Abstract – Wednesday 6th July 11:50 – 12:30

Using genetic-based advice to deliver personalised advice and improve lifestyle: from genes to behavioural changes

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Improving diet and other lifestyle behaviours has considerable potential for reducing the global burden of non-communicable diseases, promoting better health across the life-course and increasing wellbeing. However, realising this potential will require the development, testing and implementation of much more effective behaviour change interventions than are used conventionally. To date, most strategies to reduce the NCD burden have been targeted at populations using ‘one size fits all’ public health recommendations, e.g. ‘eat at least five portions of fruit and vegetables daily’. However, the global burden of NCD worldwide continues to rise and this emphasises the need for more effective prevention strategies.

Sequencing of the human genome combined with the recognition that interactions between genotype and diet influence health has opened opportunities for personalisation of dietary/lifestyle advice based upon individual genotype. Recent steep reductions in the cost and time for genomic sequencing and an increasing ability to extract information of interest, e.g. disease risk and ancestry, from sequence data have fuelled interest in personal genetics among the public. However, whether the genotype-based advice produced significantly greater changes in dietary behaviour is not known.