



Physical Abilities Assessment

Introduction & Preparation Guide: Strength Training

Upper Arm | Abdominal & Endurance | Trunk



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WELCOME!

Congratulations!

You are taking the first step to ensure your success on the tests and ultimately in your career at San Diego Gas & Electric (SDG&E). The physical ability tests used at SDG&E are designed to measure your physical capabilities for performing physically demanding jobs. This booklet will give you information about the procedures used to test candidates on the physical abilities necessary for successful and safe job performance. It will describe the tests you will be taking, as well as provide suggestions for training to improve your chance of success on the tests and in the job for which you are applying.

Good Luck!

HOW TO USE THIS TEST GUIDE

This manual is divided into several sections aimed at helping you become more successful when taking the test.

- An overview of physical ability testing at the company
- General test taking strategies
- A description of each test
- Suggestions for developing your strength and endurance
- Resources to help you design a program for yourself

Whether you are a *first-time* test taker or retaking the tests, take time to read through this entire manual and familiarize yourself with the tests you will be taking, as well as the strength training suggestions. Start early, as it takes time to improve physical strength. Also provided are resources to assist you when preparing for this test.

Let's get started!

OVERVIEW

Accommodation

In accordance with the Americans with Disabilities Act (ADA), if you have a disability, you have the right to request an accommodation in the hiring and testing process. If you believe that your disability requires special arrangements to take the test(s), please contact sdgestaffingquestions@sdge.com prior to taking the test(s).

About Physical Ability Tests

Physical Ability Tests are used by SDG&E to help ensure that employees will be able to successfully and safely perform the physical tasks associated with physically demanding jobs. Rather than tests that try to recreate the job, these tests measure basic strength and endurance that are related to success in the job in question.

Consider the example of someone applying for a job that requires digging trenches. Instead of being tested on the specific ability to dig a trench, he or she would be tested on the upper body strength, abdominal strength/endurance, and back strength that are all involved with digging trenches. This approach is more standardized and safe, is more efficient, generalizes to other job tasks, is easier to administer, and relies less on techniques that can be learned on the job. Furthermore, research has shown that these fundamental physical abilities predict success in a wide range of physical job tasks.

GENERAL TEST TAKING STRATEGIES

Preparing for the Test

Strength and endurance training is beneficial for your health regardless of whether you are taking the physical abilities test. If you are not currently involved in strength training and you are not in a physically demanding job, it is highly recommended that you engage in strength and endurance training both to improve your overall health and to help you prepare to take the physical abilities test. You should always check with your doctor before engaging in any physical training program.

- **Be positive!** Start with a positive attitude and don't give up. Building your strength and endurance takes time and commitment.
- **Start early and pace yourself.** If you choose to prepare for your test, start slowly and allow yourself adequate time to build up your strength and endurance. For some, this may take as little as a few weeks, and for others it may take several months.
- **Be consistent.** Being consistent is important when building strength and endurance. Take time off for rest, when necessary, but a consistent routine will help you stay on track.
- **Condition yourself.** Building strength is not only going to help your test performance, but also good for your overall health.
- **Rest and eat right.** Make sure you get plenty of rest and eat healthy while you are training, especially the days leading up to the test and the day of the test.

The Day of the Test

The tests you will be taking are safe. There is little risk of injury. However, there are several things to keep in mind the day of the test that will minimize chances of injury and help you perform your best.

- **Get ready.** Take part in the warm-ups and stretches that are described by the test administrator.
- **Make good choices.** If you do not feel well or have reason to believe you cannot safely perform the tests (e.g., illness, injuries, etc.), reschedule your testing session. There will be other opportunities. Your health and safety are of utmost importance.
- **Listen carefully to all test instructions!** To ensure that you perform at your best and do not get injured, listen to all test instructions. Make sure to assume the correct body positioning and perform the tests as instructed.
- **Listen to your body.** If experience any unexpected pain during stretching or testing, stop!

Warm-Ups

To ensure the safety of the candidate, the following exercises are recommended: Hamstring Stretch, Side Bend, Quadriceps Stretch, and Body Twister.

Hamstring Stretch

Starting Position (Figure 1.)

- Sit on the floor with your legs together in front of you. The knees should be slightly flexed.
- Your feet should be perpendicular to the floor, such that the toes of the feet are pointed upward.

Movement

- Slowly reach forward toward your ankles, while keeping the back flat and knees slightly bent. Grasp the toes and move the chest toward your knees.
- Keep the head up, the back flat and the toes pointed upward and attempt to slowly straighten the knees.
- Only go as far in the knee extension as is comfortable.

Hold

- Hold the stretched position for 10-20 seconds. You should feel the stretch in the hamstrings. If not, check to see that you are not rounding the back and are attempting to straighten the knees.

Repetitions

- Repeat the exercise 3 times.



Figure 1. Hamstring Stretch

Side Bend with Straight Arms

Starting Position (Figure 2.)

- Stand with feet approximately shoulder distance apart, knees slightly bent.

Movement

- Reach arms overhead with palms facing out. Keeping arms straight, lean from waist to one side, reaching with both arms.
- Keep the head facing forward.
- Only go as far in side bend as is comfortable.

Hold

- Hold the stretched position for 10-20 seconds. You should feel the stretch in the muscles on the side of your torso and your back.

Repetitions

- Repeat the exercise 3 times for each side.

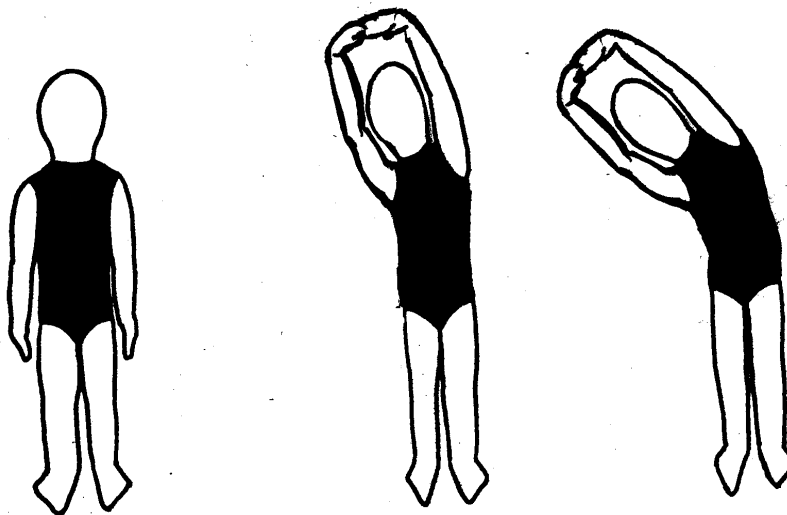


Figure 2. Side Bend

Quadriceps Stretch

Starting Position (Figure 3.)

Stand erect with the feet shoulder width apart.

- Grasp a stable surface with the right hand (e.g., chair, table).

Movement

- Bend the knee of the right leg so you can grasp the right foot behind you with the left hand.
- Slowly and gently pull the right heel upward towards the buttocks as you move the bent leg back.

Hold

- Hold the stretched position for 10-20 seconds. You should feel the stretch in the front of the thigh and across the hip joint. If not, continue to gently pull the bent leg back and upwards as you push forward with the right hip.

Repetitions

- Repeat the exercise 3 times for each leg.

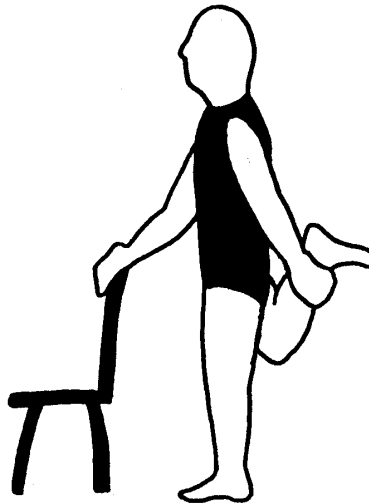


Figure 3. Quadriceps Stretch

Body Twister

Starting Position (Figure 4.)

- Place the right side of the body an arms length away from a wall.
- Stand erect with the feet shoulder width apart.
- Keep your arms straight and place them at your sides at shoulder height.

Movement

- Slowly twist the upper body to the left (counterclockwise) keeping the arms extended at shoulder height.
- As you twist to the left, allow only the right heel to come off the floor.
- Twist as far as possible, attempting to touch the wall with the left hand. If you can not reach the wall simply hold the stretch in a comfortable position.

Hold

- Hold the position for 10-20 seconds. You should feel the stretch in your trunk and shoulders. If not, slowly attempt to twist just a bit further.
- You should not feel any strain in your back or knees.

Repetitions

- With the right side towards the wall perform the exercise 3 times.
- Repeat the exercise with the left side toward the wall, allowing only the left heel to come off the floor.

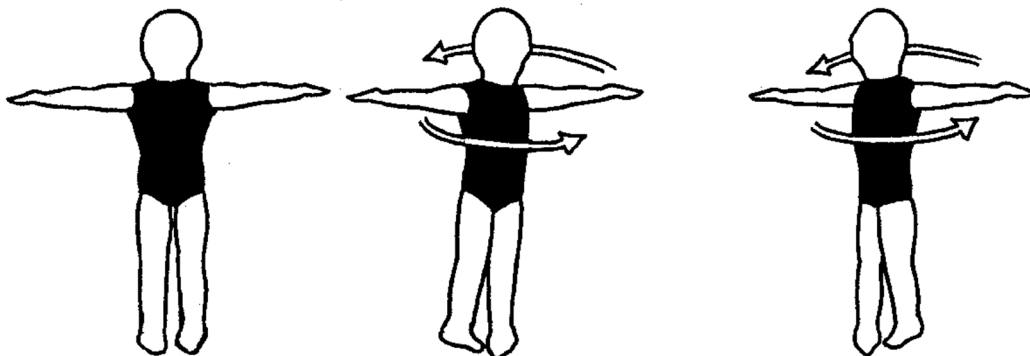


Figure 4. Body Twister

Description of the Tests

The battery of tests is used to assess the physical strength and endurance of job candidates. It is intended to ensure those who are hired have a high likelihood of successfully performing the physical demands of the job for which they are applying, and to minimize the risk of injury to employees during the performance of their jobs.

Arm Lift

The Arm Lift test measures the strength of your arms. This test requires you to stand on a flat platform and with your arms bent at a 90-degree angle and to pull up on a non-moving arm bar with your maximum force for 4 seconds. You will perform 1 practice trial at 50% effort and 3 trials at full effort. In some cases, you may be asked to perform a 4th trial at full effort. You will receive a 30 second rest between trials. See below for a picture of this test.



Figure 5. Arm Lift.

Sit-Ups

The Sit-ups test measures the strength and endurance of your abdominal (stomach) muscles. This test requires you to lie on your back (on a foam mat) with your legs bent at approximately a 45- to 90-degree angle, and to perform as many sit-ups as you can in one minute. You will be given specific instructions on how to perform the sit-ups. Your feet will be held steady while you perform the sit-ups. You will complete one trial only. See below for a picture of this test.



Figure 6. Sit-Up

Trunk Pull

The Trunk Pull test measures the strength of your lower back. This test requires you to sit on a mat with your feet against a flat wooden platform placed vertically against a wall, and to pull back on a non-moving bar with your maximum force for 4 seconds. You will perform 1 practice trial at 50% effort and 3 trials at full effort. In some cases, you may be asked to perform a 4th trial at full effort. You will receive a 30 second rest between trials. See below for a picture of this test.



Figure 7. Trunk Pull

Developing Strength and Endurance

Note: You should always check with your doctor before engaging in any physical training program.

The following suggestions and resources are aimed at developing the strength and endurance that are associated with SDG&E's physical abilities pre-employment test. It is highly recommended that you design a training program to include a wide variety of exercises that will improve your overall physical strength and fitness. This includes working all major muscle groups as well as performing aerobic activities (e.g., walking, running, biking, swimming) that will help improve your overall fitness.

You might consider obtaining advice or assistance from a personal trainer to help you design a strength training program that is customized for you. You can often find certified personal training professionals who work at local fitness clubs such as the YMCA. It may be helpful to show this booklet to your personal trainer and discuss exercises that will help you prepare for the test.

Make sure you understand the proper techniques and form for performing all exercises. If you do not perform them the correct way, you may not benefit much — worse yet, you risk getting injured.

Upper Arm Strength Training

The first test in the physical abilities test battery measures your upper arm strength (biceps and forearms) using a static (non-moving) strength test. There are several exercises that will help build strength in upper arms.

Some basic exercises that focus on these muscle groups include wrist curls, concentration curls, hammer curls and chin-ups. You can learn more about using these and other exercises that strengthen your biceps and forearms by accessing the resources listed in the Resources section of this guide.

Abdominal Strength Training

Since one of the tests in this battery consists of sit-ups, the best way to prepare for this test is to build up your abdominal strength and endurance using sit-ups. There is no special equipment needed and you can perform these just about anywhere.

Some other exercises that focus on these muscle groups include crunches and the plank. You can learn more about using these and other exercises that strengthen your abdominal muscles by accessing the resources listed in the Resources section of this guide.

Trunk/Lower Back Strength Training

The trunk pull test measures your lower back strength using a static (non-moving) strength test. There are several exercises that will build strength in your lower back.

Some basic exercises that focus on these muscle groups include dumbbell rows, back extensions, and stiff legged dead lifts. You can learn more about using these and other exercises that strengthen your lower back by accessing the resources listed in the Resources section of this guide.

FURTHER RESOURCES

Below are various books and websites that may be useful in helping you design a strength training program. You may find the books at your local library or bookstore. There are also a large variety of videos that have instructor-led strength training programs available at online. These resources are listed to help you develop your current skills.

Please note that SDG&E is in no way affiliated with any of these resources, they are simply listed for your convenience.

Books

- Grymkowski, P., Kimber, T., & Connors, E. The Gold's Gym Training Encyclopedia, Vol. 1, (1984).
- Hatfield, M. (2005). Health Series: Strength Training for Muscle Development. Doubleday Publishing.
- Brungardt, K. (1998). The Complete Book of Abs: Revised and Expanded Edition. Random House Publishing Group.
- Farand-Taylor, J. (2006). Solid to the Core: Simple Exercises to Increase Core Strength and Flexibility. New Harbinger Publications, Inc.
- Hagerman, P. S. (2006). The Complete Idiot's Guide to Core Conditioning, Illustrated. Alpha Books.
- Norris, C. M. (2002). Abdominal Training, Second Edition: A Progressive Guide to Greater Strength. Globe Pequot Press.
- Wuebben, J. & Stoppani, J. (2008). Stronger Arms & Upper Body. Human Kinetics Publishing.

Websites

- http://exercise.about.com/od/exerciseworkouts/Strength_Training_and_Specialty_Workouts.htm
- <http://www.shapefit.com/strength-training.html>
- http://en.wikipedia.org/wiki/List_of_weight_training_exercises