



# COMMON QUESTIONS REGARDING PHYSICAL FITNESS TESTS, STANDARDS AND PROGRAMS FOR PUBLIC SAFETY

## Common Questions Asked About Fitness For Public Safety

The Cooper Institute (CI) has worked with fitness programs in law enforcement, public safety and military since 1976. Over the years, the CI has considered this work as part of its mission to help shape and influence fitness programs throughout the nation. We have seen **significant legal, scientific, program and policy changes** during these years. Because of our leadership role in public safety fitness, we constantly get questions regarding these changes. This chapter will address some of the common questions and provide some direction for your agency based upon the most current information available. What departments were doing in the past may have been acceptable at the time of implementation, but new legislation and new validation studies have provided **new direction**. This section will include specific recommendations that will help your agency move toward implementing fitness tests, standards and programs which help ensure a **fit workforce** and which are **valid and defensible** if challenged in court.

Please note that the CI does not perform law enforcement fitness testing validation studies at the present time. Rather, we report findings that we receive from other organizations that perform these types of studies.

## Questions Regarding Fitness Tests, Standards and Programs

### 1. Why be concerned with fitness?

- It relates to the ability of officers to perform essential functions of the job.
- It relates to minimizing the risk of excessive force situations.
- It relates to minimizing the known health risks associated with the public safety job.
- It relates to meeting many legal requirements to avoid litigation and have a defensible position if challenged in court.

### 2. What constitutes *valid and defensible* fitness tests, standards and programs?

Current legislation requires that fitness tests, standards and programs must be:

- job related
- scientifically valid

#### A. Requirements for Job Relatedness

- A fitness component (or fitness area) must be an *underlying factor* for performing essential and/or critical physical functions of the job. It must demonstrate **construct validity**.
- A fitness component (or fitness area) must *predict* who can and who cannot perform the essential and/or critical physical functions of the job. It must demonstrate **criterion validity**.



## B. Requirements for Scientific Validity

- Fitness tests/standards/programs must have evidence that they are accepted within the field of exercise science as being valid and as meeting the “standard of ordinary care” of The American College of Sports Medicine (ACSM).
  1. The fitness tests are accepted as valid measures of the fitness areas (construct validity).
  2. The fitness tests must be accurate and reliable measures of the fitness area tested.
  3. The fitness standards predict who can and who cannot perform the essential and/or critical physical functions of the job (criterion validity).
  4. The fitness programs are defined and implemented according to ACSM guidelines for safe exercise training.

### 3. Is physical fitness job related and can it be scientifically valid?

Yes. Results of several public safety studies consistently show 20-30 strenuous/critical physical tasks that are job related. These tasks are necessary to perform essential functions of the job. There is ample data to document that physical fitness components are the **underlying and predictive factors for performing tasks** such as:

Sustained Pursuit	Aerobic Power
Sprints	Anaerobic Power
Dodging	Aerobic/Anaerobic Power/Flexibility
Lifting and Carrying	Muscular Strength/Muscular Endurance/Anaerobic Power
Dragging and Pulling	Muscular Strength/Muscular Endurance/Anaerobic Power
Pushing	Muscular Strength/Muscular Endurance/Anaerobic Power
Jumping and Vaulting	Anaerobic Power/Leg Power and Strength
Crawling	Flexibility/Muscular Endurance/Body Fat Composition
Use of Force <2 minutes	Anaerobic Power/Muscular Strength/Muscular Endurance
Use of Force >2 minutes	Aerobic Power/Muscular Strength/Muscular Endurance

## Questions Regarding Legal Issues

### 1. What are the legal requirements regarding tests, standards and programs?

Tests/standards/programs cannot discriminate against protected classes (females, minorities, handicapped or older adults) as defined by the Civil Rights Acts of 1964 and 1991, the Americans with Disabilities Act (ADA) and the Age Discrimination in Employment Act (ADEA).

**However, if job relatedness is established and documented, then the fitness tests, standards and programs *can* discriminate against anybody. It is important to implement tests/standards/programs that do discriminate between those *who can and cannot do the job* regardless of age, gender, race, or handicap condition.**



## 2. What about legal concerns of liability and negligence?

There are two levels of legal concern:

- The *first* concern revolves around potential negligence by the agency in the delivery of the fitness tests/standards/programs. The concern here is **safety**. The agency must document in writing the policies and procedures that meet the “standard of ordinary care” as demonstrated by following ACSM guidelines.
- The *second* concern revolves around the liability of an agency for **not having tests, standards and programs**. An agency that does not address the fitness requirements and needs of officers is susceptible to litigation for the following:
  - a. Negligent hiring: failure to hire applicants who are fit to do the job.
  - b. Negligent training: failure to train recruits and incumbents so that they are physically capable of doing the job.
  - c. Negligent supervision: failure to supervise incumbents to ensure that they can meet the physical demands of the job.
  - d. Negligent retention: failure to reassign officers who cannot meet the physical demands of the job.

Note: There has been one court case (Parker vs Washington, DC Police Department 1988) in which the agency was found negligent for not requiring a physical fitness program for officers.

## 3. Are the Cooper tests and norms defensible in court?

- The Cooper **tests** have scientific evidence for having construct and criterion validity as measuring job related factors and **are defensible**.
- The Cooper **norms** are scientifically **valid norms** based on general population and law enforcement samples and they are a representative cross-section of fitness levels among those populations.
- **Absolute cutpoints** (single standard for all) for the Cooper tests have been found to be job related and defensible if validated for a specific agency.
- Using **percentile rankings** of the Cooper norms for **standards** is **not as defensible**. The percentile rankings do not predict the ability to do the job and do not demonstrate criterion validity as well as using absolute cutpoints.



## Questions Regarding the Fitness Tests

### 1. What fitness test battery accurately measures the underlying fitness areas?

Aerobic Capacity (Cardiorespiratory)	1.5 Mile Run ***
Anaerobic Power (Sprinting Ability)	300 Meter Run ***
Anaerobic Power (Explosive Leg Strength)	Vertical Jump***
Muscular Strength (Upper Body)	1RM Bench Press ***
Muscular Endurance (Upper Body)	1Minute Push Ups **
Muscular Endurance (Core Body)	1 Minute Sit Ups **
Muscular Strength (Lower Body)	1RM Leg Press*
Flexibility (Lower Back and Hamstrings)	Sit and Reach*
Body Composition (Percent Body Fat)	% Fat (caliper/underwater weighing/impedance)*

\*\*\* Is highly predictive of performing job tasks in all cases

\*\* Is predictive of performing job tasks in most cases

\* Is not predictive or is predictive in only a few cases

### 2. What does The Cooper Institute recommend as a fitness battery?

The fitness test battery should contain **only those items** that measure both the *underlying* fitness components (they have construct validity) and *predictive* fitness components (they have criterion validity). The tests applied must have the validity to predict an officer's ability to perform essential and critical physically demanding tasks regardless of age, gender or handicap condition.

#### The Cooper Institute Recommended Fitness Test Battery

- 1.5 Mile Run
- 300 Meter Run
- Vertical Jump
- 1RM Bench Press and/or 1 Minute Push Up
- 1 Minute Sit Up

### 3. What about testing for body fat and flexibility?

These two fitness components do not function as significant predictors of a person's ability to perform essential tasks in public safety work. It is suggested that you continue testing for flexibility to prevent injuries and to maintain good posture and muscle balance, but not use flexibility testing as a standards qualification for selection, training or maintenance. Also, as long as aerobic power and strength are measured, a body fat measure is not needed. It does not provide any additional information about the ability to do the job and it is a "red flag" for potential ADA litigation (as a handicapping condition). Body fat measurement can be provided as feedback to be factored into an appearance evaluation within an academy setting or for an incumbent performance review, but it should not be used as a "stand alone" fitness standard.



#### **4. What about using the leg press test?**

The ability of the leg press test to predict an officer's job performance was marginal in some studies and not present in others. There is an additional problem in using the leg press test because there is considerable variability among leg press machines. The vertical jump was clearly predictive and this is the test we now recommend.

#### **5. What is an alternative to the 1.5 mile run?**

The 12 minute run test is an accurate measure of aerobic capacity and can be substituted for the 1.5 mile run. If the officer is permanently disabled and not able to run, there should be a review to determine if the officer is able to continue serving in a position if it requires running as an essential task. On a temporary basis, however, we recommend using either the maximum Schwinn Air-Dyne test or the maximal treadmill exercise test as an alternative to the 1.5 mile run for mandatory programs. The one mile walk test with heart rate monitor can also be used on a temporary basis. However, like any other fitness test, the mile walk is only valid if the individual puts forth a maximal effort during the entire test.

#### **6. What about changing how a test is delivered such as cupping the ears or crossing the hands over the chest for the sit up test?**

The validity and accuracy of any test is compromised if the procedure for administering the test is altered in any way. In other words, if a test protocol is changed, the test results are invalid. All test protocols must be followed exactly in the same manner that was used to establish the norms. The sit up test protocol requires the person to interlock the fingers and place them behind the head. However, the trainee should be instructed not to pull on the neck and should be monitored during the test. There is no data that demonstrates that individuals are injured during the sit up test when proper screening and test protocols are followed.

#### **7. Should the bench press and the push up tests be administered?**

The bench press test is a measure of muscular strength and the push up test is a measure of muscular endurance. Both strength tests measure upper body strength, are closely related and function as predictors of job performance. Some departments choose to use the bench press and push ups while others use only one test to measure upper body strength. If both tests are used, do not administer them consecutively.



## 8. What can be substituted for the Universal DVR machine?

Since the norms were established using the Universal DVR machine, no other weight training machine will be accurate. However, you may test with free weights and use the conversion formula (developed by The Cooper Institute) that allows you to use the Universal bench press norm chart. The conversion formulas are as follows:

Males: Estimated 1RM Universal = (1.016 x free weight 1RM) + 18.41

Females: Estimated 1RM Universal = (.848 x free weight 1RM) + 21.37

Note: Because males and females differ in terms of amount of lean muscle mass, there are different equations to convert the bench press scores accurately. The **standard**, however, for the bench press is the same for males and females. It is similar to determining body fat measures for males and females. The sites for measurement are different but both protocols will result in a body fat measurement accurate for that person.

## 9. What changes in the test battery can be made if a voluntary program and standards are applied instead of a mandatory program and standards?

If your department has mandatory compliance to standards/programs, then the recommended fitness battery should be used and all protocols should be followed exactly. If your program is voluntary, then you have certain other test options that are available such as a sub-max bike test or a one mile walk test with no heart rate monitor as a cardiorespiratory measure. Although these tests are a little different from the recommendations for a mandatory program, they reflect a good measurement of the fitness component. The scores can provide a baseline for training and improvement. The test battery can also include the sit and reach test and percent body fat determination.

## 10. What about using job task simulation tests?

We generally do not recommend job task simulation testing because they are not as accurate and predictive of physical ability as fitness tests. A job task simulation test battery, sometimes called an obstacle course or agility test, accounts for only 20-25% of performance of all physical tasks. These tests do not discriminate nor predict well and do not measure fitness. A fitness test battery is far more predictive of an officer's ability to perform essential tasks (accounts for between 50-90% of physical performance) and is more defensible if challenged in court. If your department chooses to use job task simulation tests, then we recommend that it be used in combination with fitness testing. Agencies should use only job task simulation tests that have been validated in a research study. Some departments are using the job task simulation as a "back up" test to ensure that the recruit who could not pass the fitness assessment for academy exit can do the essential tasks of the job. Likewise, if the incumbent officer cannot pass the fitness assessment, then the job task simulation test can serve as a "back up."



## Questions Regarding Fitness Standards

### 1. Are age and gender standards acceptable for mandatory programs?

Not according to the Civil Rights Act of 1991. Section 106 of this law addresses the issue of Same Job=Same Standard:

“It shall be unlawful employment practice for a respondent, in the connection with the selection of referral of applicants or candidates for employment or promotion, to adjust the scores of, use different cutoff scores for, or otherwise alter the results of, employment related tests on the basis of race, color, religion, sex or national origin”

We at the Cooper Institute are fitness experts, not legal experts. However, in our opinion it would appear that the use of age and gender standards are in conflict with this law if applied as mandatory standards for selection (academy entrance), completion of training (academy exit) or maintenance programs for incumbents.

The age and gender based norms were commonly used in the past to set standards because there was no data to suggest a single standard cutpoint (absolute standard). Likewise, agencies and the court accepted age and gender based norms because they did appear reasonable and they minimized adverse impact against protected classes. However, with a required emphasis on job-relatedness brought about by the Civil Rights Act of 1991 and the ADA, the age and gender based norms may not be as defensible in court as they were in past years.

### 2. What standards are recommended?

If the goal of your agency is to be in compliance with the Civil Rights Act of 1991, absolute standards (single cutpoints for everyone) are recommended. Same job=Same standard makes sense to most people. However, the use of absolute standards will likely demonstrate adverse impact especially against females. Thus, it is important that the standards be validated and that the test cutpoints predict who can and cannot do the job. Even if adverse impact is shown, if the standards have evidence for their validity, they should be upheld if challenged in court.

If the goal of your agency is to promote diversity, then the use of age-gender norms is probably the best approach. Although the use of such norms appears to violate the Civil Rights Act of 1991, these types of norms are much less likely to result in adverse impact against women. However, agencies need to be aware that age-gender norms are not as predictive of the ability to do the job as absolute standards.



## Summary of Validation Studies

The affiliates of The Cooper Institute (Fitness Intervention Technologies and FitForce) have conducted validation studies for over 180 federal, state, and municipal agencies. A summary of those validation studies was reported in *Police Chief* magazine (Collingwood, Hoffman, and Smith, March 2004, pages 32-37). The studies defined specific job-related fitness standards for each agency. There was a range of scores defined as standards for the various agencies. In other words, different standards were validated (identified) for each agency. However, the range was not very large. Here is the range of standards recommended for each test for 180 federal, state, and municipal agencies combined:

<i>Test</i>	<i>Range</i>
1.5 mile run	14:40 - 15:54 min
300 meter run	64.3 - 66.0 sec
1RM bench press raw score	151 – 165 lbs
1RM bench press ratio	.78 - .84 of body weight
Push-up	25 – 34
Sit-up	30 – 38
Vertical Jump	15.5 – 16 inches

### 3. What standards should be applied within an agency?

There are three approaches that agencies have applied for setting standards. The approaches vary as to the degree that job relatedness is documented and to the extent that they can be defended. In evaluating the different approaches, it is important to keep in mind that the defensibility of any physical performance standard is dependent upon **the degree of documentation (data) that supports the standard as being predictive of performing critical physical job tasks for the specific agency.**

- *Approach 1—Construct/Criterion Validation Study:* The **most** defensible fitness standards are those in which a validation study is performed specifically for an agency. The results of the study should document which specific fitness test cutpoints should be the job standard. Those standards would be the same for academy graduation (recruits) and for maintenance (incumbents). The selection standards into the academy, however, can be set at a score 10% lower than the standard. For example, if 30 sit ups are required for academy exit and for maintenance, then selection standards for entrance into the academy might be 27 sit ups (or 10% lower). A validation study is the most expensive option.



- *Approach 2—Transferability Study:* The next most defensible fitness standards are those which have been based on a “commonality study.” This study *documents* that an agency has a strong degree of commonality (or similarity) to an agency (federal, state, or municipal) for which there are validated standards. This can be accomplished by doing a commonality analysis. An evaluation is made by comparing job analysis information and job descriptions. After the study is complete, then the agency simply “adopts” the standards of another agency that has completed a validation study. This approach is less expensive but is also somewhat less defensible.
- *Approach 3—Applying Another Agency’s Absolute Standards:* With this approach, an agency applies the standards validated from another agency that is considered a “similar” type department (i.e., a municipal agency adopts another municipal agency’s standards). This approach has no cost associated with it because there is no validation study conducted to provide cutpoints specific to that agency. Therefore, this approach is the **least defensible** of the three approaches. If challenged the agency’s only defense is to provide documentation (with data) that the physical demands of the job are essentially the same as the agency whose standards were adopted. Without those data, there is no defensibility.

#### 4. What about using percentile rankings of the fitness norms as standards?

No. Several years ago, CI recommended using age and gender norms using the 40<sup>th</sup> percentile for academy entrance and 50<sup>th</sup> percentile for academy exit and incumbent standards. Because of legislative changes requiring Same Job = Same Standard, CI began recommending a *single* standard (either the general population norm set or a law enforcement norm set) again using the 40<sup>th</sup> percentile for selection and 50<sup>th</sup> percentile for exit and maintenance. The age and gender norms and single norms represent a ranking of fitness scores from the 99<sup>th</sup> to the 1<sup>st</sup> percentile. **The percentile scores (whether age and gender norms or single norms) have limited validity data for predicting who can and who cannot do the job.** Consequently, they pose problems if used as a *mandatory* standard for selection, training or maintenance. They do not pose a significant legal problem if used to set *voluntary* standards.

- **Age and Gender Norm Standards Using Percentile Ranking**

*Advantage:* These standards should minimize adverse impact against females and thus avoid potential litigation. In other words, these standards help ensure diversity.

*Disadvantages:* If challenged in court, there is no defense that the percentile rankings used as standards are job related. Furthermore, they are in violation of the Civil Rights Act of 1991.



- **Single Norm Standards Using Percentile Ranking**

*Advantage:* These standards require the same level of performance regardless of age and gender (Same Job = Same Standard).

*Disadvantages:* These standards will probably demonstrate adverse impact on females and, if challenged, there is limited data to support that the percentile rankings are job related. There is limited data to support that these standards predict capability to do the job.

**5. Can an average of scores on the fitness battery be used as standards?**

No. If fitness test scores are used as mandatory standards, then each test must be treated separately. Each fitness test measures a specific fitness component required by the officer to perform the essential job functions. Therefore, the officer must meet the cutpoint score for each fitness test. For voluntary standards, however, an average score is acceptable.



## Questions Regarding Fitness Programming

### 1. Should on-duty time be allowed for incumbents to train?

Some agencies are allowing three hours a week on-duty time to train. This provision encourages and motivates officers to exercise. Some type of monitoring system is needed to ensure that the officers are using that time for exercise. A court case decision by the Ohio Supreme Court (FOP vs Ohio Highway Patrol, 1983) stated that the agency did not have to provide facilities, equipment or on-duty time for officers to train although the agency had mandatory fitness qualifications.

### 2. What are the steps to develop and implement a physical fitness program?

A good starting place is to send an officer through the Physical Fitness Specialist Certification course conducted by The Cooper Institute. This will prepare the officer to be a fitness coordinator who can set up a testing and training program in the department. Each department will have to make a decision to use age and gender standards, single standards or absolute standards. Advantages and disadvantages of each have been delineated in this text. We recommend the absolute standards that are *valid* and *defensible* because they are *job related* and *scientifically valid*. Next, determine if the program will be voluntary or mandatory compliance or a combination of the two. For example, some agencies have mandatory compliance for academy exit and voluntary programs for incumbents, or mandatory testing but voluntary compliance. Looking toward the future, some agencies will implement mandatory compliance to fitness standards throughout an officer's career **because it is the right thing to do to ensure that officers are fit for duty**. Agencies must give their officers a fair chance to prepare for the implementation of mandatory fitness standards/programs. Applicant and recruit fitness standards/programs may be implemented at any time. Incumbent fitness standards/programs should be phased in over time. "Grandfathering" of incumbents is not recommended because it undermines the basic premise that physical fitness is job related.

## CONCLUSION

A given agency has the latitude to implement physical fitness testing, standards and programs. No one can legitimately argue that physical fitness is not job related. The key issue and the one necessitating considerable planning, thought, research and effort is **what level of physical fitness is required to do the job?** In other words, which fitness cutpoints or standards will be chosen and implemented. The standards your agency selects for applicants, recruits and incumbents has legal, scientific and practical issues. The recommendations put forth by The Cooper Institute reflect our judgment as to the legal and scientific validity requirements for tests, standards and programs. However, your department's legal and HR specialists should be included when fitness testing standards and policies are being made.



## Top Ten Physical Fitness Policy Checklist

- 1. Are the purposes and goals clearly defined?**  
(What do we want to do?)
  - The goals are expressed in terms of ensuring the physical performance capabilities of officers.
- 2. Is the rationale behind the purposes and goals clearly defined?**  
(Why do we need to do it?)
  - The rationale is expressed in terms of job relatedness.
- 3. Has the job related validity for the tests, standards and programs been demonstrated and documented?**  
(Why is it valid and job related?)
  - There is documentation from a validation study or process to support the selection of the tests, standards and programs.
- 4. Are the personnel subject to the policies and programs identified from the top down?**  
(Who needs to do it?)
  - Ideally, all sworn personnel are required to meet the policy.
- 5. Are the personnel responsible for implementing and supervising the program identified?**  
(Who delivers the program and how are they trained, certified and supervised?)
  - Ideally, a fitness coordinator has been trained and certified as a Physical Fitness Specialist to implement a fitness program based on the standard of ordinary care according to ACSM.
- 6. Are the primary fitness components of the program clearly identified and explained?**  
(What is the program?)
  - screening
  - assessment
  - goal setting
  - exercise prescription
  - education
  - trained leadership
- 7. Are the operational components of the program clearly defined and explained?**  
(What occurs in the program and which agency operations are affected?)
  - There is a detailed process flow chart.
  - There is a defined officer fitness selection process.
    - selection testing
    - selection standards
    - job descriptions and job announcements



- There is a defined recruit fitness training curriculum.
  - academy objectives
  - entry and exit testing
  - curriculum
  - graduation standards
- There is a defined incumbent fitness maintenance program.
  - in-service training and education (meeting ACSM guidelines)
  - periodic fitness assessment (meeting ACSM guidelines)
  - standards compliance process and procedures (incentives, progressive sanctions)
  - personnel performance review system
  - medical “fit for duty” review
  - specification of limited duty assignments
  - remedial programming

**8. Is the implementation process with timelines defined?**

(How will the program be phased in?)

**9. Are the organization’s responsibilities specified?**

(What is the expectation of the agency?)

- provision of screening and assessment
- provision of education
- provision of trained fitness leadership
- provision of on-duty time for training, if appropriate
- provision of facilities and equipment, if appropriate
- record keeping
- program evaluation
- ensuring job descriptions and officer evaluation reports reflect the need for fitness
- supervision of incentive and/or compliance process

**10. Are the individual officer’s responsibilities defined?**

(What is the expectation of the officer?)

- acquire and maintain the necessary fitness level
- participate in assessment and education/training activities
- participate in remedial training as deemed necessary



## OPTIONS FOR FITNESS TESTING AND STANDARDS IN LAW ENFORCEMENT

Law enforcement, military and other public safety organizations often require their applicants, trainees, and incumbents to maintain a certain level of physical fitness to be “fit for duty.” Job-related duties require an individual to be prepared to perform optimally in certain situations with strength, stamina, speed and power.

There is no governing body that dictates to organizations how they are to implement fitness tests, choose their fitness standards, or implement their fitness programs.

Some organizations have voluntary fitness testing with recommended standards that are not enforced (voluntary compliance). Other organizations have mandatory compliance for fitness tests and standards, meaning that the individual will not be hired or will be fired if fitness standards are not met or maintained. Still others have mandatory testing but voluntary compliance to fitness standards.

Furthermore, organizations often differ in fitness requirements for applicants, trainees and incumbents. For example, some law enforcement departments require their academy graduates to meet a fitness standard, but the incumbent officer is never tested for fitness again. The Cooper Institute has the opinion that fitness should be maintained throughout an individual’s career, if his or her job requires a readiness to respond physically. Currently, there are many approaches that are being used successfully to accomplish this purpose. One of the main concerns, however, is to avoid litigation brought about because of unfair standards or perceived inequalities.

The Cooper Institute is committed to providing information to organizations that will help them to select the best approach that is appropriate within their particular setting. Additional information is included in a paper called, *Commonly Asked Questions*. This can be found on our website [www.cooperinst.org](http://www.cooperinst.org) under Fitness in Law Enforcement. Included in this information is a suggested test battery (1.5 mile run, 300 meter run, sit ups, push ups or bench press, and vertical jump) and information on how these tests are job related. In addition, information is included to help you make an informed decision regarding legal risks. There is no *foolproof* solution to avoid litigation, but we hope to provide you with the pros and cons to each approach.

What follows are basic definitions often used to implement fitness tests & standards and a chart to indicate some of the options or scenarios currently used by different organizations:



## Definitions

*Fitness Norms:* a representation of how individuals compare to one another with regard to performance on physical fitness tests. The Cooper Institute has one of the largest and most valid data bases in the world with respect to fitness norms for age and gender.

*Fitness Standards:* minimal scores that must be attained on each physical fitness or job task simulation test to indicate that an individual can perform his/her job. Organizations generally determine which standards they choose to use.

*Percentile Rankings:* a number that tells individuals what percentage of the group scored worse than them. For example, if someone scores at the 40<sup>th</sup> percentile, then 40% of the group scored worse and 60% of the group scored better.

*Age & Gender Norms:* a representation of how individuals in a specific age and gender group compare to one another with regard to performance on physical fitness tests. Example: a norm chart of Males 20-29 years old will contain fitness scores for individuals in this age and gender group and indicate if they have scored Superior, Excellent, Good, Fair, Poor or Very Poor and will give percentile rankings for each category as well.

*Single Norms:* use of percentile rankings after all ages and both genders are combined into a single norm (these norms were derived from the Cooper age and gender norms).

*Absolute Standards:* minimal scores or “cutpoints” that have been determined in law enforcement validation studies as the fitness standard that must be attained by everyone regardless of age, gender or handicapping conditions for the person to be considered “fit for duty.” Note: Organizations determine absolute standards by three methods: 1) they conduct a “validation study” for their own department; 2) they perform a “transferability study” by comparing their commonalities to an organization that has completed a validation study and (if comparable) they adopt or “transfer” those absolute standards; or 3) they informally adopt absolute standards conducted by other organizations if they perceive their organization to be similar in job tasks.

*Job-Task Simulation:* a test that incorporates specific physical tasks that an individual is likely to perform on the job. In law enforcement, such a test might include tasks such as climbing a wall, pushing a vehicle, dragging a dummy, and so on. These tests are often called obstacle courses or agility tests. Some departments develop a test and set a standard while others conduct a formal Job Task Simulation Validation Study.



## OPTIONS FOR FITNESS TESTS AND STANDARDS

	<b>Applicant</b>	<b>Trainee/Academy</b>	<b>Incumbent</b>
<i>Fitness Standards</i>	1. Age X Gender 40 <sup>th</sup> *	Age X Gender 50 <sup>th</sup> *	Age X Gender 50 <sup>th</sup> *
	2. Age X Gender 40 <sup>th</sup> *	Single 50 <sup>th</sup> *	Single 50 <sup>th</sup> *
	3. Single 40 <sup>th</sup> *	Single 50 <sup>th</sup> *	Single 50 <sup>th</sup> *
	4. Age X Gender 40 <sup>th</sup> *	Absolute**	Absolute**
	5. Absolute** (10-15% lower)	Absolute**	Absolute**
<i>Job-Task Simulation</i>	1. Job Task (same as incumbent)	Job Task (use fitness tests for programming)	Job Task (use fitness tests for programming)
	2. Job Task (10-15% lower ) than incumbent	Job Task (use fitness tests for programming)	Job Task (use fitness tests for programming)
<i>Fitness &amp; Job Task Combinations</i>	1. Age X Gender 40 <sup>th</sup> * (trainability)	Single 50 <sup>th</sup> * (Job Task used when 50 <sup>th</sup> is not reached)	Single 50 <sup>th</sup> * (Job Task used when 50 <sup>th</sup> is not reached)
	2. Age X Gender 40 <sup>th</sup> *	Job Task	Job Task (use fitness tests for programming)
	3. Absolute** (10-15% lower than incumbent)	Job Task (use fitness tests for programming)	Job Task (use fitness tests for programming)
	4. Single 40 <sup>th</sup> *	Single 50 <sup>th</sup> * (use fitness tests	Job Task  for programming)
	5. Single 40 <sup>th</sup> *	Job Task	Single 50 <sup>th</sup> *
	6. Absolute**	Job Task	Job Task

\*Derived from Cooper norms using percentile rankings as the standard

\*\*Absolute standards derived from law enforcement validation studies using Cooper tests

Note: Job Task Tests are obstacle-course type of tests that may/may not be validated