



# RESEARCH2REALITY

Shining a light on research & innovation.

## There's No Way Around It: The Truth Hurts

An interview with **Calvin Kuo**, Biomedical Engineer, University of British Columbia  
Assistant Professor, UBC School of Biomedical Engineering

We specialize in developing wearable human motion sensors, and one of our main focuses here is not just on normal motion, but really on injuries and how do people actually get injured outdoors? And this is one of the really big things that we cannot do in laboratories because obviously we can't intentionally hurt people. So the best way we can observe these injuries as they occur is when they occur.

In the past, one of the big areas that we worked in was concussion biomechanics and understanding what are the impacts that result in concussions? Traditionally, concussions are a very difficult injury to diagnose, so the only way we have that now is to actually do neurological functional tests. And that's things like, "What day is it today? When's your birthday?" Things like that.

We know that concussions are caused by impacts to the head, and so we've been developing sensors to measure how hard do people get hit and trying to say, "Well, if you're getting hit above a certain threshold, you are at risk for a concussion." So that's one of the big translational pieces for that work.

Now, a lot of the work that we're doing now is applying these same techniques to the rest of the body to study things like knee injuries, ankle sprains, and things like that. What we're really focused on here is to try and

