

Ruler Drop Test

Patient information

Name:

Age:

Date of test:

Purpose

The Ruler Drop Test is designed to monitor the athlete's reaction time. This simple and effective test helps assess the quickness of response, which is crucial for various athletic performances.

Equipment needed

- Meter ruler
- Assistant

Test procedure

1. Instruct the patient to sit or stand comfortably with their dominant hand outstretched. Ensure the patient is relaxed and understands the test procedure.
2. The assistant holds the meter ruler vertically between the patient's dominant hand's outstretched index finger and thumb, ensuring that the top of the thumb is level with the zero-centimeter line on the ruler.
3. The assistant releases the ruler without warning, and the patient catches it between their index finger and thumb as quickly as possible. The assistant records the distance between the bottom of the ruler and the top of the patient's thumb where the ruler has been caught.
4. The test is repeated two more times. Record all distances and calculate the average value of the three trials.
5. Use the average distance to calculate the reaction time using the formula:

$$t = \sqrt{\frac{2d}{a}}$$

where:

- **d** = average distance in meters
- **a** = acceleration due to gravity = 9.81 m/s²
- **t** = reaction time in seconds

Distance

First attempt distance (cm):

Second attempt distance (cm):

Third attempt distance (cm):

Average attempt distance (cm):

Reaction time

List in seconds:

Additional notes**Healthcare professional information****Name:****Signature:****Date:**