Step down test for patellofemoral pain syndrome

Q: I have knee pain from patellofemoral pain syndrome (PFPS). I'm seeing a Physical Therapist who has tested me and put me on an exercise program. One of the tests was to step down from a stair and back up as many times as possible in 30 seconds. I could only do it 10 times. What's normal?

A: The step-down test is used to test the knee in anyone with a healthy knee or with knee pain to determine level of function. It mimics stepping down stairs, which is often very painful for someone with patellofemoral pain syndrome (PFPS).

The test is done by standing with the leg to be tested on a standard height stair (usually 20-cm or five inches). You lower your body enough to touch the heel of the opposite leg on the floor in front of the step. Then you straighten back up and repeat.

The test was standardized in 2002 for testing with healthy adults and compared with patients who have patellofemoral pain syndrome (PFPS). A normal, healthy adult can perform an average of 18 repetitions of this step-down activity. People with PFPS test out at around an average of 14 repetitions.

Other studies that have repeated this test with female athletes who have PFPS have reported an average of 15 plus or minus seven repetitions before rehab. That means there was a range from eight to 22 repetitions within the group. After an eight-week long strengthening program, the athletes were able to perform 21 plus or minus five repetitions (range of 16 to 26).

You can also check with the Physical Therapist who did the testing and see if this matches with the test he or she was using. Your therapist will know what goal to set for you based on several factors such as current strength of hip and knee muscles, type of sports activity, activity level you plan to engage in, and level of strength needed for both.