

PRESS RELEASE

Diabetes drug improves bone mass in mice with osteoporosis

A drug used to treat type-2 diabetes also improves bone health, according to research presented today at the Society for Endocrinology's annual BES conference. The findings may help to reduce the large number of diabetics who undergo surgery to treat bone fractures.

Type-2 diabetics are more likely to suffer from bone fractures, longer recovery times and other skeletal complications. In the UK alone, 40,000 diabetic patients are surgically treated for fractures and their complications. Currently it is unclear why type-2 diabetics are at greater risk. However, there is a well-established link between a class of diabetes medications known as thiazolidinediones (TZDs) and increased risk of fractures. TZDs may have this effect by reducing bone formation.

In this study, researchers from the Royal Veterinary College looked at a group of drugs called GLP-1R agonists, which are increasingly being used instead of TZDs to treat type-2 diabetes. 12-week old female mice had their ovaries removed to induce bone loss. The mice were then given either liraglutide or exenatide, both GLP-1R agonists, for a period of four weeks. The researchers found that liraglutide significantly increased the mice's bone mass as well as improving bone structure and connectivity.

As more and more patients are being treated with GLP-1R agonists, it's essential to understand their effect on bone health. "Our work may shed light on how GLP-1 affects bone mass and structure," according to lead investigator Dr Chantal Chenu. "This will help us understand how we can prevent and heal bone fractures, particularly for vulnerable elderly diabetic patients that have already lost bone mass with age."

The group will next focus on investigating the effects of GLP-1 agonists on diabetic bone and their skeletal mechanisms of action.

-ENDS-

Notes for editors

1. For further information about the study please contact:

Dr Chantal Chenu

Royal Veterinary College
Royal College Street
London NW1 0TU
Tel: +44 (0)20 7468 5045
Email: cchenu@rvc.ac.uk

2. The study *Liraglutide, a glucagon-like peptide-1 receptor agonist, improves bone mass and architecture in ovariectomised mice* will be presented by Dr Chantal Chenu at the Society for Endocrinology's annual BES conference at 13:00 on Wednesday 25 March 2014.
3. For other press enquiries, or copies of the abstract, please contact the Society for Endocrinology press office:

Omar Jamshed

Communications Assistant
Society for Endocrinology
Tel: +44 (0)1454 642 206 (office)
Tel: +44 (0)XXX XXX XXX (mobile)
Email: omar.jamshed@endocrinology.org

4. The Society for Endocrinology's annual BES conference is held at the ACC Liverpool from 24 - 27 March 2014. BES features some of the world's leading basic and clinical endocrinologists who present their work. Journalists wishing to attend should contact Omar Jamshed at the Society for Endocrinology press office.
5. The Society for Endocrinology is a UK-based membership organisation representing a global community of scientists, clinicians and nurses who work with hormones. Together we aim to improve public health by advancing endocrine education and research, and engaging wider audiences with the science of hormones www.endocrinology.org

