



## Getting the most from your NFPA 1582 Physical Program

### Part II - Test Day

So you've chosen a vendor and laid the groundwork with your firefighters. Now test day is approaching, and you want to make sure you get the most from your investment. In this article we discuss a few preparatory items and approaches to NFPA testing that will ensure you have a successful and well received medical and fitness evaluation.

#### Schedule:

In our experience performing firefighter exams, we have found that a two phase process yields much better results than having everything done in 1 day. What does this mean exactly? On Phase I, we complete all the blood work and, depending on the circumstances, a few other testing components. This allows the labs to be available for Phase II, the testing day. This means that when the medical provider meets with your firefighters, they can discuss the labs in detail, provide one on one individual counseling based on their lab results, and answer any questions the firefighter may have. In our opinion, this is a much better system than simply sending their test results in the mail with some generic diet and exercise forms.

#### History Forms

The NFPA 1582 Standard calls for yearly history forms to be filled out by all participating firefighters. Without these forms, medical providers are missing key pieces of information such as medical problems, previous surgeries and medications. This information is imperative in making medical judgments about your firefighters. As physicians, much of our medical decision making is dependent upon both the firefighters' personal and family history. We recommend that history forms be filled out when the lab draws are done. Why? This allows the medical provider the opportunity to review the blood work and history forms prior to meeting with your firefighters. This way we can begin to prepare our recommendations for that firefighter before we have even met him or her. For example take a firefighter who on their history form marked down that he was a smoker with a family history of heart disease. On his labs we discover that he also has high cholesterol. As we are preparing for our meeting with this firefighter we would gather information for him regarding quitting smoking, and lowering cholesterol. We will also stress the importance of lifestyle changes to reduce his risk of cardiac disease. When we perform his physical we will ask additional questions and pay special attention to elements of the physical exam in order to detect possible heart disease. In addition we will make specific recommendations for follow up based on all this information. How could we do this without a good medical history form? We couldn't, and without this key piece of information, your firefighters are not getting the counseling they deserve.

#### Test Day

Testing day should not be a day of chaos! We encourage an orderly process as outlined by the NFPA 1582 standard. Did you know that The Standard even has an order of how testing should proceed? The process should be smooth and well-ordered with your firefighters moving from station to station with a minimal amount of wait time between stations. Stations should include vitals, body fat testing, plank, push-ups, strength testing, pulmonary function testing, audiometry, resting EKG, treadmill exercise testing and finally the physical exam and counseling with the medical provider.

#### ON-SITE FIREFIGHTER PHYSICALS



## There are three mistakes you should avoid with testing.

1. The first is trying to cram too many people through at once or too many in one day. There is economic pressure to do this. It is cheaper for the vendor and the department to try to get more people through the process. While it may sound like a good idea to hire someone who promises to see all 80 of your firefighters in one day, in our experience whatever financial benefits that were derived by this are more than undone by costly errors that come from technicians and physicians trying to process too many people. This is an important process and needs to be done correctly. It is reasonable for your vendor to process about 4 to five people per hour, or 30 to 40 people in an 8 hour day. Trying to do more than this is asking for mistakes to be made.
2. The second mistake that we see being made is that pushups and planking are done just prior to exercise testing. This elevates the resting heart rate and artificially lowers VO2 max on treadmill testing. This can make your entire department look less fit than they actually are.
3. The third is simply not following the 1582 Standard. In order to do testing as required by the NFPA standard there is the need for investment in specific equipment that can be expensive. For example, The Standard calls for the use of a Jackson Strength Tester, which is a \$5000 piece of equipment. Instead of spending the money to conform to The Standard, many vendors will just skip strength testing all together. The 1582 Standard is not the end all be all but it is considered best practices at this time. If you are going to invest money in a testing program then every effort should be made to follow it as closely as possible.

While on the subject of equipment, we see some vendors also using bicycles instead of treadmills for the treadmill exercise test. Did you know NFPA 1582 removed the bicycle 14 years ago because it is too inaccurate? Every cardiologist we have ever worked with uses a treadmill in their office as part of their stress and exercise testing. We have never seen one use a bicycle. Because you stand, walk, and run on the treadmill, and go up an incline, it more closely resembles your physiologic response when fighting a fire. How many of you have ever seen a firefighter sit on a bike and pedal while responding to a fire? We haven't seen one either. And lastly, the WFI Protocol calls for a treadmill and not a bicycle.

## The Physical Exam

Believe it or not, this is the most important station. In many programs the physical examination is nothing more than another testing station, but it really should be much more than this. It should always be the final station. Why? By the time the medical provider meets with the firefighter we want to have the medical history, labs, and the results of all testing in front of us. This information directs our physical examination and counseling of the firefighter. This is our chance as medical providers to make a difference for the firefighter and for your department. Armed with all this information we are able to make well informed medical decisions regarding clearances or medical issues. If we need further medical information, the firefighter is right there in front of us. We don't have to go back later and try to sort things out. We are able to send the firefighter out of the physical examination and one on one counseling session with specific recommendations tailored to their specific labs and testing results that were gathered during the testing process. In addition each firefighter is given a copy of that days testing to share with his personal physician.

### ON-SITE FIREFIGHTER PHYSICALS



As physicians, it is our job to round out the entire process and make it into something of use for the firefighter to enhance his or her health. The best compliment we can get is when a firefighter tells us that we have spent more time, and were more thorough than their own personal physician.

In the next installment we will discuss clearance issues, departmental statistics and record keeping.

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