Physical activity, frailty and the preoperative period – letter to Anaesthesia

We read with interest Dr O'Hanlon's editorial [1]. Whilst frailty and ageing are inherently linked, we agree that frailty is likely to be a more useful for assessing perioperative risk in older people. Physical inactivity is a defining feature of frailty, and a target of numerous frailty intervention studies [2]. Health benefits from a physically active lifestyle are well-documented. Increased physical activity can delay the onset and slow the progression from a non-frail to frail state [3]. Furthermore, there is growing evidence of the association between physical activity and perioperative outcomes [4]. Such considerations have prompted the incorporation of promotion of activity into prehabilitation in this population. Whilst sustained change in habitual, environmentally-cued behaviours such as physical activity is notoriously difficult to achieve, it is plausible that the preoperative period may represent a "teachable moment" in which motivation may be elevated. However, the impact that increasing preoperative physical activity has on frail elderly patients, the optimal type, duration and intensity of physical activity for prehabilitation programmes and the mutable determinants of activity in this population are poorly understood. Consequently, parameters that are likely to be important in the design and evaluation of complex interventions targeting preoperative physical activity remain uncertain.

In order to address this, we must first have a robust, objective method of measuring physical activity. Traditionally assessment of preoperative physical activity has relied on either clinician judgement, or patient self-report as part of the risk assessment. These assessments exhibit both error and bias and have no preoperative predictive value [5]. Wearable accelerometers are increasingly being used to measure physical activity in the perioperative research setting [6]. This should enhance understanding of heterogeneity and determinants of physical activity which could inform risk stratification, shared decision-making and planning of perioperative care for our older patients.

Lisa Grimes[1,*], Simon J Griffin[2], Ari Ercole[1]

[1]Division of Anaesthesia, University of Cambridge, Addenbrooke's Hospital, Hills Road, Cambridge, CB2 0QQ. UK

[2]Primary Care Unit, University of Cambridge, Institute of Public Health, Forvie Site, Robinson Way, Cambridge CB2 0SR.

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