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The 30-Inch View®

Success Story

Success Story:

NuStep's Award-Winning Device Highlights a Focus on People

At NuStep, Inc., ergonomics is not just something they talk about. The Ann Arbor, Michigan-based company recently won a prestigious 2009 Medical Design Excellence Award (MDEA) for its T5^{XR} Recumbent Cross Trainer. This patented exercise machine, which helps people stay in motion regardless of physical condition, was a four-year collaborative effort that drew on the expertise of many groups including Humantech ergonomists. From design, to assembly, to the delivery of its products, the company is incorporating ergonomic principles.

NuStep's Vice President of Research and Development, Mark Hildebrandt, understands the importance of listening to the customer. He also understands the importance of ergonomics and human factors in product design. "We had feedback on our previous model requesting more adjustability. But with the cross trainer, you are talking about a repetitive motion activity in a sometimes unsupervised setting. We didn't want the added adjustability to introduce possible ergonomic safety concerns or result in an unpleasant user experience."

From the beginning, when the company's first recumbent trainer was introduced in 1993, NuStep has committed to the mantra that their products be safe, easy-to-use, and effective. Originally designed for the cardiac rehabilitation setting, the machines have had wide appeal for physical therapy clinics, senior living communities, and health and wellness centers. Hildebrandt, who had enlisted Humantech's expertise with the previous model, involved the ergonomists to, "give us the parameters of how we could expand the product features while still keeping it safe for users."

Some of the key ergonomic features according to Hildebrandt are the 360º swivel seat which allows for easy exit and entry, adjustable hand grips to accommodate larger and smaller hands, an automatic adjustment in hand grip distance for taller users, increased weight capacity; and the overall ergonomic body positioning (seat, hands, and feet) during use.

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The story does not stop there, however. NuStep pays close attention to ergonomics during the manufacturing and delivery process of the T5^{XR}. The company, with the help of Humantech, has developed a flexible assembly process using adjustable work carts, ergonomically friendly assembly tools and gravity feed fixtures to deliver parts. They've also addressed ergonomics in terms of product delivery and installation. "Because our product is over 200 lbs, we wanted to make sure it could be shipped in multiple, smaller boxes to avoid heavy lifting up stairs or through doorways," explains Hildebrandt. In addition, the company developed the NuStep Transporter, a separate tool to easily move the product in any direction with minimal effort and no lifting. "In hospitals, they can take the product right to a patient's room," notes Hildebrandt.

When asked for his advice on what companies can do to best incorporate ergonomics into their products, Hildebrandt's answer is simple. "Listen to your customers and fit your products to them. A satisfying user experience requires that the whole product be evaluated to meet the human user interface. It's true that good design fits everyone." Hildebrandt is quick to add that it's important not to overlook the delivery process and they made some things easier for this too. "I don't want the trucker cursing us either, because it's our brand name on that box."

For more information about NuStep and their products visit, www.nustep.com.

About Humantech

For 30 years, global companies have relied on Humantech for workplace improvements. By combining the science of ergonomics and our unique 30-Inch View®—where people, work, and environment intersect—we deliver practical solutions that impact safety, quality, and productivity. At Humantech, we believe people make productivity happen. The 30-Inch View is a registered service mark of Humantech, Inc., 2008.