## What is already known on this topic

Physical illness is a common antecedent to suicide in elderly people, though prevalence figures vary widely from 34% to 94%

The risk of suicide associated with physical illness is unclear because there are few controlled studies

A recent report noted serious physical illness in 56% of those who committed suicide compared with 16% of a control group

#### What this study adds

Visual impairment, neurological disorder, and malignant disease were all independently associated with suicide in elderly people

Both serious physical illness and high overall burden of illness are stronger risk factors in men than in women

#### Main findings

Serious physical illness was independently associated with suicide. However, physical illness seemed to be a stronger predictor in men. We found no such association in women, possibly because of small numbers, though there may be a real sex difference.

Impaired vision was a predictor of suicide in our study. While visual impairment has been shown to be associated with depression in later life,11 few studies have explored a possible link with suicide. One study found no association. 12 A more recent report noted an association between visual impairment and suicidal ideation.13 Neurological disorder was associated with suicide in our study, paralleling findings from register studies on mixed age populations.14

We observed an increased rate of suicide in people with ongoing malignant disease, which agrees with results of studies of mixed age15 and elderly16 populations. Cardiovascular disease and musculoskeletal disorders have been reported as common among elderly people who committed suicide.2 The case-control design allowed us to show that these disorders were not risk factors for suicide.

Many elderly people who commit suicide consult their doctor a short time before their death, 17 but many fail to communicate their despair. We have recently shown that relatives observed suicidal feelings twice as frequently as doctors, and doctors were less likely to discuss suicidal feelings with patients in poor physical health.<sup>18</sup> Further research should focus on the detection and treatment of depression and suicidal ideation in the context of physical disease.

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- Barraclough BM. Suicide in the elderly. In: Kay DKW, Walk A, eds. Recent developments in psychogeriatrics. Ashford, Kent: Headley, 1971:87-97. Clark DC, Clark SH. Suicide among the elderly. In: Böhme K, Freytag R,
- Wächter C, Wedler H, Regensburg S, eds. Suicidal behavior: the state of the art. Proceedings of the XVI Congress of the International Association for Suicide Prevention. Regensburg: Roderer, 1993:161-4.
- Carney SS, Rich CL, Burke PA, Fowler RC. Suicide over 60: the San Diego study. *J Am Geriatr Soc* 1994;42:174-80.
- Henriksson MM, Marttunen MJ, Isometsä ET, Heikkinen ME, Aro HM, Kuoppasalmi KI, et al. Mental disorders in elderly suicide. Int Psychogeri-atr 1995;7:275-86.
- Lyness JM, Conwell Y, Nelson JC. Suicide attempts in elderly psychiatric
- inpatients. J Am Geriatr Soc 1992;40:320-4 Hepple J, Quinton C. One hundred cases of attempted suicide in the eld-
- erly. Br J Psychiatry 1997;171:42-6.
  Sainsbury P. Suicide in London. Maudsley monographs. No 1. London: Chapman and Hall, 1955.
- Åsberg M, Montgomery SA, Perris C, Schalling D, Sedvall G. A comprehensive psychopathological rating scale. Acta Psychiatr Scand Suppl 1978;5-27.
- Skoog I, Nilsson L, Palmertz B, Andreasson LA, Svanborg A. A population-based study of dementia in 85-year-olds. N Engl J Med 1993;328:153-8.
- 10 Miller MD, Paradis CF, Houck PR, Mazumdar S, Stack JA, Rifai AH, et al. Rating chronic medical illness burden in geropsychiatric practice and research: application of the cumulative illness rating scale. Psychiatry Res
- 11 Kennedy GJ, Kelman HR, Thomas C, Wisniewski W, Metz H, Bijur PE. Hierachy of characteristics associated with depressive symptoms in an
- urban elderly sample. *Am J Psychiatry* 1989;146:220-5.

  12 Stensman R, Sundquist-Stensman U-B. Physical disease and disability among 416 suicide cases in Sweden. *Scand J Soc Med* 1988;16:149-53.

  13 Forsell Y, Jorm AF, Winblad B. Suicidal thoughts and associated factors in
- an elderly population. Acta Psychiatr Scand 1997;95:108-11.
   Stenager E, Stenager E, Suicide in patients with neurological disorders.
   In: Stenager E, Stenager E, eds. Disease, pain and suicidal behavior.
   Binghamton, NY: Haworth Medical Press, 1998:31-49.
   Allebeck P, Bolund C. Suicides and suicide attempts in cancer patients.
- Psychol Med 1991;21:979-84.
- 16 Grabbe L, Demi A, Camann MA, Potter L. The health status of elderly persons in the last year of life: a comparison of deaths by suicide, injury and natural causes. Am J Public Health 1997;87:434-7.
- 17 Harwood DMJ, Hawton K, Hope T, Jacoby R. Suicide in older people: mode of death, demographic factors, and medical contact before death. Int J Geritatr Psychiatry 2000;15:736-43.
- 18 Waern M, Beskow J, Runeson B, Skoog I. Suicidal feelings in the last year of life in elderly persons who commit suicide. *Lancet* 1999;354:917-8. (Accepted 19 December 2001)

# Correction

Comparison of cardiovascular risk between patients with type 2 diabetes and those who had had a myocardial infarction: cross sectional and cohort studies

An editorial error occurred in the abstract of this paper by Josie M M Evans and colleagues (20 April, pp 939-42). In the results section the risk ratios for the cross sectional study were the wrong way round. The adjusted risk ratio for death from all causes for patients who had had myocardial infarction compared with those with diabetes should have been 1.33 (95% confidence interval 1.14 to 1.55) [not 2.27 (1.82 to 2.83)], and the risk ratio for hospital admission for myocardial infarction should have been 2.27 (1.82 to 2.83) [not 1.33 (1.14 to 1.55)].

## *Endpiece*

# Naughty thoughts

After two days in hospital, I took a turn for the

W C Fields, American humourist (1879-1945)

Submitted by Fred Charatan, retired geriatric physician, Florida