

### Osteoarthritis of knees and obesity

To the Editor

We read with interest the study on knee osteoarthritis (KOA) and obesity in Eastern Saudi Arabia by Ismail et al.<sup>1</sup> Their findings confirm other published epidemiological studies that suggest obesity is strongly associated with KOA development,<sup>2</sup> and that this is stronger in women than men.<sup>3</sup> Though the correlation between structural OA and pain, or disability, is stronger in the hip than the knee, for the latter, the reduced muscle strength and obesity correlate more strongly with pain and disability measures, than the radiological changes.<sup>4</sup> More significantly, both these factors remain eminently modifiable. Hence, even modest weight reduction decreases the risk of developing KOA - a 10 lb (4.54 Kg) reduction over 10 years decreases this by 50%.<sup>5</sup> In those with established KOA, the relationship between weight loss and functional improvement is linear, with the greatest improvements in those who lose most weight.<sup>6</sup> Such sustained weight loss has been shown to produce symptomatic improvement and a benefit of pain reduction for up to one year.<sup>7</sup> Moreover, longitudinal data suggests lower limb strengthening exercises may protect against KOA, or in those with KOA, from disease progression,<sup>8</sup> and that symptomatic improvement to those with KOA is mediated by improved proprioception and standing balance.<sup>4</sup>

At present, no intervention exists that alters the long-term outcome for osteoarthritis.<sup>9</sup> However, in addition to the authors' suggestions on the importance of weight loss, we would add that strategies to reduce the burden of KOA must combine weight reduction with leg strengthening exercises, even if these are only isometric.<sup>3</sup> Recent work shows this combination, rather than either

intervention alone, provides better improvement in self-reported pain and disability measures.<sup>10</sup>

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### Reply from the Author

No reply was received from the Author.

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