1.3 A LIFE COURSE APPROACH TO HEALTHY AGEING: THE HALCyon PROGRAMME

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Physical capability, the capacity to undertake the physical tasks of daily living, is an important component of healthy ageing, and can be assessed by objective tests of muscle strength and physical performance and self-reports of everyday function. There is growing evidence that social and biological factors across life affect the peak levels of physical capability achieved in adult life and/or their subsequent rate of decline, and that, in turn, physical capability predicts subsequent health and length of survival. Until recently, this evidence had been limited to separate studies.

We first present results from recent HALCyon systematic reviews and meta-analyses on lifetime determinants of physical capability, including growth and socioeconomic conditions early in life, and on the impact of impaired capability on risk of subsequent health conditions and survival time.

We then present new findings from the HALCyon cohort studies and future plans aimed at filling the research gaps identified by the systematic reviews and previous research. These include (1) the influence of age, gender and lifetime body size on physical capability; (2) the contribution of markers of muscle and neurological development to adult physical capability levels; (3) the concordance and discordance between muscle mass, strength, physical performance and limitations in everyday function.

In conclusion, understanding and promoting healthy ageing requires comparative and in-depth research on physical capability using longitudinal studies, preferably with data on characteristics across the whole of life.