

Mind over matter? The psychology of healing

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People suffering from diabetes-related foot ulcers show different rates of healing according to the way they cope and their psychological state of mind, according to new research by a health psychologist at The University of Nottingham.

The large study published in the journal *Diabetologia* this month has shown that the way patients cope with the condition and their levels of depression, affect how the wound heals or worsens.

The work by Professor Kavita Vedhara from the University's Institute of Work, Health and Organisations, has sparked a follow-on project to develop psychological treatments to reduce depression in sufferers and help them cope more effectively with this debilitating and potentially life-threatening condition.

Foot ulcers are open sores which form when a minor skin injury fails to heal because of microvascular and metabolic dysfunction caused by diabetes. Up to fifteen per cent of people with diabetes, both Type 1 and Type 2, develop foot or leg ulcers with many suffering depression and poorer quality of life as a result.

The increased morbidity and mortality caused by the condition are estimated to cost UK health services £220 million per year. The costs are exacerbated by slow healing rates with two thirds of ulcers remaining unhealed after 20 weeks of treatment. The five year [amputation](#) and death rates among patients are 19 per cent and 44 per cent respectively. Ulcers account for around four out of five lower leg amputations and

half of diabetes-related hospital admissions.

During the five-year study 93 patients (68 men and 25 women) with diabetic foot ulcers were recruited from specialist podiatry clinics across the UK. Clinical and demographic determinants of healing; [psychological distress](#), coping style and levels of cortisol (a stress hormone) in saliva were assessed and recorded at the start of a 24 week monitoring period. The size of each patient's ulcer was also measured at the start, and then at 6, 12 and 24 weeks to record the extent of healing or otherwise of the ulcer.

The results of the research showed that the likelihood of the ulcer healing over a 24 week period was predicted by how individual's coped. Surprisingly perhaps, patients who showed a 'confrontational' way of coping (a style characterised by a desire to take control) with the ulcer and its treatment were less likely to have a healed ulcer at the end of the 24 week period.

Professor Vedhara said: "My colleagues and I believe that this confrontational approach may, inadvertently, be unhelpful in this context because these ulcers take a long time to heal. As a result, individuals with confrontational coping may experience distress and frustration because their attempts to take control do not result in rapid improvements."

A secondary analysis of each patient examined the relationship of psycho-social factors with the change in the size of the ulcer over the observation period. Whereas the first analysis showed that only confrontation coping, not anxiety or depression, was a significant predictor of healing, the second showed that depression was a significant predictor in how the size of the ulcer changed over time, with patients with clinical depression showing smaller changes in ulcer size over time i.e., they showed less improvement or [healing](#).

More information: The research has appeared in the July 18 advance online publication of *Nature*.

Provided by University of Nottingham

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