

Contact: Simon Dunford, Press Officer s.dunford@uea.ac.uk 44-016-035-92203 University of East Anglia

## Long-term use of diabetes drugs by women significantly increases risk of fractures

A group of drugs commonly used to treat diabetes can double the risk of bone fractures in women, according to a new study by the University of East Anglia (UEA) and Wake Forest University.

Published today in the *Canadian Medical Association Journal (CMAJ)*, the findings show that use of thiazolidinediones for more than one year by women with type 2 diabetes significantly reduces bone density, resulting in the risk of fractures being doubled.

The researchers found no increased risk of fractures among men, however.

Thiazolidinediones are a group of drugs used to treat type 2 diabetes. Included in this group are the drugs rosiglitazone and pioglitazone. Latest figures show there are around 4 million users of these drugs in the US, while in the UK there were around 2 million prescriptions for rosiglitazone and pioglitazone last year.

"Women with type 2 diabetes are already at an increased risk of fractures - with a near doubling in the risk of hip fractures - so any additional risk from thiazolidinedione therapy could have a considerable impact on public health," said lead author Dr Yoon Loke, of the University of East Anglia.

"The underlying causes of this gender-specific effect of thiazolidinediones require further investigation. In the meantime, regulatory authorities and clinicians should reconsider recommending these drugs to women with type 2 diabetes.

"This is a problem that arises with long-term use, and patients should not stop or change their treatment suddenly without consulting their doctors. Women who have taken these drugs for more than a year should speak to their doctors about other treatment options."



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Recent research into thiazolidinediones has focussed on the drugs' adverse cardiovascular effects. This new meta-analysis involved a systematic review of 10 clinical trials involving a total of 13,715 participants. The trials lasted from one to four years and all were double-blinded.

There is no clear evidence that other drugs used to treat type 2 diabetes, such as metformin and sulfonylurea, cause an increased risk of fractures.

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'Long-term use of thiazolidinediones and fractures in type 2 diabetes: systematic review and meta-analysis' by Yoon Loke (University of East Anglia, UK), Sonal Singh and Curt Furberg (both Wake Forest University, US) is published in *CMAJ* on December 10.