



Source: BioConstructs, LLC <http://www.preparationforchaos.com/casestudy.html>

## **Abstract:**

110 Firefighters (FF) with a range of symptomatic and asymptomatic orthopedic issues were treated quarterly using Muscle Activation Techniques (MAT) and specific exercise prescriptions. The FF were then educated as to how to strategically manipulate the exercises to help restore the weak mechanical links and progress toward specified goals. At the end of the first quarter numbers reflect a 65% decrease in the number of Fire Department workman's compensation claims, a 67% reduction in loss due to injury claims which translated to an 80% decrease in the number of days lost due to injury. Over the next 2 years that the program was implemented, the department saw significant decreases in the average number of injuries and work days lost due to injury.

---

## **Case Study:**

### **CHALLENGES**

Firefighting is a physically demanding job. In order to keep the firefighters healthy and drive down costs due to injury, the Fire Department sought a professional fitness consultation company to create a program that would be safe, effective and of lasting interest to the firefighters.

Heretofore, all efforts to bring such a program to the department failed for lack of specificity to the job of firefighting (and the individual firefighter) and the inability to create enthusiasm for the program.

These vendors included chiropractors, hospital programs, and personal trainers.

### **SOLUTIONS**

The Fire Department hired PFC.

In an effort to make the program interactive and garner the department's trust and enthusiasm, PFC first gathered the firefighters together, shift by shift, station by station, to learn what the firefighters themselves wanted and expected from a fitness program.

Secondly, the biomechanics specialists at PFC performed an in-depth biomechanical analysis of the Fire Department firefighting techniques (e.g. training tower evolutions and actual suppression calls) in order to 1) rate the efficacy of current fitness habits, and 2) to create a fitness prescription unlike any other in existence -- a program that would be absolutely specific to the physical needs of the Fire Department.

PFC then met with each firefighter individually. They performed a comprehensive orthopedic and neuromuscular assessment and treated any muscular weakness or instability through the use of Muscle Activation Technique (M.A.T.). Based on the M.A.T. treatment and the individual's unique anatomical proportions PFC's specialists created personal exercise prescriptions.

Finally, PFC created a Fire Department Fitness Program Notebook and Manual that would allow the firefighters to be totally self-sufficient. PFC introduced new resistance training equipment and taught a thought process that showed the firefighters how to continue to manage their workouts according to their individuals needs and goals.

## **RESULTS**

The anecdotal evidence for the positive impact that PFC had was evident from the beginning. Reports of decreased shoulder, back and knee pain and increased flexibility and strength were common.

The empirical evidence is significant as well. The initial phase of PFC's program with the Santa Monica Fire Department had an **approval rate of over 95%**.

**The Risk Management Department of the City reports that the first quarter numbers reflect a 65% decrease in the number of Fire Department workman's compensation claims, a 67% reduction in loss due to injury claims which translated to an 80% decrease in the number of days lost due to injury.**