Leisure Time Physical Activity and Cardiovascular Disease

Important Note: Leisure Time PA appears not to be strictly defined in any of the papers referenced by Li and Siegrist (2012). Broadly speaking, it appears Leisure Time PA refers to any physical activity that is not done at work or for sports, so this can include walking to and from work, jogging, running or even cycling.

Li and Siegrists Low and High categories are the lowest and the highest levels of Leisure Time PA in each of this studies [over a week]. Low leisure time PA roughly appears to be small amounts of walking during the week or energy expenditure of <4200 Kj/week whereas high leisure time PA roughly appears to be either regular (within a week) intense physical activity (e.g. running) or about >= 12,600 kJ/week. Moderate Leisure Time PA then is anything between these two groups. Their analysis did not account for bias within each of the included cohort studies. They also did not provide incidence rates from which the relative risks were calculated from.

Population: Men aged 25 – 84 years without CVD based in USA, Finland and the UK
Intervention: Moderate Leisure Time Physical Activity
Comparator: Low Leisure Time Physical Activity

Outcome Timeframe	**Study results and measurements**	**Certainty in effect estimates** (Quality of evidence)	**Absolute effect estimates** Low PA Moderate PA	**Summary**
CHD	Relative risk: 0.85 (CI 95% 0.77 - 0.93) Based on data from patients in 7 studies Follow up: 5 - 20 years.	Moderate Risk of Bias	*Not provided*	Moderate Leisure Time Physical Activity decreases risk of CHD
Stroke	Relative risk: 0.73 (CI 95% 0.62 - 0.85) Based on data from patients in 7 studies Follow up: 7.7 - 32 years.	Moderate Risk of Bias	*Not provided*	Moderate Leisure Time Physical Activity decreases risk of Stroke

Population: Men aged 25 – 84 without CVD based in USA, Finland and the UK
Intervention: High Leisure Time Physical Activity
Comparator: Low Leisure Time Physical Activity

Outcome Timeframe	**Study results and measurements**	**Certainty in effect estimates** (Quality of evidence)	**Absolute effect estimates** Low PA High PA	**Summary**
CHD	Relative risk: 0.79 (CI 95% 0.73 - 0.85) Based on data from patients in 7 studies Follow up: 5 - 20 years.	Moderate Risk of Bias	*Not provided*	High Leisure Time Physical Activity decreases risk of CHD

Stroke	Relative risk: 0.71 (CI 95% 0.6 - 0.84) Based on data from patients in 7 studies Follow up: 7.7 - 32 years.	Moderate Risk of Bias	*Not provided*	High Leisure Time Physical Activity decreases risk of Stroke

Population: Women aged 25 – 84 without CVD based in USA, Finland and the UK
Intervention: Moderate Leisure Time Physical Activity
Comparator: Low Leisure Time Physical Activity

Outcome Timeframe	**Study results and measurements**	**Certainty in effect estimates** (Quality of evidence)	**Absolute effect estimates** Low PA Moderate PA	**Summary**
CHD	Relative risk: 0.78 (CI 95% 0.72 - 0.85) Based on data from patients 7 studies Follow up: 5 -20 years.	Moderate Risk of Bias	*Not provided*	Moderate Leisure Time Physical Activity decreases risk of CHD
Stroke	Relative risk: 0.89 (CI 95% 0.79 - 1.0) Based on data from patients in 6 studies Follow up: 7.7 - 32 years	Moderate Risk of Bias	*Not provided*	Moderate Leisure Time Physical Activity has little or no effect on the risk of CHD

Population: Women aged 25 – 84 without CVD based in USA, Finland and the UK
Intervention: High Leisure Time Physical Activity
Comparator: Low Leisure Time Physical Activity

Outcome Timeframe	**Study results and measurements**	**Certainty in effect estimates** (Quality of evidence)	**Absolute effect estimates** Low PA High PA	**Summary**
CHD	Relative risk: 0.71 (CI 95% 0.65 - 0.77) Based on data from patients in 7 studies Follow up: 5 -20 years.	Moderate Risk of Bias	*Not provided*	High Leisure Time Physical Activity decreases risk of CHD
Stroke	Relative risk: 0.78 (CI 95% 0.66 - 0.92) Based on data from patients in 6 studies Follow up: 7.7 - 32 years	Moderate Risk of Bias	*Not provided*	High Leisure Time Physical Activity decreases risk of Stroke

References

Li J, Siegrist J. Physical activity and risk of cardiovascular disease—a meta-analysis of prospective cohort studies. International journal of environmental research and public health. 2012 Jan 26;9(2):391-407.

Practical Issues

Exercise and Activities

How often do I need to exercise?

For Adults aged 18 – 64 (based on the Australian Guidelines)

- Doing some is better than none, if you're doing none, gradually build up to the recommended amount.
- Be active on most, preferably all days of the week.
- Accumulate 150 to 300 minutes (2 ½ to 5 hours) of moderate intensity physical activity or 75 to 150 minutes (1 ¼ to 2 ½ hours) of vigorous intensity physical activity, or an equivalent combination of both moderate and vigorous activities, each week.
- Do muscle strengthening activities on at least 2 days each week

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Adverse effects, interactions and antidote

Are there any side effects from exercising?

There is the potential for injury when engaging in any physical activity.

Cost and access

How much will exercising cost?

This will depend on the chosen activity. For example, walking is free, whereas an organised sport or gym may incur a variable cost.
