

New research examines commonly used toxin

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New Research at the University of Calgary, Faculty of Kinesiology suggests that Botulinium type-A toxin (BTX-A) passes easily to surrounding muscles and is more difficult to control once injected than many people suspect. The paper will be published in an upcoming issue of the *Journal of Biomechanics* and is posted on the journal's "In Press" website at: <http://www.jbiomech.com>.

The research team was led by Dr. Walter Herzog, who received the American Society of Biomechanists' highest honour for research last year. Herzog says that the results are interesting and have relevance for consumers and physicians who use product made out of the toxin.

"The injection doses used in this study are similar to those used in human injection protocols for the soleus muscle, both for spastic cerebral palsy in children and hemi-plegic adults secondary to stroke," says Herzog.

Herzog's lab was trying to use the product in ongoing research that examines how muscle weakness contributes to joint degeneration. The idea was to use botulinium toxin as an agent to temporarily paralyze muscles. What they found is that the toxin they used passed easily into the surrounding muscles and weakened all the muscles in the area.

"The main reason that this is significant," says Herzog, "is that many people believe that when Botox is injected into a single muscle it stays there. This research shows that it is not that easy to control. As therapeutic applications of BTX-A in humans increase, it is important

that we understand more about the functional affects of this product which, at the end of the day, is a toxin.”

Source: University of Calgary

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