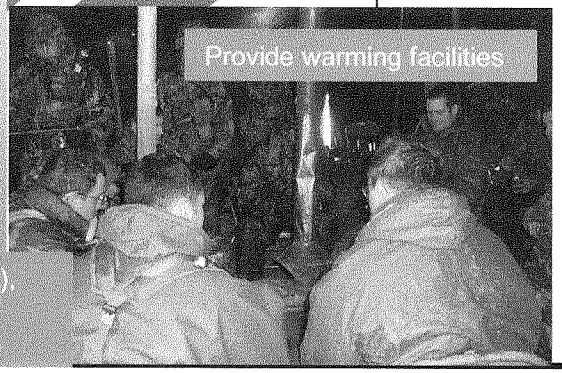
Recommended Uniform and Work Modifications

Work Intensity	Little Danger	Increased Danger	Great Danger
High **Digging foxhole, running, marching with rucksack, making or breaking bivouac**	Increased surveillance by small unit leaders; Black gloves optional - mandatory below 0°F	ECWCS* or equivalent; Mittens with liners; No facial camouflage; Exposed skin covered and kept dry; Rest in warm, sheltered area; Vapor barrier boots below 0°F Provide warming facilities	Postpone non-essential training; Essential tasks only with <15 minute exposure; Work groups of no less than 2; Cover all exposed skin, Provide warming facilities
Low **Walking, marching without rucksack, drill and ceremony**	Increased surveillance; Cover exposed flesh when possible; Mittens with liner and no facial camouflage below 10°F Full head cover below 0°F. Keep skin dry -especially around nose and mouth.	Restrict Non-essential training; 30-40 minute work cycles with frequent supervisory surveillance for essential tasks. See above.	Cancel Outdoor Training
Sedentary **Sentry duty, eating, resting, sleeping, clerical work**	See above; Full head cover and no facial camouflage below 10°F; Cold-weather boots (VB) below 0°F; Shorten duty cycles; Provide warming facilities	Postpone non-essential training; 15-20 minute work cycles for essential tasks; Work groups of no less than 2 personnel; No exposed skin	Cancel Outdoor Training

*ECWCS – Extended Cold Weather Clothing System

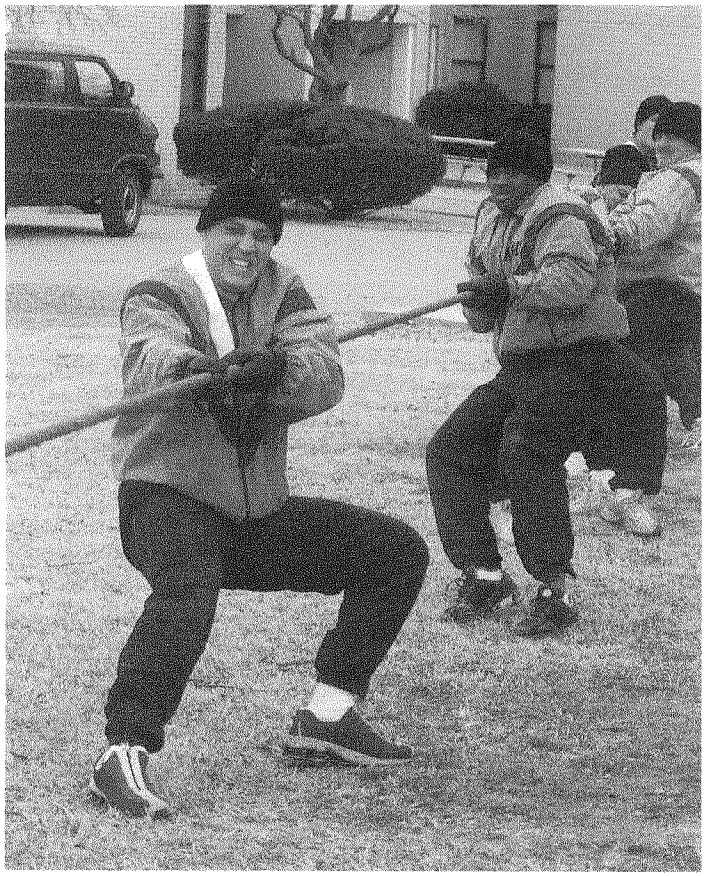
These guidelines are generalized for worldwide use. Commanders of units with extensive extreme cold-weather training and specialized equipment may opt to use less conservative guidelines.

Recommended Uniform and Work Modifications

Work Intensity		Little Danger			Increased Danger	Great Danger
		+40	+10	0	-20	-65
High Digging foxhole, running, marching with rucksack, making or breaking bivouac	Increased surveillance by unit leaders	Cover exposed skin	Optional / Mandatory		Extended cold weather clothing system or equivalent; cover exposed skin	Postpone non-essential training; essential tasks only with less than 15 min exposure; work groups of no less than 2; cover all exposed skin
Low Walking, marching without rucksack, drill and ceremony			Mandatory		Restrict non-essential training; 30-40 minute work cycles with frequent supervisory surveillance for essential tasks	Cancel outdoor training
Sedentary Sentry duty, eating, resting, sleeping, clerical work		Vapor barrier boots Below 0° F	Facial camouflage	No facial camouflage	Postpone non-essential training; 15-20 minute work cycles for essential tasks; work groups of no less than 2 personnel; no exposed skin	Cancel outdoor training
		Polypropylene underwear (worn next to skin), field jacket liner, and field jacket for temperatures +40 to -20		 Provide warming facilities		

Cold Weather Clothing -- Physical Fitness Uniform

Wind chill	T-shirt and trunks	Add jacket	Add pants, cap, and gloves
More than 60° F:	x		
Between 50°-60°F:	x	x	
Less than 50°F:	x	x	x



Resources

- TRADOC Reg 350-9, Prevention of Heat and Cold Casualties
- GTA 08-05-062, Guide to Staying Healthy
- GTA 08-06-012, Adverse Effects of Cold

Department of the Army
Headquarters, United States Army
Training And Doctrine Command
Fort Monroe, Virginia 23651-1047
16 July 2003

*TRADOC Regulation 350-29

Training
PREVENTION OF HEAT AND COLD CASUALTIES

Summary. This regulation prescribes policy and provides guidance to commanders in preventing environmental (heat or cold) casualties.

Applicability. This regulation applies to all Active Component and Reserve Component training conducted at service schools, Army training centers, or other training activities under Headquarters, U.S. Army Training and Doctrine Command (TRADOC) control.

Supplementation. Supplementation of this regulation is permitted. However, proposed supplements must be submitted to Commander TRADOC, ATTN: ATMD, 60 Ingalls Road, Fort Monroe, VA 23651-1048, for approval.

Suggested improvements. The proponent of this regulation is the TRAI comments and suggested improvements on DA Form 2028 (Recommend through channels to Commander, TRADOC, ATTN: ATMD, 60 Ingalls Suggested improvements may also be submitted using DA Form 1045 (A Proposal).

Availability. This publication is distributed solely through the TRADOC

ADVERSE EFFECTS OF COLD

CAUSE AND SYMPTOMS

FREEZING INJURY (FROSTBITE).

a. Cause. EXPOSURE TO BELOW FREEZING TEMPERATURES, COMMONLY ASSOCIATED WITH DAMP CLOTHING OVER THE INVOLVED BODY PART.
b. Symptoms. Skin is waxy, white/gray and numb while frozen
pon thawing, the signs vary with the degree of injury as
llows:
1. Mild–Moderate. Redness, swelling, clear blisters, pain
2. Severe. Blue-black discoloration, blood-filled blisters, early absence of pain

EZING ("TRENCH FOOT," "IMMERSION FOOT").
use. PROLONGED EXPOSURE TO COLD (USUALLY 32°-
° F) AND WETNESS
mptoms. Redness, swelling, blistering, bleeding, numbness.

– PREVENTION –

O KEEP WARM REMEMBER THE WORD C-O-L-D

ness and Care– Feet, socks, and clothing are warmer when
per care of the feet is imperative.

r h e a t i n g – Wearing too much clothing causes
ng, perspiration, dampness and coldness.

and Looseness-- Clothing in loose layers assures air
hich hold body heat. Adjust the number of layers to the
ire and activity. Loose-fitting clothing insures circulation and

NESS-- A wet garment is a cold garment. Wear the field
a windbreaker and to repel water.

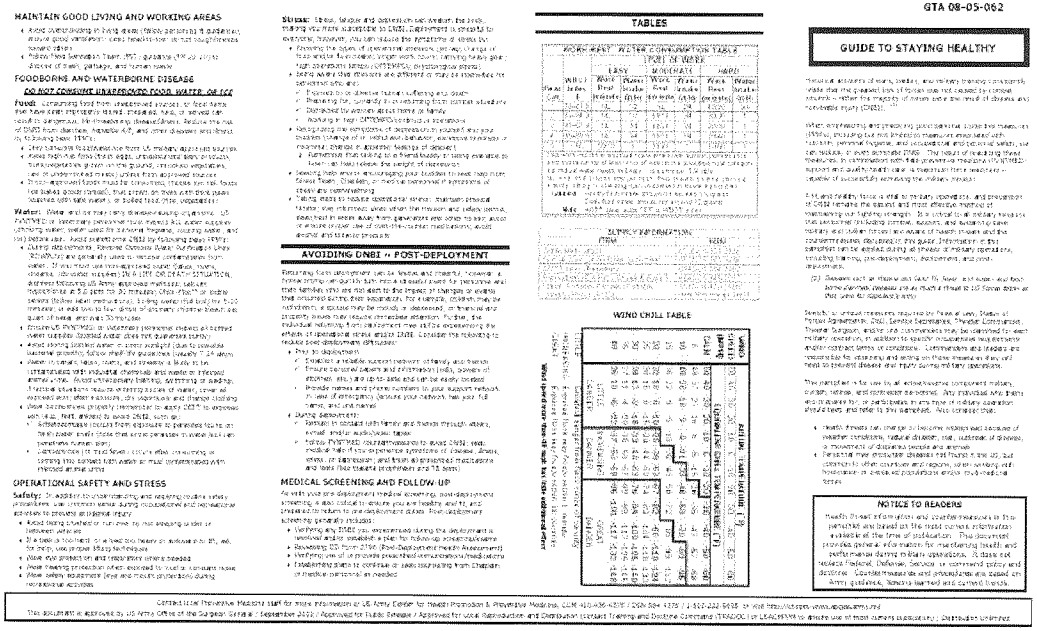
FIRST AID TREATMENT

r feet, change to warm, dry clothing, and seek medical
e. DO NOT RUB, AND DO NOT USE SNOW.

TION. US Army Training and Audiovisual Support Centers (TASC).

06-012 Headquarters, Department of the Army
Dated August 1985

Page 1 of 1



Questions or Comments?

DCSOPS&T TOMA

FY04 EXODUS

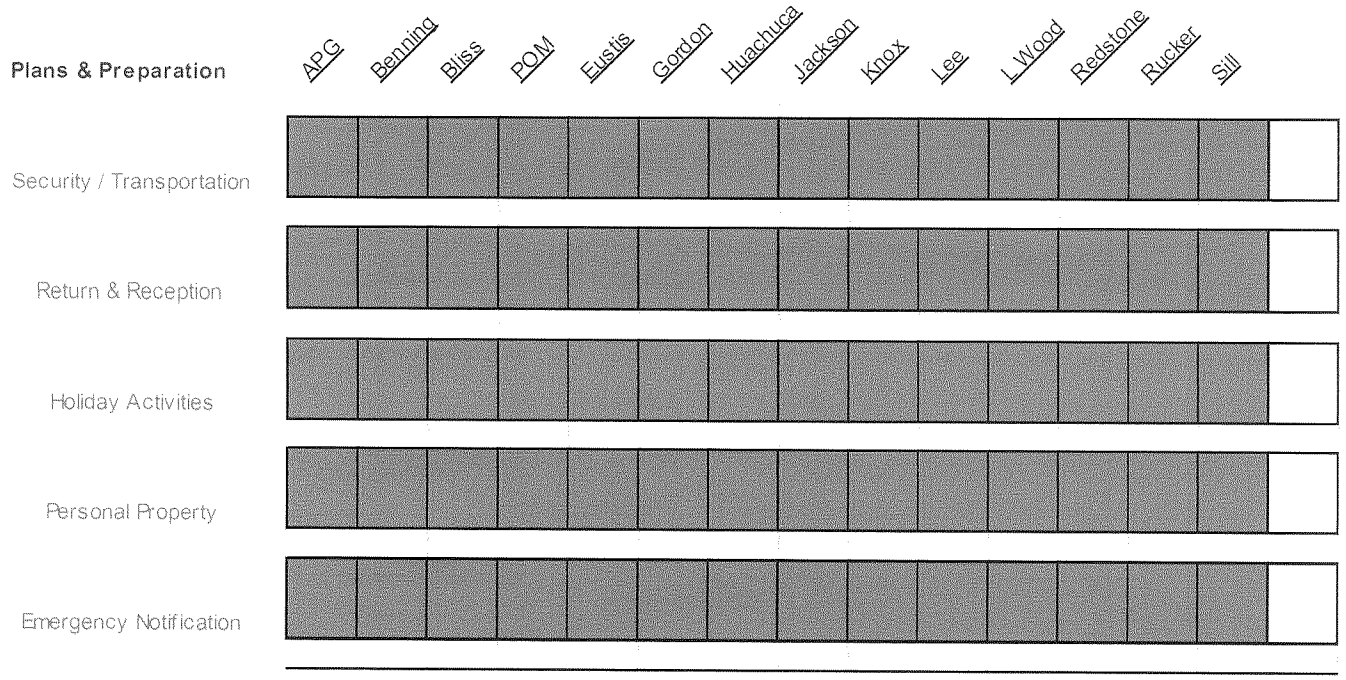
AGENDA

- FY 04 Exodus Preparation Status Slide
- Resolution of Exodus Issues from the 19 Nov 03 IET Bde Cdr VTC
- Questions/Comments

(Draft Slide)

FY 04 EXODUS

(Draft Slide)



FY04 EXODUS

- Issue- Funding for 100% urinalysis of IET Soldiers

  Status- Confirmed that IMA is funding this requirement
- Issue- Inquiry into the requirement to provide SSN of Soldiers with positive urinalysis result

  Status- Confirmed that SSN is required to be provided to TOMA then to USAREC to check moral waivers roster
- Issue- Three Kings Day holiday return date is 7 Jan 04

  Status- Completed
- Issue- Destination data disseminated to installations to ship BCT Soldiers to AIT sites

  Status- Completed

(Draft Slide)

FY04 EXODUS

QUESTIONS/ COMMENTS
(Draft Slide)

AGENDA

1. (Enclosure 5) 15 April 04 Executive Safety Council Taskings/Agenda

2. Time and place TBD

TIME	EVENT	ACTION TASKED
00:00-00:10	Opening Remarks	CG/Chairmen
0010-0025	FY03/04 Statistics	Command Safety
00:25-00:30	Pay Day Weekend and IET PT Statistics	Command Safety
00:30-00:40	TRADOC Fatality AAR	Command Safety
00:40-0:100	Heat Injury Prevention	TRADOC Surgeons Office
01:00-01:05	Physical Exams Update	TRADOC Surgeons Office
01:05-01:10	MEDPROS Update	TRADOC Surgeons Office
01:00-01:10	Water Safety	Command Safety
01:10-01:25	Seat Belt Safety	Command Safety (NTSB)
01:25-01:50	Manpower Study Back Briefs	Commanders
01:50-02:00	Closing Remarks	CG/Chairmen

Encl. 5