Do high levels of physical activity favour favourable cardiovascular risk factors regardless of sleep?

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In this issue of Menopause, Casas et al (1) provide cross-sectional information useful in understanding leisure-time physical activity and sleep with cardiovascular risk factors in postmenopausal women. In this study of 393 women the authors provide interesting information which is relevant to health practitioners in advising women with regards to decreasing cardiovascular risk factors. The authors analysed 393 participants of the Woman on the Move through Activity and Nutrition (WOMAN) study of whom they have 48 month follow up data. Interestingly the average sleep quality and sleep duration did not significantly differ between women with high and low physical activity levels. Multivariate analysis found that physical activity was significantly associated with HDL, trunk fat, and total body fat after controlling for sleep quality, sleep duration, age, hormone therapy, smoking and BMI. This study indeed highlights the value in providing advice for women on the importance of prioritising physical activity for women of postmenopausal age by practitioners. The findings that associations of leisure time physical activity and sleep suggest that cardiovascular risk factors were more favourable in highly active women relative to less active women regardless of sleep may be unexpected for some. Sleep quality was significantly related to glucose after controlling for confounders and the relationship between sleep duration, trunk fat and total body fat also remained significant. With the exception of body fat, there were no significant differences between the good sleep and poor sleep categories.

Looking at this further previous research has shown that poor sleep and exercise are associated with increases and decreases in pro-inflammatory markers (2, 3), and may lead to hunger through increases in gherlin and decreases in leptin (4, 5). Physical activity may also affect sleep through changes in thermoregulation, and circadian rhythms (6); while moderate intensity exercise may promote better sleep quality and duration in adults (7,8).

Potential weakness of the research, include that It is possible that unmeasured variables such as dietary measures may be confounders and explain some of the relationship discussed. Further limitations include not having longitudinal sleep data, and the need to underline the caution with which the results should be interpreted. Despite these however, the study raises some interesting messages for practitioners, with the results suggesting that good sleep quality or duration does not compensate for low levels of physical activity.

In conclusion this study suggests that physical activity is a more important lifestyle modification than sleep to improve cardiovascular risk factors in postmenopausal women; however both lifestyle modifications, including, ensuring sufficient sleep quality and duration
and increasing physical activity should be strongly encouraged by menopause practitioners in postmenopausal women care.

REFERENCES