

all-cause mortality in the elderly. They also showed increased risk of mortality associated with obesity defined by waist circumference  $\geq 88$  cm in women or  $\geq 102$  cm in men, and by BMI  $\geq 35$  kg/m<sup>2</sup>. The strengths of this study lie in its high-quality measurements of adiposity, fitness, and mortality. Stratification by fitness (bottom 20% v the rest) and adiposity groups suggested an increased mortality risk with being unfit, independent of weight status. Although increasing adiposity was not associated with increased mortality in the "fit" 80% of the population, the small size of the cohort makes conclusions uncertain. Further, the "fit" 80% of the population is a potentially heterogeneous group; the results from Wannamethee *et al* tell us that it is important to take muscle mass into account to understand the true effect of increased BMI.

The results of these 2 studies suggest that obesity is a useful marker of increased risk of mortality in the elderly. Although both studies showed statistically significant results for BMI and waist circumference, both suggested that waist size is the stronger predictor of mortality in older people. Interestingly, neither study showed an association between mortality and percentage of body fat, suggesting that it is not necessary for clinicians to measure at this level of sophistication. Neither study showed a relation between overweight and mortality, further confirming this lack of risk. In persons with the lowest muscle mass or the lowest cardiorespiratory fitness, any mortality risk associated with excess weight was essentially eclipsed. This finding

indicates the importance of preservation of muscle mass and fitness in the elderly and the extent to which low levels of these markers indicate underlying frailty and ill health. However, the studies show that it is also important to continue to pay attention to obesity in older people.

Neither study was able to address the causal pathways between obesity and mortality, which probably include decreased physical activity, cardiorespiratory fitness, and muscle strength. Future studies should move from analysing the effect of 1 factor independent of others to analysing joint effects because the latter better represent the causal mechanisms at work. This approach is especially important in the elderly, in whom a lifetime of causal cycles will have occurred.

In a third study, Reeves *et al* conducted a large cohort study, following 1.2 million women over an average 5–7 years to evaluate cancer incidence and mortality. They showed a clear relation between excess weight, defined by BMI, and cancer incidence and mortality for 10 of the 17 cancer types examined, some for the first time. The primary limitation of the study was the use of self-reported weight and height to calculate BMI; however, this would probably lead to a dilution effect, suggesting that their results may underestimate true effect sizes. In addition to the strong association between obesity and cancer, other key findings of this study were the notable differences in risk according to menopausal status and the relation between overweight and increased risk of some types of cancer.

Together, the 3 studies confirm that obesity—defined by BMI, waist circumference, or waist-hip ratio—is an important predictor of mortality in middle-aged and older people, and that additional factors, especially cardiorespiratory fitness and muscle mass, need to be considered in the elderly. Interestingly, each study used different categorisations for BMI and waist circumference, which will clearly influence any association with mortality. Larger studies, which will allow more detailed categorisation of BMI and waist circumference, will be important to clarify the point at which increased weight is associated with increased risk in older people, after accounting for muscle mass. These 3 studies also confirm the real need for sex- and age-specific analyses because conclusions from 1 group may not apply to another.

If we are to provide clear recommendations for practitioners and patients, we need high-quality trials with hard end points that assess the effects of interventions on body weight, its distribution, muscle mass, and cardiorespiratory fitness in older people.

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## Correction

### Accuracy of ECG interpretation in primary care was limited for detecting atrial fibrillation

Although Gavin Falk and Tom Fahey appear as authors for this article<sup>1</sup> in the

PDF version, they are not appearing correctly as authors in the html version

or in the PubMed citation. By way of this erratum, we are correcting this error.

Gavin Falk, MD, Tom Fahey, MD

1. Falk G, Fahey T. Accuracy of ECG interpretation in primary care was limited for detecting atrial fibrillation. *Evid. Based Med* 2008;**13**:58.

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