Research Review: When ACSM Speaks, Fitness Professionals Listen!

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Introduction: The American College of Sports Medicine (ACSM) is the largest sports medicine association in the world, with an estimated 40,000 plus national and international members (doctors, surgeons, physiotherapists, academics and fitness professionals) who are dedicated to advancing and integrating scientific research to provide educational and practical applications of exercise science and sports medicine.

The ACSM holds two conferences each year; the ACSM national convention which features presentations on the most recent research findings within the field of sports medicine; and the ACSM Health and Fitness Summit & Exposition, which is similar in concept to Australia's FILEX convention and focuses strongly on practically-based health and fitness research. If you are ever in the US when either conference is on, they are well worth attending.

The ACSM released its first position stand in 1982 (Use of Alcohol in Sport) and since that time has released 20 different position stands, including the following:

- Nutrition and Athletic Performance (2009)
- Appropriate Physical Activity Intervention Strategies for Weight Loss and Prevention of Weight Regain for Adults (2009)

These position stands are generally available for free download; just enter ‘ACSM position stands’ into a search engine.

Professor Garber and her distinguished colleagues have done a great job updating the 1998 ACSM position statement ‘The Recommended Quantity and Quality of Exercise for Developing and Maintaining Cardiorespiratory and Muscular Fitness, and Flexibility in Healthy Adults’ and have used more recent (1998 to 2010) research findings to develop these new guidelines which focus on exercise and intentional physical activity.

The authors have provided a summary (Tables 1 and 2) of the evidence related to the exercise prescription (abbreviation ExRx). For example, the ‘health benefits of exercise’ has an ‘evidence category’ of ‘A’, which equates to a high level of scientific evidence, generally from randomised controlled trials. By contrast, ‘neuromotor exercise to benefit middle-older aged adults’ has an evidence category of ‘D’, which equates to a low level of evidence (i.e. panel consensus statement). Table 3 explains the level of evidence categories.

In Table 2, the authors provide the evidence based upon individual ExRx’s. For example, with regard to cardiorespiratory fitness, both the frequency and intensity of exercise have an evidence rating of ‘A’. In fact most of the evidence supporting cardiorespiratory, resistance training, flexibility and neuromotor exercise has either an ‘A’ (46 per cent) or ‘B’ (35 per cent) level of evidence.

The authors discuss the ExRx using steps (i.e. pedometers) and recommend that the exercise prescription use both steps per minute combined with the current recommendations for exercise duration.

Discussion: As this new position stand includes both healthy adults and adults with certain chronic disease or disabilities, the information and guidelines presented are applicable to a wide array of clients and patients.

The recommendation by ACSM to prescribe steps per minute outdates all of the pedometers I have been given gratis by numerous pharmaceutical companies; I will now have to look for a model that provides total steps and steps per minute.
Pros: It is not surprising that the ACSM has raised the bar with this position stand; it is a necessary update given the amount of new evidence available since 1998. Any time ACSM releases a position stand, all fitness professionals should read it.

Fitness professionals (and my students!) should commit Table 2 (showing evidence based upon individual ExRx) to memory, as when clients or patients ask ‘why’ you can easily justify your response. Table 2 also provides a nice summary of the ACSM ExRx guidelines for cardiorespiratory, resistance training, flexibility and neuromotor exercise, which all fitness professionals should commit to memory.

Cons: The article is written in a technical manner, which some fitness professionals may find challenging. However, the take home information is fortunately easy to decipher.

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