

USCG Fitness Study Phase II Summary of Results

Assistant Commandant for Human Resources (CG-1)

Subject: USCG Fitness Study Phase II Summary of Results

Methodology

Phase II of the Coast Guard fitness assessment was to determine the best teaching method to improve overall fitness. Members were solicited via ALCOAST to volunteer for the study. Volunteers were randomly selected to be part of four teaching methodologies. Each group was instructed to perform a similar workout which emphasized functional movements and core stabilization; except for group one which was used as a control group and could chose any workout.

Members were first asked to complete the Coast Guard Athleticism Assessment which consisted of six elements derived from a face validity study of the boat forces physical requirements and correlated to the assessments below.

- Pull –ups
- T-test
- Inverted row
- Side bridge
- Long jump
- 300 yard shuttle

As members sent in the results of their assessment they were randomly placed in one of three groups:

<u>Group #</u>	<u>Description</u>	<u># Participants</u>
1.	Control group did their own workout	52
2.	Physical Health Instruction Training (PHIT)	67
3.	CG Athleticism Web Site	42
4.	Live Instruction (Capt Shumway)	46

After 3 months members were asked to retake the assessment. The following are the results:

Measure	Method			
	Control	Handout	Video	Inst Lead
Pull Up Number Pretest	5.4	4.6	5.0	1.9
Pull Up Number Posttest	4.9	4.5	4.5	3.3
Long Jump inches Pretest	76.6	76.3	75.4	65.9
Long Jump inches Posttest	75.5	76.7	73.9	75.8
Inverted Row number Pretest	10.4	9.7	10.2	6.8
Inverted Row number Posttest	11.1	10.2	9.3	10.5
T Test seconds Pretest	12.3	12.5	12.6	13.8
T Test seconds Posttest	12.1	12.4	12.7	12.4
Side Bridge total seconds Pretest	81.8	77.4	77.6	72.3
Side Bridge total seconds Posttest	83.0	75.9	76.5	93.3
Shuttle 300Yd total seconds Pretest	70.8	73.4	76.2	78.3
Shuttle 300Yd total seconds Posttest	73.5	79.1	79.5	71.7

Analysis

Live Instruction method produced a statistically significant increase in performance on all physical tests.

On 300 Yard Shuttle the Control Group and the Live Instruction Group produced a significant decrease in performance.

Although Physical Health Instruction did not produce a significant increase in performance the increase was near significant.

Cautions and Considerations

Not all the groups started at the same fitness level. The Live Instruction Group had considerably fewer Pull Ups and Inverted Rows, jumped nearly a foot shorter, and were considerably slower on the T-Test.

Furthermore, on all measures except the Side Bridge, the Post Test levels of performance for the Live Instruction Group were close to those of all the other groups at Pretest.

Conclusion

Performance on the Pull Up, Long Jump, Inverted Row, T-Test, and Side Bridge were unaffected in the Group (1) Control Group, Group (2) Physical Health Instruction Training Group, and Group (3) CG Athleticism Web Site Groups. For these same groups the 300 Yard Shuttle actually resulted in a reduction in performance on the Post Test. Group (4) the Live Instruction Group, provided an increase in performance on all measures. This increase may have been the results of unusually poor performance at the Pre Test compared to the other three Groups, but the added motivation, commitment to continue the program, and professional guidance cannot be over looked.

The communities which mandate physical fitness to be a part of their jobs require a more extensive look at their fitness programs. This will help ensure overall readiness in the highest of tempos. There has been interest from the U.S. Army Research Institute of Environmental Medicine (USARIEM) to assist with this process and the FAC recommends we involve the stakeholder of these programs to look closer at this option.

The overall lack of physical fitness from our work force may contribute to our increase musculoskeletal injury rate. (Phase I indicated that injuries were more common in individuals who did not exercise). Phase II strongly indicates that the best way to help individual improve increase physical fitness is with an instructor lead format. Anecdotally this is especially true for members who do not have a strong fitness background. Performing an exercise incorrectly will only cause increase musculoskeletal problems and delay physical fitness.

Members in the control group did not significantly increase or decrease which may indicate they are content with their routine and did not feel the need or desire to improve. Maintaining current fitness standard was ok.

Recommendations

1. Continue the current test for members in the operational community that require PFT.
2. Continue to work with operational units as requested to help reduce musculoskeletal injuries.
3. Units should continue to develop Fitness Instructions that specifically include instructor led physical training programs for Active Duty Personnel to increase CG physical readiness levels for all Active Duty Personnel. Especially for members in poor physical fitness.