ProStride™ Knee

A comparative study on a 59-year-old subject with over 25 years of prosthetic use, evaluating electronic knee joints, including ProStride.

COMPARATIVE STUDY

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Easy to install and intuitive to use.

Installation is straightforward, requiring just a few steps:

1

CONFIGURE THE SETTINGS

The intuitive user interface allows clinicians to program the knee with just a few simple inputs. ProStride's smart sensors automatically calibrate to the patient's gait pattern, making adjustments quick and accurate.

2

FINE TUNING

Final adjustments can be made swiftly through a user-friendly app, allowing for real-time feedback and ensuring optimal performance.

This process not only saves valuable time, but also ensures that clinicians can focus more on patient care rather than on technical setup. The ProStride knee is designed to be as user-friendly as possible, allowing practitioners of all experience levels to install and program it efficiently.

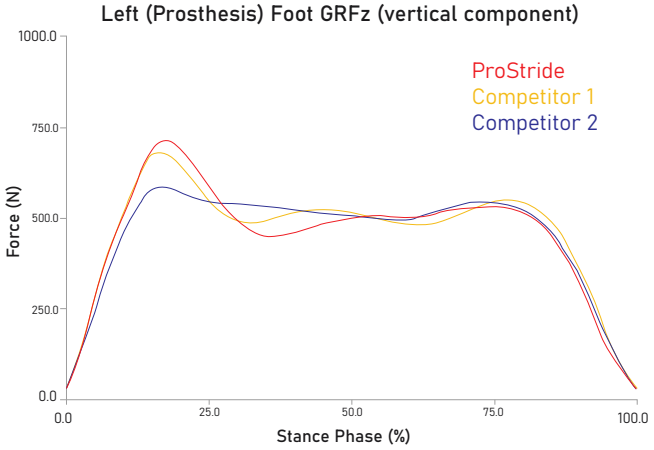
1

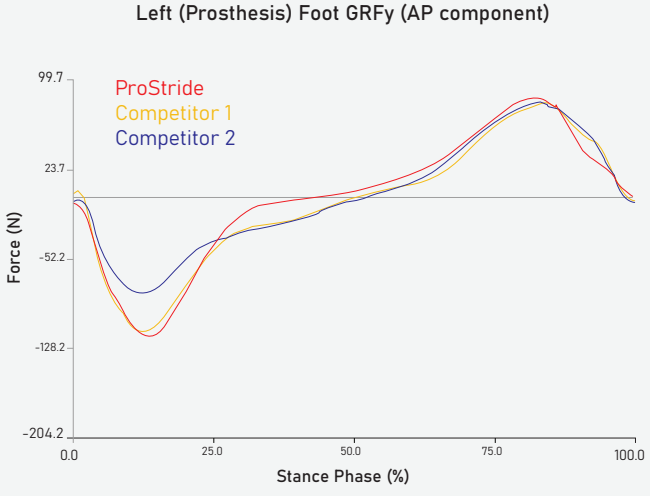
Gait Analysis Comparison: Vertical Component of the Prosthetic Limb Side

In all knee joints, a complete bimodal nature is not observed. However, Prostride smoothly reaches toe-off.

ProStride provides consistent and stable support. As the patient moves through the stance phase, the knee effectively absorbs impact and maintains balance, ensuring a smooth progression.

The ProStride knee not only supports a stable stance but also ensures that the patient moves through this phase effortlessly, culminating in a smooth and confident toe-off, which is critical for maintaining a natural gait rhythm.





2

Gait Analysis Comparison: Anterior-Posterior Component of the Prosthetic Limb Side

Despite there being almost no difference observed in acceleration during step crossing, ProStride shows adequate deceleration, which is necessary to control forward momentum and prepare the limb and body for the subsequent phase of gait, helping to prevent jarring impacts that could lead to instability or discomfort.

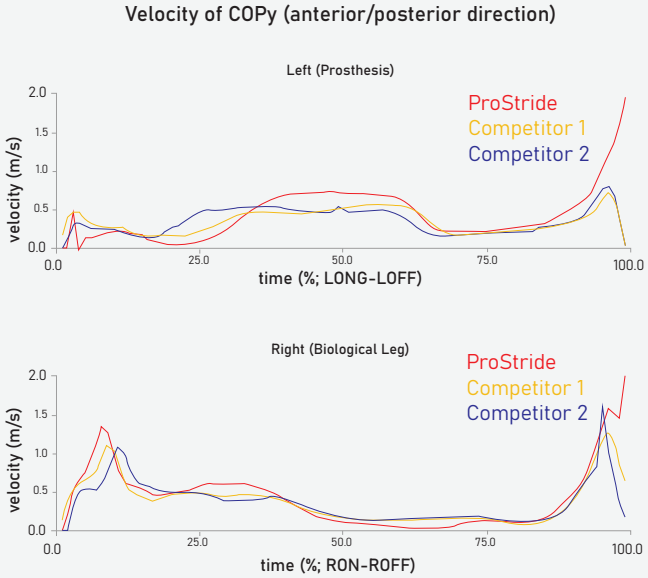
3

Speed of Anterior-Posterior Movement of Center of Pressure

The Speed of Center of Pressure (COP) refers to how quickly the pressure point moves across the sole of the foot during the gait cycle. As we walk, the COP travels smoothly from the heel towards the toes. The rate at which this transition occurs provides crucial insights into the smoothness and efficiency of our walking dynamics.

In the case of ProStride, the early stance phase shows little difference in COP speed compared to other prosthetic joints, indicating a stable initial contact. However, where ProStride truly excels is during the mid-stance phase, where the COP speed accelerates smoothly. This smooth acceleration continues towards the end of the stance phase, closely mimicking the natural gait observed on the healthy side.

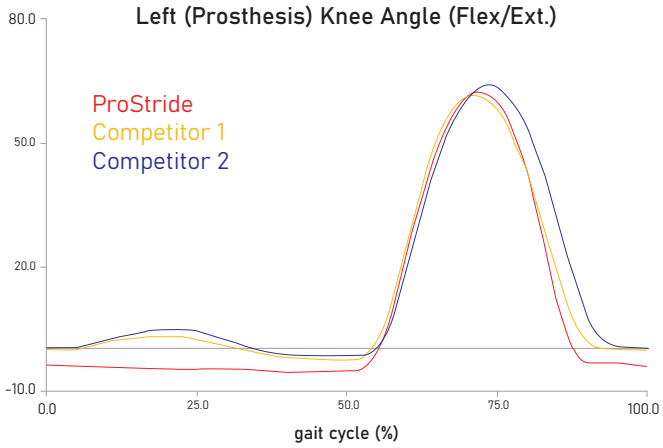
This seamless transition of weight from heel to toe in ProStride ensures that each step feels natural and effortless, contributing significantly to a more balanced and comfortable walking experience.



4 Knee Joint Angle Change

The maximum flexion angle during the swing phase with ProStride closely matches that of natural walking, approximately 60 degrees. The timing to reach this maximum flexion is consistent with other high-quality prosthetic knee joints.

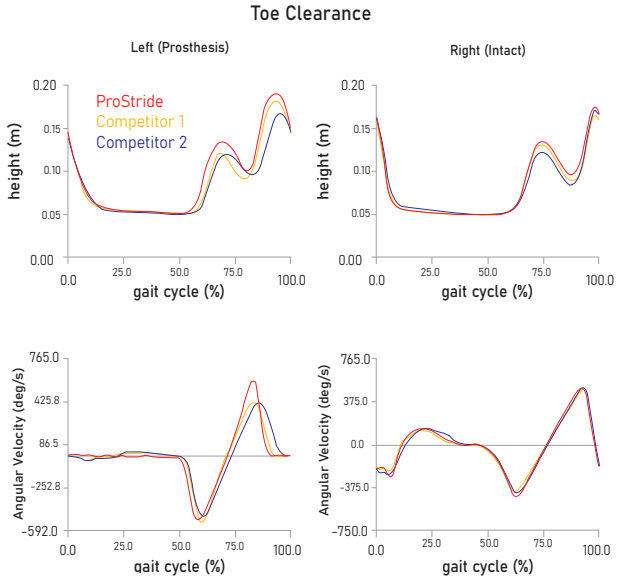
ProStride demonstrates strong control over swing phase flexion limitation and its timing.



5 Foot Clearance

Higher knee angle velocity during the early swing phase suggests a rapid knee rise, which is necessary for a smooth and efficient gait.

The foot is more distant from the ground. This means the Prostride has a better toe clearance, reducing the risk of stumbling for a more secure step.



STUDY OUTCOMES

1

One of the key strengths of the ProStride knee is its versatility. This prosthetic knee system is engineered to deliver a high-quality gait experience for a wide range of patients, regardless of their activity level.

2

ProStride provides the same reliable performance and is accessible to K3 patients who require a balance of stability and mobility for everyday activities.

3

The knee's adaptability means it can be tailored to meet the unique demands of each user, ensuring that they enjoy a natural and comfortable gait. Whether it's walking on uneven terrain or navigating stairs, ProStride's responsive design provides the support and flexibility patients need to feel confident in their movements.