



SAFETY IN TACTICAL TEAM FITNESS TESTING

By Kathy Vonk and Jay Smith

The danger of injury during any type of fitness testing, whether it is something as minor as a sprained ankle or as tragic as a heart attack, cannot be eliminated completely due to unknown underlying factors. It can be minimized, however, through proper pre-screening, preparation time, event selection, sequence of testing events, environment inspection and preparation, and readiness for emergency.

TRAINING

It is imperative that all associated officers are properly trained and have current certification before embarking on team development or team testing. This is one of the first issues raised when matters become contentious or challenges arise. Tactical team members as well as instructors must be trained, and there are several quality certifications available.¹ The training should be skill-specific and pertinent to the scope and mission of the team.

While it isn't necessary that team members be trained to instructor levels, all staff should be cross-trained. Physical fitness is an underlying construct of most team tasks and for this reason, there is an appropriate emphasis on fitness during training and testing. Therefore, we recommend that staff be trained as fitness instructors or fitness coordinators and that certification is maintained.

It is imperative that all associated officers are properly trained and have current certification before embarking on team development or team testing.

The question of qualifications is often the first, or one of the first, posed by plaintiffs' attorneys in litigation. Competent SWAT instructors voluntarily place the expectation upon themselves to know and be able to recite important facts about doctrine or tactics; the same should be expected of fitness, particularly when conducting fitness training or testing.

It may be enough to review important issues just prior, such as literature on testing and risk management in the

While it isn't necessary that team members be trained to instructor levels, all staff should be cross-trained.

days or weeks before annual selection testing, since fitness is arguably an ancillary duty. This process should, however, be an SOP, conducted like any other operation pre-brief.

The content of such briefing may include:

- Review and agreement of test methodology
- Consensus around successful performance of technique for physical fitness and task (simulation) events
- Review of all safety procedures, roles by team members, back-up or redundancy roles, and expectations from beginning to end of testing
- Review of signs and symptoms of distress, injury and or danger exhibited by the environment and the participants
- Review of all equipment and facilities

The goal is to exceed the reasonable person's standard in preparation. Just as pre-mission actions are ritualized, so should pre-testing actions, including documenting the ritual and modifying as needed to ensure a safe experience. All possible outcomes cannot be anticipated but there are many that can be reasonably expected and prepared for. Training before and in response to developments as they occur will keep a team at the top of its game.

PRE-PARTICIPATION SCREENING

It is the legal and moral responsibility of the host agency or employer to en-

sure the safety of those participating in physical activities — training or testing. Because there are predictable risks associated with maximal or near-maximal physical activity, authorities such as the American College of Sports Medicine (ACSM) have outlined the reasonable actions which must be taken. The ACSM's "Guidelines for Exercise Testing and Prescription," currently in its eighth edition, is an excellent desk reference that should be in every fitness instructor's (or instructor participating in fitness-related activities) personal library. The precautions and procedures outlined in the guidelines will assist in ensuring participant safety and agency defense, should one be necessary.

It is the legal and moral responsibility of the host agency or employer to ensure the safety of those participating in physical activities – training or testing.

The Canadian Society for Exercise Physiology (CSEP) has long been a leader with respect to pre-screening forms for physical fitness activity programs and testing. CSEP updated the Physical Activity Readiness Questionnaire (PAR-Q) and developed the PAR-Q+ in 2012. This form is very easy to use and adds an important layer of pre-screening to avoid unnecessary injury to a team member.²

Whether you choose to facilitate the completion of the PAR-Q+ in your presence or the form is provided in advance and the candidate presents the executed form at the test site, somebody will have to be responsible for reviewing the answers. Due to the review and oversight role that must be performed,



some degree of training and documented proficiency or expertise must be demonstrated by that person. Many fitness instructor certifications include training in pre-screening methods. This should be considered a basic or essential qualification for those conducting the testing.

As noted, the alternative to in-person pre-screening is to require it of the candidates in advance. A form can easily be crafted to include the following information:

- Complete description of the testing procedures with the required levels of performance for each
- The safety measures that will be in place during testing
- The qualifications, in brief, of those conducting the testing
- A simple check box: The candidate IS or IS NOT cleared to participate in testing (or training)
- Printed name of medical professional to include credential, signature and date of same

Such a clearance form should be readily available to all candidates and each would be required to present it in advance or at the time of testing. The advantages to this approach are

obvious: A trained medical professional is assuming responsibility for clearance, valuable time otherwise spent on administrative details can instead be directed to in-brief and preparation, and the agency conducting the testing can be viewed as engaging in an industry best practice focused on participant safety.

ADEQUATE TIME TO PREPARE

Due to the high degree of self-selection involved in membership to a select assignment, a pre-test will hopefully be a quick check or confidence builder for a team candidate. Unlike entry level training, which is often characterized by people new to law enforcement (and who say, “The academy will get me into shape”), officers applying for tactical team membership will hopefully have assumed the personal responsibility to always be ready to perform. However, team tryouts and training may signal a change in personal training habits and focus. With this in mind, it is recommended the testing authority publicize the dates and nature of testing.

In order to minimize risk of injury and promote optimal performance, it is recommended that those who plan to attend and participate in team selection testing or annual recertification are

informed at least 12 weeks in advance of the date of the test, the events and the passing standard. This will afford the candidate adequate time to train or to make reasonable adjustments in specific fitness areas. If, on the other hand, a potential candidate is coming off a long period of inactivity, this training period will aid in minimizing the risk of injury, perhaps through the exercise of discretion by delaying team application and testing should that be deemed the better choice.

PRE-TEST INSTRUCTIONS

Explicit instructions for participants should be included in informational packets made available well in advance of the actual test date. It is also advised the same instructions be posted, where possible, on websites, training and testing sites, and other locales as appropriate, such as briefing and locker rooms.

Some general guidelines for all physical testing include the following:

- Participants should refrain from ingesting alcohol, excessive caffeine or using tobacco products within three hours of testing.
- Participants are instructed to maintain a proper hydration program in the days leading up



- to the test – one cannot properly hydrate the morning of the event.
- Participants are instructed to eat a small serving of simple carbohydrates, as tolerated, 15-60 minutes before activity such as a small energy bar, runners' gel, half a small bagel, small serving of fruit, or other plain food.
- If the testing is to be conducted later in the morning or during the day, participants are advised to eat a small- to moderate-sized meal at least two hours before testing *and* they should have convenient, non-perishable personal food items for consumption during a protracted testing session.
- Participants should be rested for the assessment and should refrain from higher intensity training 24 to 48 hours prior to testing.
- Participants are advised to arrive 30 minutes before the designated reporting time.
- Participants are advised to wear loose, comfortable clothing as indicated by the test circumstances (PT attire/BDUs/etc.) and appropriate for the climatic conditions.

- Participants are advised to bring adequate water to consume before, during and after testing. In addition, a container appropriate for wear or carry during testing, as allowed, should be included in their basic equipment kit.
- Participants are strictly advised against consuming energy, pre-workout or other stimulant drinks or supplements in any form the day of testing.

This list is not intended to be exclusive. In fact, it may not be comprehensive in light of your team's particular circumstances. It is, however, intended to follow general guidelines and to provide a template. The take-away point is

Don't expect test participants to be prepared on their own. We have a responsibility to do everything we can to ensure safe, effective and valid testing.

this: Don't expect test participants to be prepared on their own. We have a responsibility to do everything we can to ensure safe, effective and valid testing.

APPROPRIATE TEST EVENT SELECTION

A SWAT fitness test should include activities that may be required of those on the team to prep for, complete and clean up after a mission. For example, one of Honolulu PD's annual fitness testing events includes swimming, as they may be forced to deploy in open water. This may not be an appropriate event for a team in an area where there are no large bodies of water.

Similarly, rappelling may be completely acceptable for a team that responds in an area with tall buildings and/or mountains, whereas a team that deploys in a region which has none may not be required to master this skill. There are, however, some activities that are certainly appropriate across the board, so many team testing events are very similar. The recommended route would be to employ a company to conduct a task analysis of the team, and design the test using these results.

It is essential to document the relationship between the test and the demands of the job or the team function.

Professional standards exist which inform the development and validation of selection, training and retention tests. Although it is a very common practice, simply calling around to other local or similar entities to request copies of their test or modeling your assessment on another test cannot be considered a best practice.

Challenges to tactical team tests are infrequent and we have little guidance from the courts. However, ample guidance exists from other segments of law enforcement and other industries. It is essential to document the relationship between the test and the demands of the job or the team function. The covered agency entity or employer must perform or contract to have performed these tasks and report on them prior to actual testing.

PASSING STANDARDS

A “passing” score is (legally speaking) the minimum level required to perform the skill. This is where some teams are deemed legally accountable because the chosen passing level is much higher than the minimum successful task completion level. For example, if the goal is to be able to pull oneself up and onto a platform during a deployment, requiring 10 pull-ups in full gear may be deemed too high of a standard to be a minimum. Age and gender adjustments should not apply and are actually illegal, as a task-based standard is just that — pass or fail, can one perform the job or not.

The process by which minimum criteria, such as a passing score, are established is much more difficult than saying “The state team requires X, so we can require Y,” or “The academy requires this so we should require this much more.” Unfortunately, this thought process or something similar is often applied. The “gut-check” standard is a favorite of some; others will simply mimic other teams, while still others will stick with what they have always done, without knowing where anything came from to start. The bottom line is that while your passing score may seem like a good idea, in the face of injury or legal challenge, you must be able to link the score to the test which must be linked to the job (or the team function) and that evidence must be documented.

TESTING EVENT SEQUENCE

Once determined, the events should be placed in the appropriate sequence to maximize performance and minimize the risk of injury due to overuse and unnecessary fatigue, or to improper intensity levels at the wrong time. The industry standard for testing events is as follows:

- Non-fatiguing events such as flexibility, blood pressure, body composition
- Short agility tests such as the T-test or other short SWAT-specific O-course (10 seconds or less)
- Maximum power and/or strength test such as 1-rep max bench, power clean, vertical jump
- Short sprint such as up a set of stairs, pulling an officer from a patrol car and dragging/carrying behind cover a short distance away, moving a downed officer a very short distance using your team’s preferred technique, or SWAT-specific O-course (30-45 seconds)

- Muscular endurance test such as a 60-second maximum for push-ups, sit-ups and/or pull-ups
- Fatiguing anaerobic capacity such as the 300-meter shuttle run
- Aerobic capacity such as the one-mile run

If your team uses a longer task-specific O-course (4-6 minutes) which incorporates many of the above intensity and duration levels, it is recommended that it is conducted on a separate day to allow for appropriate recovery and to reduce injury potential.

If you are not sure which test should precede another, consult a fitness professional or base your decision on the time the event takes and the intensity level of the test. Higher intensity events of short duration should precede lower intensity events of longer duration to allow for more accurate results and reduce injury potential that exists when the testing sequence is improperly reversed. For example, whereas a 100-yard dash would be appropriate before a one-mile run, having the tests reversed would fatigue the very muscles necessary for the second, more intense event. This would increase the time required to complete the 100-yard dash due to muscle fatigue and may result in failure. This improper sequence would also increase the potential for injury such as a strained hamstring during the 100-yard dash.

ENVIRONMENT PREPARATION

As noted above, it is imperative that all equipment to be used during the testing is inspected and tested, as well as the entire environment in which the events will occur. All equipment should be used according to manufacturer specifications and inspected for cracks, signs of weakness or deformation, improper maintenance



or anything else that may indicate potential for equipment failure.

When in doubt, do not use the piece of equipment. Delete that specific event until the equipment and conditions are up to specs. Check the grounds and grassy areas and clear it of other unnecessary equipment, rocks, glass or other debris which may cause injury and may not be visible without close inspection. Think in terms of worst-case scenario rather than that which is expected, and take steps to minimize or eliminate those hazards.

PROPER WARM-UP AND COOL-DOWN

Allow for appropriate warm-up prior to testing. This transition time should be anticipated and strictly adhered to at all testing and training sessions. The warm-up procedure should be formal and conducted by trained staff. The typical response adults have to “Warm up. Testing will start in 10 minutes,” consists of a little bit of

moving around, maybe some sitting and stretching, and a whole lot of talking. This is best avoided altogether. A structured warm-up can be performed and very likely will result in a reduction in soft tissue injury.

The proper sequence is to begin with general, whole body movement that gradually builds in intensity; walking or walking in place, then light jogging should be sufficient to increase core body temperature, blood flow, neural transmission, tissue temperature and elasticity. Dynamic stretching (as opposed to static stretching) starts out with easier movements and limited range of motion and gradually increases specificity (looks more like test activities) and range of motion. The overall goal to keep in mind whether training alone or in a group or before testing is to transition from a period of relative inactivity to near maximal activity gradually, safely and specifically. This routine should be scripted and conducted after some practice, much the same as an entry drill or dry fire exercise.

Similarly, allow time for proper cool-down and stretching activities, and have plenty of water or sports drinks on hand. Heat, water and sugar emergencies are not uncommon and the preparation should include plans for such occurrences. Except in extreme training or testing situations, participants are much more likely to show signs of distress upon completion.

Motivation, pride and experience will often times motivate a person

The overall goal to keep in mind whether training alone or in a group or before testing is to transition from a period of relative inactivity to near maximal activity gradually, safely and specifically.

to complete the challenge in front of everyone, only to be overcome when the clock stops. Perhaps more importantly, a properly conducted and ritualized cool-down is one of the most effective recovery tools to ensure an officer is ready to go at the next exercise or call out.

EMERGENCY READINESS

There are multiple levels of emergency preparedness that must be addressed, some with staffing, others with training, and still more with equipment. Many teams have personnel with paramedic or EMS status. Operators trained to this level should be tied to testing and ideally present for all training exercises. In addition, EMS onsite during testing minimizes response time. Those staff should be briefed as to the content and sequence of testing to be conducted, key personnel and safety procedures in place to include prior pre-participation screening, warm-up/cool-down, hydration, shade, etc., as they arrive on site, prior to the commencement of testing. Their vehicle or tent should be proximal and highly visible. If at all possible, request the same personnel based on their interest, ability and willingness to be proactively involved; it will make a huge difference!

The team paramedic should have a kit stocked with basic first aid and sports injury-related items such as ice packs, tape and pre-wrap, elastic bandages, etc. In addition, personnel should be trained in the use of oxygen, AED and basic life support. Two-way and cellular communication with the appropriate contact information pre-loaded on speed dial is necessary.

Team members should all have designated roles in the event of emergency and those duties should be rehearsed as necessary. If EMS is not onsite, a decision should be made in advance under what circumstances people will be transported and the vehicle so

designated and ready for immediate use. As in all situations, an after-action debrief is indicated.

Front-loading the time and effort into conducting thorough research, implementing proper preparation and SOPs relative to tactical team fitness testing safety, everyone involved can be optimally prepared to provide a safe, rewarding and legally defensible experience for participants, instructors, agencies and teams. ■

ENDNOTES

1. American College of Sports Medicine (ACSM), Cooper Institute, FitForce's Tactical Fitness Instructor Course, LouKa Tactical's Tac Team Fitness Instructor (TTFI), NSCA's Tactical Strength and Conditioning Facilitator (TSAC-F) certifications.
2. <http://www.csep.ca/english/view.asp?x=698>.

ABOUT THE AUTHORS

Kathleen Vonk has been a certified police officer since 1988. She served with and retired from the Ann Arbor (MI) Police Department and now serves as a state trooper for Nevada Highway Patrol. Officer Vonk is NTOA's Physical Fitness Section Chair as well as column editor for the National Strength and Conditioning Association's TSAC program. She is an NSCA CSCS, USA-1 Weightlifting Coach and holds several certifications from the Cooper Institute. She has a BS in Exercise Science and a BA in Criminal Justice. She co-owns and instructs for LouKa Tactical Training (www.loukatactical.com). She can be reached at kathy@loukatactical.com.

Jay Smith, M.S., CSCS, USAW, is the founder of Integrated Fitness Systems (IFS) and is the president and CEO of FitForce Inc. He is an exercise physiologist and certified strength coach, and was a longtime use-of-force instructor. Mr. Smith served as the only Director of Physical Fitness & Health Maintenance Programs for the Massachusetts Criminal Justice Training Council (POST) for eight years. He consults with public safety agencies throughout the country on training and employment issues, particularly the development and validation of fitness programs and standards.