

# Microvascular dysfunction, physical activity, and cardiometabolic diseases

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## **Propositions**

accompanying the dissertation

### **Microvascular dysfunction, physical activity, and cardiometabolic diseases**

1. Microvascular dysfunction is an early phenomenon in impaired glucose metabolism; it can be both cause and consequence of type 2 diabetes (this dissertation).
2. Islet microvascular dysfunction is associated with higher insulin secretion in the fasting state and glucose-stimulated insulin secretion in the late phase in individuals without a history of diabetes (this dissertation).
3. A higher composite score of microvascular dysfunction is independently associated with an increased risk of cardiovascular disease regardless of large artery region; systemic microvascular dysfunction can contribute to the development of cardiovascular diseases (this dissertation).
4. There is a significant sex difference in the dose-relationship of physical behavior with incident cardiovascular disease; more moderate-to-vigorous-intensity physical activity is associated with a reduced cardiovascular risk in women, whereas more light-intensity physical activity is associated with a higher cardiovascular risk in men (this dissertation).
5. Further investigations are needed to focus on the role of microvascular dysfunction and physical activity as risk prediction biomarkers as well as prevention and therapeutic targets of cardiometabolic diseases.
6. People often change their minds, so does science; the knowledge can be overturned.
7. Don't forget the necessity for alternative hypotheses and disproof (John R Platt, Science, 1964).
8. If we want to reduce the fear of uncertainty, we need to face it, accept it, and control its impact to the minimum.
9. 不积跬步，无以至千里；不积小流，无以成江海（荀子，战国）。 A journey of a thousand miles cannot be achieved without accumulation of each single step, just as the enormous ocean cannot be formed without gathering every brook or stream (Xunzi, Warring States period).

Wenjie Li 李雯婕, 22 October 2020