Glucagon-like peptide 1 (GLP-1) analogues are increasingly recognised for their considerable clinical effects on weight loss and diabetes. Increasing evidence has shown their use can improve cardiovascular disease risk, decrease mortality, and provide other metabolic improvements.1

In the Lancet, Carel le Roux and colleagues2 examined whether 3·0 mg liraglutide administered daily might, over time, reduce the rate of development of type 2 diabetes in individuals with prediabetes. The authors observed a 4·6 kg placebo-subtracted weight reduction with liraglutide (50% of patients lost ≥5% weight vs 24% in the placebo group) after 3 years—weight loss that is similar to that reported in previous liraglutide studies. A meta-analysis3 showed a placebo-subtracted 5·3 kg weight reduction in response to 3·0 mg liraglutide administered daily and that 63% of treated patients lost a median of more than 5% weight during 1 year compared with 23% of patients receiving placebo. Intensive lifestyle modification showed similar weight loss of 5·6 kg in the large Diabetes Prevention Program (DPP) study4 with an average follow-up of 2·8 years.

The major finding of le Roux and colleagues, however, is the prediabetes to normoglycaemia conversion in the liraglutide group (66% vs 36% in the placebo group) at the end of 3 years; additionally, only 3% of individuals in the liraglutide group versus 11% in the placebo group developed diabetes by the end of the trial. Effectively, these results indicate that for every three people treated, one person would be expected to become normoglycaemic owing to liraglutide treatment alone. These results were similar in the short-term, earlier reports of this study. Of patients who were prediabetic at screening, 31% in the 3·0 mg liraglutide group and 67% in the placebo group who had prediabetes at baseline continued to have prediabetes at 56 weeks, suggesting a 69% reduction in prediabetes with 3·0 mg liraglutide and a 33% reduction with placebo. At 56 weeks, 4% of patients on 3·0 mg liraglutide developed diabetes compared with 14% in the placebo group.1 At 20 weeks,6 84% of patients with prediabetes on 3·0 mg liraglutide and 96% on 1·8 mg liraglutide became normoglycaemic versus 3% on placebo. At 2 years7 they showed a 52–62% return to normoglycaemia for patients with prediabetes on 1·8–3·0 mg liraglutide. Another GLP-1 analogue, exenatide, showed similar effects; 77% of treated patients with prediabetes returned to normoglycaemia versus 56% in the placebo group after 24 weeks.8 To our knowledge, no studies with other GLP-1 analogues have examined how they might impact prediabetes and diabetes risk.

Weight loss is generally effective at reducing the incidence of prediabetes and progression to full diabetes. Intensive lifestyle modifications over 4 years in the DPP study in the USA4 showed 58% risk reduction for incidence of diabetes versus placebo. At 10 years, the risk reduction was 34% for the DPP lifestyle programme.9 Similar results have been found in the 4 year Finnish DPP study10 with 58% risk reduction. Metformin, an inexpensive insulin sensitiser and the first-line therapy recommended for diabetes, was shown to reduce incidence of diabetes by 31% in the DPP study.4 In a small 1 year study,11 85% of patients with prediabetes on metformin had returned to normoglycaemia versus 52% of patients receiving placebo. Treatment with thiazolidinediones has also been shown to return patients with prediabetes to normoglycaemia—51% with rosiglitazone.
Comment

versus 30% on placebo and 48% with pioglitazone versus 28% on placebo. The annual incidence of diabetes was 2% with pioglitazone versus 8% in the placebo group; 11% developed diabetes with rosiglitazone compared with 25% in the placebo group. Although liraglutide appears to have the largest effect versus other medications, it remains similar to the effect of intensive lifestyle modifications.

Although liraglutide was effective at reducing the incidence of diabetes and in reversing prediabetes to normoglycaemia, this might not be the most cost-effective pathway. Indeed, lifestyle modification, which is much less expensive than is liraglutide, improves not only the risk for developing diabetes but also other components of metabolic syndrome such as hypertension and hyperlipidaemia. Lifestyle modification appears to be equally as effective at 3 years as liraglutide, which requires daily injections. However, because these studies had different designs and were done during different periods, a direct comparison of intensive lifestyle modification and liraglutide would be required to determine this, and possibly, specifically designed comparative studies would be advisable to assess the effects of one, the other, or a combination of the two to advance the field. Whether liraglutide is more effective in the longer term (eg, 10 years) or whether other GLP-1 analogues are more effective than lifestyle modification alone also remains to be seen. These considerations should be weighed carefully in terms of future recommendations for the treatment of patients with prediabetes in the clinic.

Is screening for the psychological effects of war useful?

The extensive documentation of the psychological injuries arising as a consequence of conflict in the Middle East highlights the crucial need to establish how this morbidity can be minimised and prevented. A 2014 report from the Institute of Medicine recommended only one evidence-based intervention: mental health screening. The USA, Canada, the Netherlands, and Australia use the approach of post-deployment screening. However, debate about the benefit of post-deployment screening is ongoing.

In The Lancet, Roberto Rona and colleagues have addressed this question in a randomised controlled trial of post-deployment screening in the UK for mental disorders in 434 platoons comprising 10 190 Royal Marine or Army personnel after deployment to Afghanistan. At follow-up, 10–24 months after initial assessment, there were no significant differences in prevalence between groups for post-traumatic stress disorder (PTSD; adjusted odds ratio 0.92, 95% CI 0.75–1.14), depression or anxiety (0.91, 0.71–1.16), alcohol misuse (0.88, 0.73–1.06), or seeking support for mental disorders (0.92, 0.78–1.08). However, findings from this study need to be interpreted in the context of the...