

## CHAPTER XII

# Supplementary Programs

Supplementary programs which may be organized and supervised by the Department of Gymnastics and Tumbling are as follows: Sub-Squad; Injured Cadets; Individual Development.

### SUB-SQUAD

The Mass Exercise department at the Pre-Flight Schools tests cadets upon arrival. The tests include push-ups, chins, vertical jump (jump and reach) and speed agility. The standards at Pre-Flight Schools are: Push-ups, 20; Chins, 6; Vertical Jump, 16 inches; Speed Agility, 33 seconds. A Physical Fitness Test (Pack Test) measuring fitness for strenuous activity is also given. The cadet, carrying a pack weighing one-third of his body weight, steps up and down on a platform sixteen inches high for five minutes. Each cadet is subjected to a final test identical to that given at entrance, in order to record improvement.

Cadets who do not meet the entrance standards usually lack upper body strength in general. By means of daily sub-squad activities, work can be prescribed to meet the deficiency. Chart II shows that an inferior cadet may be brought up to the standards of the base within a five-week period.

The following plan for Sub-Squad has been evolved at a Pre-Flight School.

First: Hold sub-squad practice twice each week for one hour for battalions in the first to fifth weeks of their twelve-week program.

Second: Beginning with the sixth week for each battalion, sub-squad cadets report for concentrated work during the regular calisthenics period of twenty five minutes duration. Such a plan should obtain effective results.

### ADMINISTRATIVE FORMS

Forms which may be used effectively in the administration of the sub-squad appear below. (Charts II, III, IV, V)

NAME	COMPANY AND PLATOON	16	20	24	28			DATE PASSED	CHIN	PUSH UPS
Joe Gish*	H-3	√						11/1 11/16	6	20
D. J. Doe (P)	G-2	√√								
C. L. Smith (C)	I-1									
W. T. Dore*										

Code: \*—Weak in both. C—Chins only. P—Push ups Only. √—Present at start of class. √√—Present both times. Blank space—Absent.

CHART I

This is used at one of the pre-flight schools for mustering and checking chins and dips passed by cadets in the sub squad.

Cadet	Test	Chins	Push-ups	Vertical Jump	Dips Parallels	Rope Climb without Legs	Leg Lifts and Sit-ups	Hold Legs in "V" Position (2 min.)	Extension Presses (Weights)
THF	Initial	3 (O)	4	16	0	0	15/15	30 s.	15
	2nd Wk.	6 (O), 7 (R)	12	18½	1	0	20/20	50 m.	20
	3rd Wk.	7 (R)	10	18	2	7	25/25	1 m.	25
	4th Wk.	6 (O)	17	18¾	1	15	40/40	1 m., 27 s.	22
	5th Wk.	7	20	20	6	11	45/45	1 m., 35 s.	21
WJP	Initial	2 (O)	11	15½	0	0	25/15	1 m.	14
	2nd Wk.	3 (O), 5 (R)	24	17½	0	0	25/20	2 m.	18
	3rd Wk.	7 (R)	21	17½	6	7	30/30	2 m.	20
	4th Wk.	3 (O)	22	18	6	12	40/40	2 m., 15 s.	22
	5th Wk.	7	25	19½	11	12	40/40	1 m., 30 s.	22
LRR	Initial	2	13	15	3	0	15/15	30 s.	11
	2nd Wk.	3 (O), 6 (R)	17	17¼	7	0	20/20	50 s.	15
	3rd Wk.	6	17	17½	7	12	25/25	1 m., 45 s.	15
	4th Wk.	6	20	18	9	15	40/40	2 m., 27 s.	17
	5th Wk.	7	21	19½	10	12	75/150	2 m., 51 s.	15
WEI	Initial	1	15	13½	0	0	15/15	50 s.	15
	2nd Wk.	4	21	16¾	6	0	20/5	2 m., 5 s.	19
	3rd Wk.	5	25	19	8	0	30/0	2 m., 51 s.	18
	4th Wk.	5	25	20¼	12	5		4 m.	18
	5th Wk.	6	25		14	8	40/20	3 m., 15 s.	19
TED	Initial	0	15	15½	1	0	20/20	40 s.	15
	2nd Wk.	4	20	17¾	5	0	40/40	1 m., 15 s.	19
	3rd Wk.	5	21	20	8	7	45/40	1 m., 20 s.	18
	4th Wk.	6	21	19½	10	8	40/45	1 m., 35 s.	19
	5th Wk.	6	22		10	10	40/40	2 m.	19
EJC	Initial	0	5	15	0	0	15/15	46 s.	—
	2nd Wk.	1 (O), 4 (R)	11	17¼	0	0	20/20	52 s.	—
	3rd Wk.	4 (R)	10	17½	0	6	25/25	1 m.	9
	4th Wk.	5 (O), 6 (R)	18	16¾	2	9	40/40	1 m., 5 s.	13
	5th Wk.	5	18	18½	2	9	40/40	1 m., 10 s.	13
HLJ	Initial	3	15	15	0	0	15/10	1 m.	8
	2nd Wk.	5	19	15	0	8	22/10	1 m., 15 s.	10
	3rd Wk.	7	21	14½	1	10	25/25	1 m., 30 s.	10
	4th Wk.	8	22	15	4	11½	30/30	2 m.	14
	5th Wk.								
RGS	Initial	0	4	16	0	0	15/15	30 s.	10
	2nd Wk.	2	15	18	1	0	20/20	50 s.	13
	3rd Wk.	3 (R)	13	18	3	0	25/25	1 m.	15
	4th Wk.	4	20	18½	6		40/40	1 m., 50 s.	17
	5th Wk.	5	20	19¼	7	0	50/50	2 m.	15

CHART II. DEVELOPMENTAL GYMNASTICS SUB-SQUAD IMPROVEMENT CHART

Abbreviations used: O—Ordinary, R—Reverse, m.—Minutes, s.—Seconds.

CADET

			Rope Climb	$\frac{1}{2}$
			Push Up Low Bars	15
			Back Dips	35
			Wrist Twists	4
			Chins	4
			Push-ups (Dips) Parallel Bars	6
			Hang Walk Parallel Bars	2
			Fence Vault	4 ft.
			Wrist Walk Parallel Bars	3
			Grasshopper Walk Parallel Bars	1
			Walk Balance Beam Eyes Closed	$\frac{1}{2}$
			Arm Extension	25
			Arm Curls 35# Weight	20
			Inverted Hang	1

CHART III. TESTS FOR SQUAD B

NOTE: These tests are designed to increase upper body strength. The sub-squad is divided into *two groups*—the new and slow and the advanced. In order to move out of the new and slow group, a cadet must pass the above tests.

CADET

			Hip Circle (Belly Grind)	2
			Chins	5
			Push-ups (Floor)	20
			Push-ups (Low Bars)	20
			Vertical Jump	18"
			Back Dips (Low Bars)	20
			Hang Walk Leg $\frac{1}{2}$ Lever	1
			Grasshopper Walk (Jump)	1
			Vault over Both Bars	
			Dips	8
			Inverted Hang	3
			One Arm Chin (Graspwrist)	
			Forward, Backward Rolls, Parallel Bars	
			Chins, Legs $\frac{1}{2}$ Lever	3
			V Position	2 min.
			Rope Climb	1
			Leg Lifts and Sit-ups	40
			Squat Balance	10 sec.
			Skip over Stick (F & B)	3
			Skin the Cat (2)	3
			Straight Arm Lift (Wts.)	1

CHART IV. TESTS FOR SUB-SQUAD A

PERSONAL RECORD OF

CADET \_\_\_\_\_ CO. \_\_\_\_\_ PLAT. \_\_\_\_\_

Gymnastics and Tumbling Department

Purpose: Break previous record. Presents a record of gradual improvement in strength (upper torso).  
 Checking: Three or more events must be attempted in succession.

	EVENT	EFFORT												PROMOTED TO:	
		1	2	3	4	5	6	7	8	9	10	11	12		
Mon.	Rope Climb														
	Push-ups (L bar)														
	G. Walk														
Tue.	Wrist Twist														
	Fence Vault														
	Chins (Reverse)														
Wed.	Chins (Ordinary)														
	Wide Arm Back of Neck														
	Dips on P Bars														
Thurs.	Arm Curls														
	Arm Extension														
	Leg Lift, Sit-ups														
Fri.	Push-ups (Floor)														
	Hip Circles (Belly Grind)														
	Position														

- Three tests given to each cadet daily. 30 minutes.
- Squad A—Squad B—work on squad tests 30 minutes.
- Abdominal work given to all cadets, 30 minutes.

Cadet \_\_\_\_\_ Co. \_\_\_\_\_ Pl. \_\_\_\_\_

CHART V. SUB-SQUAD STRENGTH IMPROVEMENT SCALE  
 PERSONAL RECORD OF CADET

## SUB-SQUAD ACTIVITIES

**Horizontal Bar\***

Ordinary grasp; jump to bent arm hang; lower slowly.  
 Cross hang; mixed grip; chin up; raise knees upward.  
 Jump to bent arm hang; ordinary grip; raise knees alternately.  
 Reverse grasp; chin.  
 Cross hang; mixed grip; jump to knee hang.  
 Ordinary grasp; bent arm hang; travel sideways.  
 Ordinary grasp; chin; raise knees to inverted squat hang.  
 Cross knee hang; mixed grip travel forward and backward.  
 Jump to hand knee hang; left (right) between hands; chin up five times.  
 Cross knee hang; mixed grip; chin up five times.  
 Cross hang, bent arms; raise knees; travel forward.  
 Ordinary grasp; inverted squat hang; lower slowly bending arms to chin;  
 extend arms slowly to straight hang.  
 From straight hang raise both knees to a double knee hang; return legs to  
 straight hang; bending arms to chin extend arms slowly.  
 Swinging in bent arm position; reverse grip.  
 Hand knee hang double; lower slowly to hang rearways.  
 Hang; release one hand and grasp wrist of other; alternate several times.  
 Knee hang left; knee swing up; lower backward.  
 Pull up to upward arm hang; left then right; lower to bent arm hang; extend  
 arms to straight hang.  
 Knee circles forward with reverse grasp; backward with ordinary grasp.  
 Hip swing up.  
 Hip circle.

**Side Horse\*\***

Jump to front support; left leg over to side stride seat; swing right leg over  
 and dismount to cross stand left sideways.  
 Repeat above with right leg.  
 Jump to front support; left leg over; right leg over to support rearways; jump  
 dismount.  
 Jump to front support; cut left leg over; swing right leg over with a half turn  
 left to a cross stride seat on neck. Grasp pommel and front vault dismount.

\* See pp. 59, 66, 69, 97, 299, 315, 319, 329, 393, 447.

\*\* See pp. 60, 64, 65, 67, 301, 318, 319, 331, 446, 453.

Repeat to croup side.

Jump to front support; left over; right over; left back; right back; jump to deck and flank vault left.

Run and squat left leg through to cross side seat; support; right over, left back, right back; jump to deck flank vault right.

Run, squat both legs through to support rearways; left back; swing right leg over with half turn to seat on croup. Grasp pommel and push off end.

Jump to front support; squat left through to a cross stride seat. Change left and right simultaneously; repeat several times; return to stand and rear vault left.

Jump to front support; with preparatory swing right flank both legs left to support rearways; cut right back; left back to front support; jump to stand and rear vault right.

Jump to front support; feint left; feint right and continue right leg cutting left hand off and dismount to a cross stand left sideways.

Jump to support rearways cutting right leg under left hand; swing left leg under left hand with half turn to cross stride seat on croup; feint right and dismount to cross stand right sideways.

Same to opposite side.

Same as above and in place of feint execute scissors backwards twice; feint right and dismount as above.

Same other side.

Jump to a preparatory swing right; flank both legs under left hand; flank both legs under right hand; feint (single) left and dismount to cross stand left sideways.

Same to opposite side.

Jump right leg under right hand; left under left hand right back; left back; feint right and single rear to cross stride seat in saddle; half turn right dismount.

Same left.

Single leg swing; double leg swing; feint and single rear vault.

#### ***Stall Bars\****

Stand frontways on lowest rung; grasp hip high; bend knees deep and straighten; repeat ten times.

Hang frontways; arch head and legs backward; repeat.

Hang rearways; raise legs (straight) alternately.

Jump to bent arm hang from stand frontways; repeat.

Stand frontways on lowest rung; grasp hip high. Bend and straighten hips. Repeat.

Hang rearways; alternately raise knees; straighten and lower.

Hang stand right sideways; chin ten times; change to left sideways and chin ten times.

Hang rearways; raise both knees; straighten and lower; repeat.

Hang frontways; keep grip; walk up close to hands as possible; walk down.

Stand frontways; place left foot on fifth rung; hook toe; knees straight neck rest; forward and backward trunk bending; keep leg straight.

Variation: On forward trunk bending grasp ankle and pull down.

\* See p. 335.

Execute with other leg.

Stand right sideways; hook toe with straight leg on fifth rung. Execute a side scale; left hand extended down side of left leg; right hand extended over head along ear. Straighten trunk and grasp stall bars with right hand swinging left hand sideward upward over head; repeat; several times to both sides.

Stand rearways; hook right toe; straight leg in fifth rung; execute a front scale; arching back; bend trunk forward grasping left ankle and spring trunk five times.

Same with other leg.

Hang rearways; raise both legs forward, lower and repeat. (Straight legs)

Walk upwards half way; grasp hip high; bend left knee deep and lower right leg; return and repeat right.

Support lying position frontways on floor; feet placed on third rung dipping. Sit on deck; hook toes under a rung; trunk raising and lowering in neck rest position.

### **Rings\***

Jump to bent arm hang; raise both knees; five to ten times.

Step backward with rings as far as possible; jump and raise knees as high as possible (arms straight) swing forward and backward; drop off on backward swing.

Jump to inverted squat hang; feet against the rings. Return to bent arm hang; extend arms slowly to straight hang; repeat three times.

Upper arm hang; grasp rings in front; swing forward and backward several times; assistant stop swing if rings are high.

Step backward with rings as far as possible; jump to bent arm hang; swing forward and backward (try not to touch floor).

Knee hang left over left arm; chin five times. Return to straight hang; knee hang right over right arm; chin five times; return to bent arm hang; extend arms slowly to straight hang.

Double knee hang left; return to inverted squat hang; double knee hang right; return to inverted squat hang; lower legs to a bent arm hang; extend arms slowly.

Upper arm hang; long swings; with knees raised forward.

From hang; feet on deck; circle through hang lying position frontways; sideways; rearways; several times.

Jump to inverted balance hang; cut off left; to bent arm hang.

Same as above cut right and left; after each cut come to bent arm hang returning to inverted balance hang before cutting off to other side.

Upper arm hang; swing long forward and backward; executing a half turn on the end of each swing.

Nest hang; return to bent arm hang; extend arms slowly to straight hang.

Turn over backward to stand; dislocate to stand. Use mat roll for safety.

Step backward with rings as far as possible; jump to bent arm hang, knees up; swing forward and backward.

Jump to inverted squat hang; extend to inverted hang, feet against ropes; return to inverted squat hang; lower to bent arm hang.

\* See pp. 301, 317, 319, 335.

Step backward with rings as far as possible; jump to bent arm hang and at end of forward swing straighten arms and immediately chin with the backward swing.

Nest hang straighten one leg backward; alternate; return to bent arm hang.

Jump to inverted hang; lower to hang rearways; return to inverted squat hang; return to bent arm hang.

Straight arm swing with turns on end of swing.

#### ***Parallel Bars\****

Jump to hang lying position frontways; chin up ten times.

Jump to cross hang lying frontways; feet placed on bars; chin ten times.

Jump to knee hang double on far bar; chin ten times.

From cross stand; frontways; knee hang left; return to bent arm hang; knee hang right; return to bent arm position; raise legs to inverted squat; hang lower rearways to stand; return.

From cross stand rearways; turn over backward to stand; repeat and return to stand.

From cross stand rearways; turn over backward to stand; return to knee hang; return to stand.

#### ***High Parallel Bars***

From cross stand frontways; jump to knee hang over both bars; push to straddle seat in front of hands. Turn to side straddle seat; under grip leg swing; dismount.

Jump to knee hang over left bar; push to outer cross seat; swing to cross seat opposite; jump off.

From cross stand rearways; turn over backwards straddling legs; push up to straddle seat in rear of hands; change to outer cross seat; jump.

Support (lower bars to minimum height): Cross support; walk to end of bars—Cross support; hop to end of bars—Cross support figures; straddle seats; cross riding seats; dismounts, vaults.

#### ***Cargo Net\*\****

Up the cargo net and down the ropes. (See plate 480.)

#### ***Ropes\*\****

#### ***Medicine Ball Activities†***

Medicine Ball activities are well suited to the needs of the sub-squad, of injured cadets, and the individual development room.

*Throwing and Pushing.*—From toes: extend arms; bend at waist; throw or push from toes; shoulder high: flex arms; extend arms; push forward; behind head: flex arms behind head; extend arms; throw ball forward!

*Variations.*—Knees, waist, chin and over the head height.

\* See pp. 59, 61, 63, 68, 69, 300, 316, 319, 332, 392.

\*\* See Chapter IX.

† See pp. 276, 336.



- Throw for Height*—Forward: back straight; knees bent; raise on toes; backward over head: knees bent; raise on toes; extend arms over head!
- Throw for Distance*.—Forward, backward over head, sideward: one arm, both arms; sideward with a turn: one arm, both arms.
- Throw Backward Through Straddle Legs*.—As you catch the ball, jump and turn; bend and throw between legs; jump again to starting position!
- Shot Put Forward*.—Standing, deep knee bend, kneeling, sitting.
- Rise on Toes and Throw*.—From chest, from right shoulder, from left shoulder, from behind head, from right side arms extended, from left side arms extended.
- Circle in Front of Body*.—Start from over head circle down right side; circle up left side and throw from over head.
- Charge Forward*.—Throw from overhead: starting position; charge forward with left (right) foot and throw forward; throw from toe: starting position; charge forward with left (right) foot, bend forward and throw from toes!
- Variations*.—Charge forward with left (right) foot; throw from left (right) shoulder; charge forward with left (right) foot; twist and throw from right (left) shoulder.
- Leg Extended to Rear, Flex Other at Knee*.—Extend left (right) leg to rear; flex right (left) leg at knee; arms flex at chest; extend arms and push ball forward!
- Variations*.—Throw from left (right) shoulder; throw from overhead; throw from left (right) toe.
- Step Forward with Left (Right) Foot*.—Drag right (left) foot. Throw from right (left) side (bowling step).
- Knees Fully Bent, Throw to Partner Standing*.—Throw from chest: knees fully bent; back straight; arms flex; knees fully bent; back straight; extend arms forward; throw from behind the head: knees fully bent; back straight; arms flex behind head; knees fully bent; back straight; extend arms overhead and throw!
- Variations*.—Throw from left (right) shoulder; arms extended down left (right) side and throw.
- From Seat on Floor Push Ball with Feet*.—Bring knees into chest; feet on ball; extend legs; push ball to partner!
- From Seat on Floor*.—Throw from right and left shoulder; throw from chest; throw from behind head; throw from arms extended vertical.
- Lie Prone, Arms Extended*.—Extend arms; raise legs; raise the ball!
- Variations*.—Raise ball and legs together; raise ball and legs together and hold for five seconds; raise ball and legs together and push ball to partner.
- Lie Supine*.—Ball on feet; extend arms over head; roll back; toes on ball; raise and throw; spread legs; extend arms overhead; roll back; spread legs; throw between legs before coming up!
- Seat on Floor, Spread Legs*.—Reach out and touch deck with ball; touch left toe, right toe; push from chest!
- Ball on Knees*.—Roll back ball on abdomen, come up and throw!
- Lie on Back*.—Kick ball to partner, standing.
- Variations*.—Form a circle, lie on deck, feet upward. Keep ball in air.

**Group Medicine Ball Drills\****Circle Position Drills*

Use a 15 medicine ball for a group of twenty men. Pass the ball rapidly from man to man.

*Variations:*

Use two balls. Object is to pass balls with such rapidity that one man is caught with all the balls.

Use three balls.

Instructor call *Reverse Direction*.

All men stand with upraised arms. Pass the ball from man to man. Keep the lower extremities facing to the front. Rotate the upper part of the body.

All men bend forward at the hips, hands almost touching the deck. Pass the ball rapidly from man to man at all times just keeping the ball clear of the deck.

*Variations:*

Call reverse of directions.

Men stand shoulder to shoulder. With both hands push the ball into the abdomen. (Caution men to tense belly muscles.)

*Variations:*

Call reverse of directions.

Men lie down on the deck, feet pointing toward center and close together. Lift the feet. Raise the arms. Hand protect the face and are used to keep the ball in center of circle. Use three or four balls, and keep throwing them in as they are kicked out. This is a juggling exercise and not a kicking contest.

*Two Lines Position Drills*

Men sit facing each other in pairs, feet about three feet apart. One grasps ball, lies back, and throws ball from sitting position.

*One Line Position Drills*

Men take supine position. Place medicine ball between feet. Arms are extended along side, palms downward. Lift medicine ball.

Men take supine position, knees to chest, feet close together in kicking position. Leaders toss ball onto feet. Object is to kick ball over his head.

*Variations:*

Use two lines with one line alternating as to throwing or kicking.

*Relays\*\* (Two Lines Position Drills)*

Form two columns, Number 1 man holding medicine ball, legs apart. The ball is rolled on the deck between the legs. The last man gets the ball and runs with same to head of line and repeats. This is continued until Number 1 man is back in original position.

*Variations:*

Men take same position as above, ball is passed between legs, last man runs with same to head of line and passes ball down the line over the heads.

The last man then runs to head of line and passes ball between legs, alternating between legs and over head.

\* See pp. 274, 336.

\*\* See Chapter XIV.

*Throwing Position*

Feet apart, flex at waist, grasp ball. On deck and with combined lift with upper body, push with legs and throw with arms. Throw ball over head for distance or height. Distance, 50 feet; height, 30 feet.

*Medicine Ball Games\**

Sub-squad interest may be stimulated by medicine ball games.

*Medicine Ball Relays*

(See Chapter XIV.)

*Straddle and Turn. (Work in threes.)*

A throws ball to B in the center. B throws ball between his legs to C and turns in time to catch it from C. Continue until men want to change places.

*Medicine Ball Bowling*

The medicine ball is thrown out and rolled along the deck at nine Indian clubs which represent the pins.

*Medicine Ball Wrestling*

Two teams form a circle; two opponents in circle, representing teams, try to wrestle ball away from each other. The side which succeeds the greatest number of times wins.

*Medicine Ball Basketball*

The game of basketball is adapted depending upon the number of men on the teams.

*Medicine Ball Volleyball*

The game of volleyball can be modified by catching instead of hitting the ball.

The above games are presented to show how medicine ball variations can enhance the program.

**INJURED CADETS**

Under the supervision of the Department of Gymnastics and Tumbling, injured cadets may participate in special prescribed activities until they can resume regular activities in the sports program and the instruction class. Good physical condition may be maintained in spite of handicap, and no time is lost in training.

The objectives of these special activities are:

1. To maintain and improve general condition and strength already acquired.
2. The increase and equalization of flexibility to the injured joint or member of the body through exercise.
3. The strengthening and readjustment of muscle control.
4. To discourage "goldbricking" on a weak excuse to avoid the instructional and Sports Program.

**ADMINISTRATIVE FORMS***Method of Organization*

The various pieces of equipment may be arranged in a series of stations. The cadets may then be divided into small groups and proceed from station to station.

Forms which may be used effectively for the injured cadet activities are shown on the following pages. (pp. 278-279)

\* See pp. 274, 336.



CADET \_\_\_\_\_  
 TYPE OF INJURY \_\_\_\_\_  
 LENGTH OF WORKOUT \_\_\_\_\_ TIME TO LEAVE \_\_\_\_\_

LEG INJURY		ARM AND HAND INJURY			
	Min.	Max.		Min.	Max.
Dips on parallel bars	3	_____	Chest Weights routine	10 min.	_____
Chins (ordinary)	5	_____	Bicycle	100	_____
Chins (reverse)	5	_____	Arm Curls (10-20 lb. barbells)	15	_____
Push-ups (low parallel bars)	10	_____	Sit-ups	50	_____
Wrist Twist	4	_____	Leg Lifts (medicine ball)	10	_____
Back Dips	20	_____	Leg Squats (50-75 lb. barbells)	25	_____
Rope Climb (hands and feet)	10 ft.	_____	Sidebending (50-75 lb. barbells)	15	_____
Arm Curls (10-20 lb. barbells)	10	_____	Sit-ups (inclined board)	20	_____
Arm extension (10-15 lb. barbells)	10	_____	_____	_____	_____
Sit-ups (inclined board)	20	_____	_____	_____	_____
Support Walk push-ups	1	_____	_____	_____	_____
Grasshopper Walk (push-ups)	1	_____	_____	_____	_____
Leg Lifts, sit-ups	20/20	_____	_____	_____	_____
Arm Curls (chest weights)	_____	_____	_____	_____	_____

This cadet has satisfactorily completed the workout.

\_\_\_\_\_  
 Officer in charge

CHART VIII. REPORT OF GYMNASTIC WORKOUT FOR INJURED CADETS  
 DURING SPORTS PROGRAM

ACTIVITIES FOR CADETS WITH LEG INJURIES

*Development of Arms, Chest and Back Muscles\**

- Rope Climbing
- Chinning. (Chin as many as possible.)
- Push-ups or Dips on Parallel Bars.
- Medicine Ball Activities.
- Weight Lifting:
  - Arm Curls. Press-ups. Straight Arm Lift. One Arm Lift. Wrist Twist.
- Parallel Bars:
  - Support Position; arms straight; walk across. Hop Across. Grasshopper Walk.
  - Grasshopper Hops.
  - Travel across three Parallel Bars end to end using the above as means of travel. End up with as many dips as possible.
  - Dragon Crawl on top of three parallel bars.
  - Pull over to Inverted Hang on ends of bars.

\* See also activities for Sub-Squad on pages 267-277.

**Pulley Weights:\***

For upper back muscles. Face machine; work in cycles of three movements; arms straight; hands downward, sideward and upward. Good load for average cadet, 40 cycles.

***Development of Neck and Upper Back Muscles***

Head Balances.

Wrestlers' Bridge.

Work against resistance of hands, sides of head, back of head and under chin.

***Development of Balance***

Squat Head Balance.

Squat Balance.

Elbow Balance.

Forearm Balance.

Head Balance.

Hand Balance.

Hop on One Foot.

***Development of Abdominal Muscles***

Leg Lifts and Sit-ups (35 to 40 each).

"V" Position (two minutes).

Half Lever on Balance Beam; Parallel Bars; and Deck.

Stall Bar exercises:

Span Bending.

Angle Support Stretch; Arms Bend Stretch.

Back toward bars; grasp bars with hands; travel down bars keeping knees straight.

Hanging on Stall Bars with back to bars do leg raises; bend knees; knees straight; one leg, and alternate both.

Lie supine; hook toes under bars; raise to sitting position; grasp bars; return to supine position.

Same as above except toes under fourth or fifth bar.

Flutter Kick.

Leg Lowering Sideways.

Inclined Board.

Rowing Machine.

***Agility***

Punch Light Bag.

Punch Heavy Bag.

Ride Bicycle (one leg).

***If Injuries Permit***

Rope Climb and Vertical Pipe (use hands and feet).

\* See Pulley Weights on pages 284-285.

Tiger Stretch.  
 Skip Rope (one leg).  
 Leg Lifts with Medicine Ball.  
 Ride Bicycle.

#### ACTIVITIES FOR CADETS WITH ARM AND CHEST INJURIES

##### *Development of Abdominal Muscles*

Leg Lifts.  
 Flutter Kick; prone or supine.  
 Sit-ups.  
 Crossing Legs, 45 degrees.  
 Legs Raised; lower to left and right.  
 Arch Up; from prone position; hips on deck.

##### *Development of Leg Muscles*

Ride Bicycle Around Track.  
 Run Around Track.  
 Walk Around Track.  
 Run Up and Down Ladder (Stairs) in Field House.  
 Squat Jumps.

##### *Light Arm Work*

Bar Bell Routine (one hand).  
 Pulley Weights (light).

##### *Agility*

Rope Skipping.  
 Bicycle Riding.

##### *Development of Foot and Lower Leg Muscles (Especially for cadets with weak feet and low arches)*

Use Toes to Tie Knots in Skipping Rope using three-quarter inch sash cord.  
 Use Toes to Pick Up Marbles and Place in Jar or Can on Opposite Side of Other Leg. Also, Shoot Baskets with Marbles and Can.  
 Creeper. Sit with back to wall; bring heels to buttocks; plant or flex toes; raise heels and pull legs out in successive movements. When legs are straight or nearly so reverse process back with heels to buttocks.  
 Walk in Sandbox; Plant or Flex Toes; Grasp with Toes; Sandbox 3' x 6' x 12" deep.  
 Sit; Do Alternate Knee Bends Keeping Both Heels off the Floor and Feet in a Position of Abduction and also Dorsi-flexed.

##### *If Injuries Permit*

One Hand Chin. (Other hand grip wrist.)  
 One Hand Push-up.  
 Dips on Parallel Bars.

Wrist Twist.  
 Rope Climb.  
 Hanging Ladder.  
 Bag Punching.  
 Tiger Stretch.

After the injured cadets have spent a reasonable amount of time (30 to 40 minutes), doing the suggested exercises for leg injury or arm and hand injury at their own speed they are then given another 20 to 30 minute work out. The work out depends upon the number of cadets present and the prevailing type of injury, and include:

Free Hand (Calisthenics).  
 Climbing Poles.  
 Horizontal Ladder.  
 Pulley Weights.  
 Medicine Ball.\*  
 Stall Bars.\*\*  
 Exercises with Partners.  
 Self Testing Doubles.  
 Exercises on Benches  
 Follow the Leader.

#### FREE EXERCISES

##### **Standing**

*Warm Up Running in Place*

*Side Twister.*—Twist left (right)—Hands on hips—Bend left (right)!

*Bent Stretcher.*—Hands overhead—Bend left (right)!

*Go High, Go Low.*—Arms extended overhead—Raise on toes—Bend and touch toes—Knees and legs straight!

*Weather Vane.*—Arms shoulder high sideways, twisting left, right!

*High Stepper.*—Raise left knee and pull into chest—Right—Alternate.

*Charger.*—Charge forward left (right) foot, arms sideways—Bend forward and touch toes!

*Jumping Jack.*—Jumping feet spread, arms overhead—Jumping feet together, arms at side!

*Toe Tapper.*—Feet spread; arms shoulder high sideways—Bend—Left hand touch right toe!

*Side Stepper.*—Lunge sideways left, right; alternate—Hands on hips or arms sideways shoulder high!

##### **Lie on Deck (Belly Down)**

*Belly Rocker.*—Hand on hip or back—Rock back and forth on belly!

*"Ugh."*—Extend arms to front overhead—Raise arms, head, legs off deck—

\* See Medicine Ball Activities on Pages 276 and 277.

\*\* See Stall Bars Activities on Pages 272 and 273.



Lower!

"Push 'Em Up Tony."—Push up!

### Sit on Deck

*Bend Low.*—Hands behind head—Feet forward and together—Bend forward—Touch knees with one or both elbows!

*Airplane.*—Feet spread, arms sideways, shoulder high—Left hand touch right toe!

*Double Up.*—Feet together in front—Bring knee into chest—Right, alternate; both together!

### Lie on Deck (Back)

*Leg Lifter.*—Lie on back—Arms at side—Raise legs up and lower!

*Easy Does It.*—Lie on back—Arms overhead—Raise up and touch toes with hands!

*Joy Ride.*—Inverted Bicycle.

### CLIMBING POLES

Climbing Poles are used to strengthen the upper body, arm, shoulder, back and abdominal muscles. Some of the activities used (See pp. 182, 183) are the following:

One Pole Climb

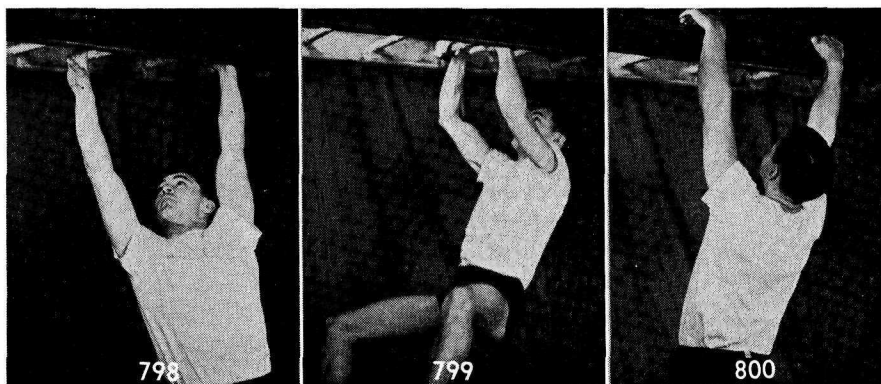
Inverted Climb

Two Pole Climb (Knees Inside and Knees Outside)

Hang on Two Pipes

- (1) Half Lever
- (2) Inverted Hang
- (3) Skin the Cat

### HORIZONTAL LADDER

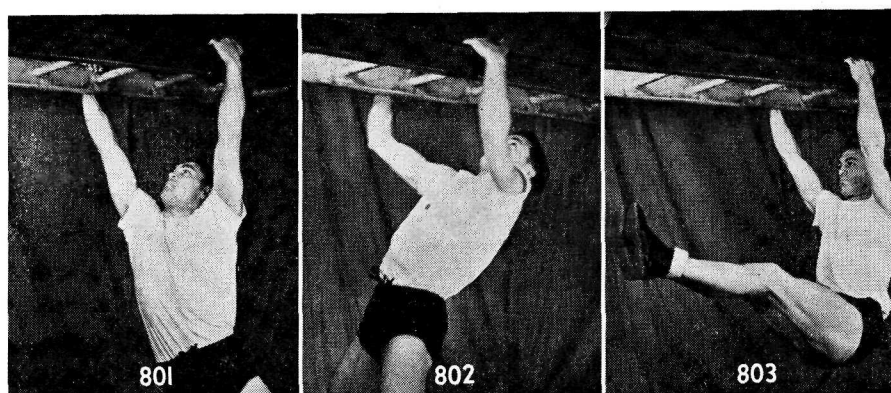


798—*Hang Travel.*—Hand over hand on rungs!

799—*Hang Travel Up.*—Double jumps on rungs!

*Variations.*—Increase the number of rungs between grasps.

800—*Hang Travel Sideward.*—Walk sideward on rail!



801—*Hand over Hand on Both Rails!*

802—*Double Jumping on Both Rails!*

*Variations.*—Forward and backward.

803—*Hand over Hand, Legs in Half Lever!*

*Variations.*—This same type of work may be done on the inclined ladder!

#### PULLEY WEIGHTS (Sample Lesson)

##### *Facing Machine*

*Arms Shoulder High Extended Frontways*

Arms sideways, shoulder high.

Bring arms frontways and down to hip. (2 counts)

Twist left; return.

Twist right; return.

Both hands together. (2 counts)

Left arm up; right down; alternate. (2 counts)

Lunge sideways with left foot; arms sideways, shoulder high. Return. (2 counts)

Lunge right. Return. (2 counts)

Alternate left and right. (4 counts)

Feet spread.

Bend; touch left toe with both hands. Return.

Bend; touch right toe with both hands. Return. (4 counts)

Step backward with left foot. Bend forward, both hands touch right toe. Return (2 counts)

Step backward with right foot; bend forward, both hands touch left toe. Return. (2 counts)

Alternate left and right. (4 counts)

Jump and spread feet; hands down between legs.

Jump upright; arms sideways shoulder high. (2 counts)

Kick left leg forward; hands to hips. Return. (2 counts)

Kick right leg forward; hands to hips. Return. (2 counts)

Alternate left; right. (4 counts)

*Arms Shoulder High Extended Sideways*

Twist left. Return. Twist right. Return. (4 counts)

**Back to Machine***Arms Shoulder High Extended Frontways*

Left arm up, right arm down. Alternate. (2 counts)

*Hands on Chest*

Lunge sideways with left foot, arms sideways, shoulder high. Return. (2 counts)

Lunge sideways with right foot, arms sideways, shoulder high. Return. (2 counts)

Alternate, left and right. (4 counts)

*Hands Over Head*

Bend forward; touch toes. Return. (2 counts)

*Hands at Hips; Palms Up*

Left hand forward; right hand moves forward as left returns (uppercut motion). (2 counts)

Exchange feet. Left hand and left foot forward. Right foot and right hand move forward as the left return (shadow boxing motion). (2 counts)

*Arms Shoulder High Extended Sideways*

Twist left; return. Twist right; return. (4 counts)

**Standing Sideways to Machine (Both handles in one hand)***Arms Sideways, Shoulder High*

Pull frontways. Arms extended. Return. (2 counts)

*Spread Feet*

Bend. Bring hands down in front to feet and up around in front of face (down and around). (4 counts)

*Arms Sideways, Shoulder High, Opposite Hand on Hip*

Bend sideways; bring handles over head, upper arm against ear. Return. (2 counts)

**Sit on Deck, Facing Machine***Arms in Front Shoulder High, Both Hands Together*

Twist left. Return. Twist right. Return. (4 counts)

*Arms in Front*

Flex and bring left knee into chest, hands down to hip. Return. (2 counts)

Flex and bring right knee into chest, hands down to hip. Return. (2 counts)

Alternate, left; right. (4 counts)

**Lie on Back***Arms Extended Upward*

Raise left leg. Arms downward, shoulder high. Return. (2 counts)

Raise right leg, arms downward, shoulder high. Return. (2 counts)

Alternate; left, right. (4 counts)

Raise both legs together; arm downward; shoulder high. Return. (2 counts)

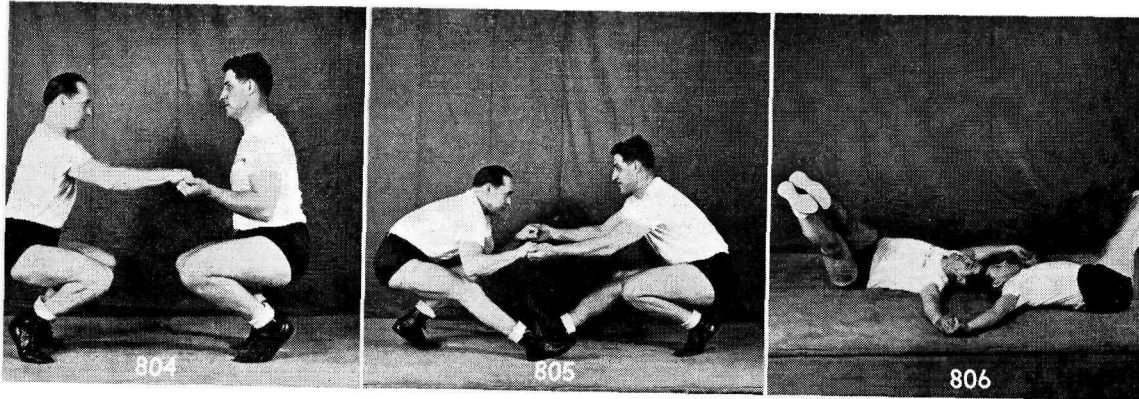
*Hands Extended Over Head*

Sit up and touch toes. Return. (2 counts)

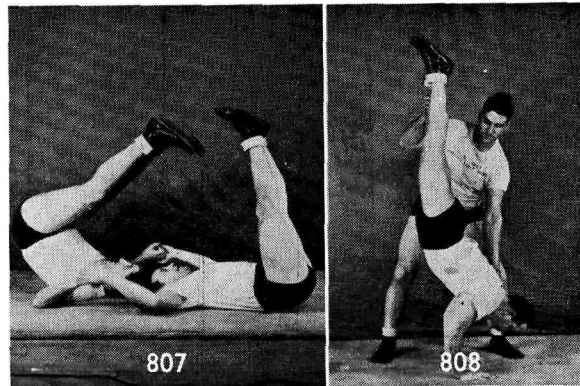
*Arms Extended Upward*

Spread legs; raise six inches off deck—arms downward; shoulder high. Return. (2 counts)

GYMNASTICS AND TUMBLING  
EXERCISES WITH PARTNER



- 804—*Deep Knee Bends*.—Partners face and clasp hands in quick cadence. Thirty to fifty times. Effect: strength with flexibility—Backs are kept straight, pull against partner for balance!
- Alternate Knee Bends*.—From feet stride left or right—Twenty to thirty times. Effect: strength—Keep forward leg straight and pointed forward—Face opposite directions and clasp right hand to left hand! (Same as above), with forward leg free of the floor—fifteen to twenty times.
- 805—*Russian Step*.—Partners face holding hands, knees fully bent, do Russian step—Effect: strength—obtain support from partner!
- Leg Stride Left and Right*.—Backs on floor, head to head—Thirty to fifty times. Effect: strength—Toes pointed; legs straight!
- 806—*Legs Swinging Sideward*.—Back on floor—Hands sideward—Clasp hands. Twenty to thirty times. Effect: strength—Keep the legs perpendicular and together. Alternate swinging legs to left and right!

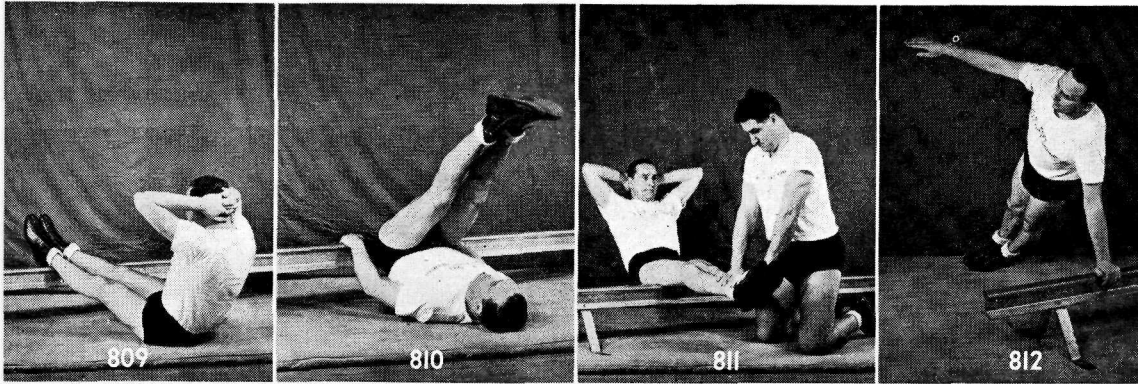


- 807—*Leg Raises*.—Back on floor, legs one-half upward raise and slowly lower to deck. Fifteen to twenty times. Effect: strength—Keep knees straight—Point toes!
- Leg Circles*.—Back on floor, both legs slightly raised—Circle legs—Twenty circles. Effect: strength—Hands on neck or at the side!
- Figure Eight with Legs*.—Same as above stunt, except make figure eight with legs!
- 808—*Hand Balance*.—Effect: strength—Partner supporting by grasping legs with right hand and left hand under shoulders—Do dips in this position!

#### SELF-TESTING ACTIVITIES (DOUBLES)

- Head to head, lie on back, hands under neck of partner. Lift.
- Hurdle position. Partner hold down straight leg, number of times that partner can put back on deck (trunk in line with extended leg).
- Rigid body lift (man own weight).
- Rigid body (2 men lift).
- Push-ups with man on top. The man on top can adjust the load until bottom man is able to withstand entire weight.
- Chins, lifting man to sitting position (hold on to ankles).
- Lift man of own weight above head. Bottom man lying on back, hands by head; top man standing on hands, lift man above head. One man spotting.
- Flex and extend arms with man on hands in position.

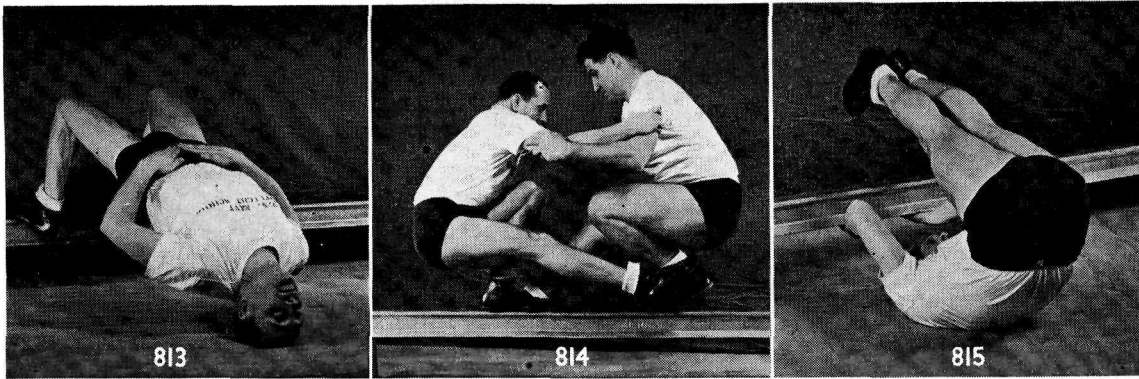
## EXERCISES ON BENCHES



- 809—*Trunk Bending Forward*.—Thirty-five to fifty times—Ankles on beam, hands behind neck on deck; grasp ankles!  
*Hold On to Beam with Hands, Feet Outside*.—Straighten legs—Feet together!
- 810—*Lie on Back*.—Grasp beam, whip legs down, come up to a sitting position on beam!  
*Trunk Forward Bend*.—Sitting on bench or beam—Partner holds ankles down—Add arms in stretch. Do twenty to twenty-five times.
- 811—*Trunk Backward Bend*.—Lying over beam on thighs, hand on neck, trunk raise—Helper anchors ankles—Do twenty to forty times!  
*Push-ups with Ankles on Beam*.—Both feet on beam—Hands on floor—Do twenty to fifty times! (Same as above) except one hand on top of other—Do fifteen to thirty times.
- 812—*Front to Side Support*.—Turn to side, support, keeping body rigid!  
*From Side Support Raise Leg and Arm*.—Do twenty-five times!  
*Crab Position and Push-Ups*.—Do five to ten times!  
*Bridge on Neck with Heels on Beam, Hands on Belly*.

★ ★ ★

- 813—*Trunk Twisting with Stride Sitting on Beam*.
- 814—*Single Leg Bend with Partner*.—Partners grasp hands, keep knee bend with one foot!  
*Jumping On and Off Beam with Partner, Free*.  
*Push Up to Shoulder While Lying on Beam, Legs Swinging Up and Over to Touch Toes on Beam*.
- 815—*Leg Swinging Up to Touch Beam While Lying on Deck, Head near Beam*.  
 Numerous variations of balance movements may be introduced in the form of toe marches, change of step, horizontal one-half stand, bouncing balls, balance sitting, squat sitting, and the like. This is valuable in developing coordination and poise.



### "FOLLOW THE LEADER"

Follow the Leader is given at the end of the period for all who can participate. The routine is as follows:

- Run around the room.
- Travel hand over hand on the hanging ladder.
- Vault over the buck.
- Punch the heavy bags.
- Swing under the parallel bars.
- Climb the rope or vertical pipe.
- Run out and around the track (indoor).
- Up and down the ladder (steps).
- Return to room.
- One chin (ordinary, reverse, combination) on the 3 bars placed around the room.
- Travel across the hanging ladder and end with running in place.

### INDIVIDUAL DEVELOPMENT ROOM

An individual development room is an asset to the program. All equipment that might be helpful in overcoming individual deficiencies or weaknesses might be kept in the room, which could also be used for the injured cadet program, thus preventing interference in regular class sessions.

Some of the inexpensive equipment which may be used in such a room is as follows, together with the part they develop:

*Arms, Neck and Chest (Upper Body Development)*

- Climbing Poles. Spaced to be used single or double. (Biceps)
- Ropes. (Biceps). Inclined, Vertical, Horizontal.
- Climbing Shelf. (Biceps)
- Chinning Bars. (Biceps)
- Peg Board. (Biceps)
- Hanging Ladder. (Biceps)
- Parallel Bars; Buck; Horse. (Triceps)
- Pulley Weights. (Chest)
- Wrist Twist. (Forearms and grip)

Old Tennis Balls. (Grip)

Rings (Latissimus Dorsi)

Stretchers. (Pectorals)

Stall Bars. (Upper body)

Adjustable Barbell. (Upper body)

Medicine Balls. (Upper body)

*Abdominal*

Benches, weighted Abdominal Shoes.

Rowing Machine.

Stall Bars.

Inclined Boards.

*Back*

Tiger Stretch.

Barbells.

Rowing Machine.

*Balance*

Balance Beams.

Mats. (Individual small mats can be hung up by the individual after use.)

Low Parallel Bars.

*Agility*

Bags. (Punching and striking.)

Rope Skipping.

Vertical Jump.

Ground Tumbling.

*Legs*

Stationary Bicycle.

Stall Bars.

Rope Skipping.

*Other Equipment*

Boxes for Magnesium and Resin.

Gear Rack.

Buck.

Medicine Ball Rack.

Wands and Rack for Same.

*Office*

Bulletin Boards.

Desk.

Log Books.

Locker for Records.

To summarize, the supplementary programs for injured cadets, for the sub-squad, and for individual development are but a particular means to the general end of physical training. All departments involved, such as Mass Exercise and Training, should work closely together so that the gymnastic specialists may contribute to the common end. Of a subsidiary nature, the programs are planned only with a view to the development and maintenance of strength, endurance, power, agility, balance and flexibility for temporarily incapacitated individuals, or for those lacking in upper body strength.



## OFFICERS' CONDITIONING DEPARTMENT

It is recommended that wherever feasible a complete Officers' Conditioning Department be installed. This department is considered to be particularly valuable for the physical conditioning and relaxation of flyers in or returning from active duty whether they are on shipboard or stationed ashore.

A suggested Officers' Conditioning Department should include the following:

1. A fully equipped individual development room containing for example:
  - (a) Chest Weights
  - (b) Stall Bars
  - (c) Graduated Weights
  - (d) Belly Boards
  - (e) Chinning Racks
2. Steam Room
3. Hot Room
4. Shower Room
5. Massage Room
6. Ultra-Violet Lamps
7. Slumber Room
8. Lounge
9. Scales

Masseurs in many cases will be difficult to secure and it is suggested that enlisted men on the base be trained by a competent masseur for this purpose.

**Strength and Endurance  
+ Effort + Hard Work  
+ Guts  
"He Conquers Who  
Endures."**