Size does matter: Researchers adapt drug dosing to body size

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University of Queensland researchers are leading the charge in adapting drug dosing to a society that is changing shape.

As the level of obesity in the Western World continues to rise dramatically, UQ School of Pharmacy's Dr Bruce Green says researchers face the ongoing challenge of determining just how dosages should be adjusted for different body sizes and compositions.

"In a pharmacological sense, obesity presents a challenging role for clinicians, as the effects of altered body composition on the time course of drug response are poorly understood," Dr Green said.

"[This] lack of dosing information… [is of additional concern when you] consider that many of these individuals require therapeutic intervention for a variety of disease states."

It is this shortfall that the School of Pharmacy's Modelling and Simulation Group is looking to redress, as they work to optimise dosages for a variety of drugs in the overweight population.

"The purpose of this study is linked to our overall strategy of ensuring that patients who are overweight do not get overdosed by dosing on total body weight, or underdosed by giving fixed doses to all patients," Dr Green said.

"We propose that drugs should be dosed on our formula for lean body

weight to match drug exposure across individuals of differing body compositions.

"The results should minimise adverse events and improve efficacy of drugs, which we have already shown in an individualised dosing trial for enoxaparin (a blood thinning drug)."

Source: University of Queensland

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