What is eKwip?

There are 175,000 primary Anterior Cruciate Ligament (ACL) reconstruction surgeries performed annually in the USA with an estimated cost of over $2 billion. There is a need to quantitatively determine and reduce the risk of suffering this injury. By utilizing factors such as knee orientation and acceleration, eKwip can compute the risk percentage of the user in real time.

eKwip is an advanced knee wrap that can monitor and collect data about the user’s leg movements. This data is then sent to a server, accessible on the internet, that calculates the risk for ACL injury and displays the movement of the leg in real time.

How does it work?

Sensors collect measurements of knee and send data to server.

Server creates model of knee and performs risk calculations.

Doctors can analyze the movements and monitor the risk of the wearer from the server.

Unobtrusive

eKwip is made out of thin spandex and velcro that simply wraps around the leg right above and below the knee. eKwip was specifically designed to minimize interference during exercise.

Mobile

eKwip is completely wireless, allowing it to be worn anywhere. Tethered to a smartphone’s WiFi network truly unlocks eKwip’s potential as a portable athletic device.

Instant Feedback

eKwip collects and transmits data in real time, and the server analyzes and displays this data as it’s received. Everything in eKwip is instantaneous.

Check your recovery progress

eKwip allows you to view your progress as you recover from injuries to your ACL. Watch yourself improve session by session.

Predict an injury before it happens

Anyone can also use eKwip to monitor their knees and analyze their movements, letting the wearer know if they are more prone to injury and what they’re doing wrong in their daily exercises.

What’s next for eKwip?

Implement a prevention mechanism on the wrap which supports the knee when eKwip predicts an injury is imminent.

Better algorithms via machine learning to adapt to different body and exercise types.

Mobile integration for patients and doctors to track and manage their recovery progress.