What Are the Potential Problems of Using Prevalence Data to Identify a Population at High Risk for Developing and Outcome?

Baseline prevalence of CHD (Framingham Heart Study)

Sex	age	number examined	number with CHD	prevalence
Female	45-49	234	3	**.01**
	50-54	234	5	**.02**
	55-59	214	7	**.03**
	60-64	55	2	**.04**
Male	45-49	212	3	**.01**
	50-54	211	10	**.05**
	55-59	184	8	**.04**
	60-64	62	5	**.08**

Cross-sectional Survey of Coronary Heart Disease among White Male Farmers, Aged 40-74 Years, by Occupational Physical Activity

	Number examined	Number with CHD	Prevalence rate	Age-adjusted prevalence rate
Not physically active	89	14	157.2/1000	126/1000
Physically active	90	3	33.3/1000	36/1000
Total	179	17	95.0/1000	87/1000

McDonough et al. J Chron Dis 1965; 18:443

Possible Explanations for an Association with Prevalence Data

- Increased risk (incidence)
- Increased duration of outcome
- Reversed direction (Outcome $\rightarrow$ Exposure)
- Bias
- Confounding
- Chance