Proteus Glossary

Percentile Rankings Explained

- A user's Percentile Ranking for any variable will depend on the cohorts that are selected in the Test Summary.
- The closer a user is to the 100th percentile, the higher that user ranks for that variable amongst their selected cohort.
- Example: if someone is in the 75th percentile for power in a movement, then their power is higher than 75% of users tested within that cohort.

Overall Values

Overall Power

- (Watts) Overall power is an average of all the peak power values for movements that were included in this test.
- Power is a measurement of force and speed. [Power (Watts) = Force x Velocity]

Overall Acceleration

- (meters/second^2) Overall acceleration is an average of all the peak acceleration values for all movements that were included in this test.
- Acceleration is a measurement of how quickly a movement reaches peak velocity (meters/second)

Overall Proteus Score

- (Watts/bodyweight) Overall Proteus Score is a pound-for-pound power score. This is a ratio of Overall Power (average of all peak power values) divided by the user's body weight in Proteus' system.

Overall Power Imbalance

- Overall Power Imbalance compares the average peak power of movements performed on the right and left side.
- The more powerful side and the percent difference between each side are noted.
- Example: *4% Right Side* indicates that the user is 4% more powerful on their right side based on the results of the completed test.

Movement Analysis

- All values displayed on this page originate from this movement's highest value during the set.

Power

- Power is a measurement of how quickly someone can produce force.
- Power (Watts) = Force x Velocity

Acceleration

- Acceleration is a measure of how quickly a movement reaches peak velocity
- The higher the value, the sooner peak power was achieved in the rep.
- Acceleration (meters/second^2) = Change in Velocity (meters/second) / time (seconds)]

Deceleration

- Deceleration is a measurement of how quickly a movement can go from peak velocity to zero velocity. Deceleration is considered the inverse of acceleration.
- The higher the value, the more quickly the movement came to a stop after peak velocity.
- Deceleration (meters/second^2) = Change in Velocity (meters/second) / time (seconds)]

Consistency

- Consistency is a measure of how closely the tested repetitions followed the movement's average range of motion.

Velocity

- Velocity is a measurement of the peak speed achieved during the fastest recorded repetition.
- The higher the value, the higher the velocity achieved.
- Velocity (meters/second) = displacement (meters) / time (seconds)

Range of Motion

- Range of motion is a measure of the distance the repetition traveled.
- Range of motion (meters) = Total displacement (meters)

3D Movement

- The 3D graph displays the movement path of each exercise. The beginning of the rep is noted by the word "start" and the end is noted by the word "end".
- The red area indicates the area of the movement where peak velocity and therefore power is achieved.
- Speed is indicated by the following color gradient going from slow to fast: Purple, Blue, Green, Yellow, Orange, and Red.
- The closer the red region is to the start of the movement, the higher the acceleration score will be.
- The closer the red region is to the end of the movement, the higher the deceleration will be.

- The peak power for each rep is indicated on the rep selection screen, it defaults to showing the movement for the peak repetition only. You can select to see all reps or individual ones.
- Once a movement has been tested at the same resistance more than once, you will have the ability to overlay and compare previously recorded 3D graphs to your most recent recordings.

Bilateral Balance

- Bilateral Balance displays comparisons of peak power (Watts) for each side of the body that was measured during unilateral movements.
- The bar graphs provide a visual representation of peak power production on each side of the body while the Side Difference is the percent difference between the user's right and left sides for the tested movement.

Insights & Recommendations

Movement Categories

Rather than providing insights and recommendations based on muscles, Proteus designates all tested movements into movement categories. These movement categories include all variations of a tested movement (push vs pull; horizontal vs. vertical; unilateral and bilateral; static and plyometric).

Movement category percentile rankings are based on the average peak power and acceleration of a tested category. Movements that are skipped within a test will not be included in calculating these percentile rankings.

Insights Classification

During a Proteus Performance Test, power and acceleration are measured for each tested movement. Proteus will then classify each movement category into a training recommendation based on their percentile rankings to the selected cohort (shown below).

- **Low Strength**
  - <50th percentile for power compared to the selected cohort

- **Speed Dominant**
  - Power is >50th percentile compared to selected cohort
  - Acceleration score is at least 5 percentiles > than power score

- **Strength Dominant**
  - Power is >50th percentile compared to selected cohort
  - Power score is at least 5 percentiles > than acceleration score

- **High Strength & Speed**
    - Power is >50th percentile compared to selected cohort
    - Power score is at least 5 percentiles > than acceleration score

Depending on a movement category's classification, Proteus will generate recommended exercises that will improve a movement category's percentile ranking.

User Cohorts, Filtering, & Sample Sizes

When viewing the results of a Proteus Performance Test it is essential that the user sets the appropriate cohort filters to receive the most accurate Insights & Recommendations possible. If a user has completed their profile, the filters will automatically be set for their gender and age range.

Selecting **Edit Cohort** will allow users to refine a test result's percentile rankings. It is worth noting that if a user has too many filters selected it may limit the sample size a test can be compared to. The filters we recommend to start a user's comparisons are **gender, age range, and weight**.