

Introduction

Since the implementation of the updated Air Force Fitness Program defined by AFI 36-2905 in July 2010, the Air Force has seen a rise in fitness test failures. According to data from Air Force Fitness Management (AFFMs), only 1.3% of Air Force members were failing the fitness assessment in the quarter immediately before implementation of the new fitness program, which rose to 3.9% by the first quarter of 2011. According to AFI 36-2905, physical fitness allows our Airmen to properly support the Air Force mission. The high fitness test failure rates highlighted the immediate need for health promotion interventions aimed to improve fitness test scores, reduce failure rates, and decrease injury rates.

In August 2010, the Scott AFB Health & Wellness Center designed and implemented a six-week Running Clinic. The running clinic is a running improvement program with the objective of helping Airmen with low performance on the 1.5 mile run component of the Air Force Fitness Program. In the past year, our Running Clinic has shown an average improvement of 83 seconds on the 1.5 mile run. Additionally, 94.6% of participants passed the cardiovascular component on their subsequent Air Force Fitness Test. The purpose of this report is to discuss the implementation and results of this innovative program at Scott AFB.

Methods

Designed by the HAWC exercise physiology staff, the Running Clinic was designed using basic principles of exercise physiology: F.I.T.T. (frequency, intensity, type, and time), specificity of training, overload/progression/adaptation, and rest/recovery. The program focuses on building cardiovascular endurance and incorporating speed work in ability-based groups while including weekly educational sessions. This approach ensures safe and effective cardiovascular training resulting in increased performance at the lowest risk of injury.

The Running Clinic is a six-week progressive training program that includes expert-led running session's 3-days per week consisting of two endurance workouts and one interval training session. Participants are also expected to participate in self-paced cross training and strength training an additional two days per week. The length of the training program was selected due to previous research having shown significant improvement in 1.5 mile and 2.0 mile run times for Navy and Army recruits with low levels of fitness in 6-week and 8-week basic training programs.

Ability-based groups are extremely important to the success of the Running Clinic. Grouping participants of similar abilities ensures training programs are tailored to the fitness level of the group, ensuring safe and appropriate progression. Additionally, these ability-based groups provide peer support, which results in increased self-efficacy and self-confidence in regards to each individual's ability to succeed in the Air Force Fitness Program.

Another integral component of the Running Clinic is the incorporation of interval training. The benefit to interval training for runners of all ability is to teach appropriate pacing while also improving aerobic capacity, or VO_{2max} . Although there are many types of speed-work, our program incorporates distance-based interval training, typically 400 meter and 800 meter repeats, with pace goals specific to each ability group. We find that this is the most structured type of speed work, allowing us to produce results in our participants in a fairly short period of time.

Besides the training program, we value educating our participants to be able to continue training independently following the completion of the program. HAWC instructors give a 10-minute briefing once per week on a variety of topics including the following: proper gear, running shoes, importance of warm-up/cool-down, progression, fueling/nutrition, and hydration. Additionally, participants receive a tip of the week to further expand on the topic of the week.

Inclusion criteria for enrollment in the running clinic includes 1.5 mile run times of 13:15 or slower, unsatisfactory performance on the previous Air Force Fitness Test, or recovering from chronic injury that resulted in inability to run (no running AF 469/422). Participants were excluded that did not meet one of the inclusion criteria or have a current AF 469/422 that prohibits running.

The primary resources allocated to the Running Clinic are man-hours of the two health and fitness specialists that manage the program. Two staff members leading three one-hour sessions per week for a total of six man-hours of actual program time. An additional 1.5 hours per week are spent on program administration (course registration, email tips, etc.) and statistical analysis. Total man hours spent on the program are approximately 7.5 hours per week.

One way to minimize HAWC man hours involved would be to replace one HAWC health and fitness specialist with a volunteer instructor. The volunteer instructor would have to complete the HAWC Physical Training Leader certification program and co-instruct with a HAWC staff member to ensure that the participants are still receiving expert-led training sessions.

Results of the program are calculated by administering a pre-test and post-test to each participant on the first and last date of the class. The HAWC staff calculates individual run time improvement and percent improvement over the 6-week course. Additionally, we calculated session, quarterly, and annual average improvement and percent improvement. Finally, we monitor the pass rate on participants' subsequent Air Force Fitness Tests.

Results

In the first year, 113 active duty Air Force men and women participated in the program. More than half of the participants had failed the Air Force Fitness Test prior to enrolling in the Running Clinic. The average pre-test run time was 15:23, and the average post-test run time was

13:58. Overall, the average improvement on the timed 1.5 mile run following participation in the Running Clinic was 83 seconds for an improvement of 9.1% from pre-test run times. Nearly 67% of participants had improved their 1.5 mile run time by 5% or more over the course of the program.

Additionally, 94.6% of participants passed the cardiovascular component on their subsequent Air Force Fitness Test. The overall Air Force Fitness Test pass rate for participants was 81.1%. A majority of those participants that passed the cardiovascular component, but failed the overall fitness test had failed due to the abdominal circumference measurement. Although our statistics demonstrate that six-weeks is sufficient time to make significant improvement on the 1.5 mile run, this is not enough time to achieve healthy weight loss.

These program outcomes are reported monthly as part of the 375 MDG Balanced Scorecard. Additionally, results have been reported as part of the HAWC Annual Healthy Airman Report for AFMOA Health Promotion Operations. If requested by individuals or units, we also provide progress reports on individual program improvement over the course of the program.

In the past year, we have had to make minor changes to the Running Clinic Program. Although we have demonstrated the program is sufficient for making improvements in run times and producing passing fitness test scores, we have noticed some individuals have not maintained fitness over time. We have begun to assess the long term maintenance of cardiovascular fitness in our participants by using AFFMS to examine performance on Air Force Fitness Test 6-months following participation in the program. However, not enough participants have tested in that time frame to provide data on maintenance of cardiovascular fitness over time. We hope in the next quarter we should have enough data to determine if this truly is a problem. If so, we will be making modifications to the program to incorporate better education and training on maintaining cardiovascular fitness after completion of the Running Clinic Program.

Conclusion

After a full year of operating the Running Clinic, the Scott AFB Health and Wellness Center plans to continue this program long term, which has been documented in our 2012 Strategic Plan. Our results have demonstrated that the Running Clinic utilizes minimal resources and produces significant results on 1.5 mile run times.

This program was briefed at the 2011 Armed Forces Public Health Conference to health and wellness professionals in other HAWCs and across other branches. Following the March conference, the Scott AFB HAWC shared the running clinic outline and training program with four other Health & Wellness Centers across the Air Force to assist with implementation of their own programs.

Our future plans are to help unit PTLs adopt similar programs across the installation. In fact, we assisted one of our program graduates in creating his own running improvement program for the members of the 375 MDG. By training more PTLs to run progressive, ability-based running programs, the overall fitness of Scott AFB active duty members should continue to climb.