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# Chronic disease risk factors in rural areas: The Greater Green Triangle Risk Factor Study

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## Background

- **Differences between rural and urban populations include:**
  - Education
  - Lifestyle
  - Access to health services
  - Disease rate
  - Mortality rate



## Introduction

- A study on the prevalence of major chronic disease risk factors and related behaviours
- Data already used in epidemiological research and planning of preventative activities

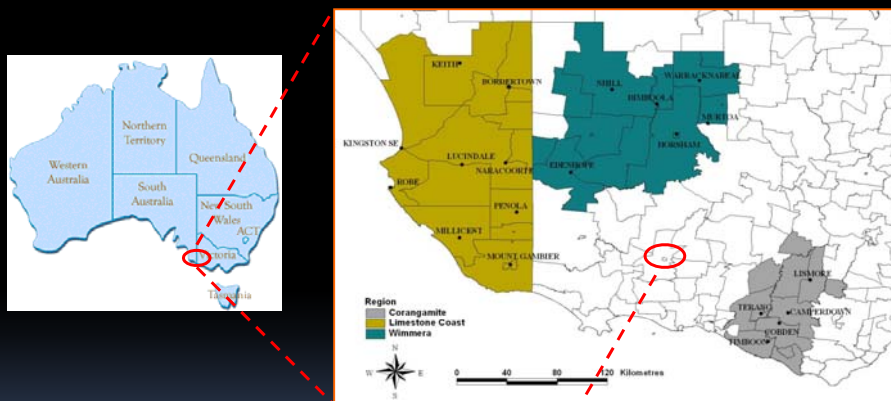


## Aims

1. Examine the prevalence of major chronic disease risk factors and related behaviours in a rural population.
2. Compare agricultural workers with other rural workers for chronic disease risk factors



## Risk factor study: areas of survey



Hamilton



## Risk Factor Study: Methodology

- Survey years: 2004-06
- Stratified random samples of men and women, aged 25-74 years, were selected from the electoral roll
- A total of 1563 participants (49% participation rate)
- Anthropometric assessment (weight, height, ...)
- Clinical assessment (total cholesterol, glucose, ...)
- Psychological assessment (depression...)



## Risk Factor Study: Results overview

- 68.9% were overweight or obese
- 48% had hypercholesterolaemia
- 34.3% had hypertension
- 5.4% had diabetes
- 30% had metabolic syndrome
- 30% had psychological distress
- Prevalence of depression and anxiety was 10%



## Occupation

- Not in paid employment (n=724)
  - student, home duties, retired/pensioner, unemployed
- Agricultural workers (n=265)
  - Farm managers/owners, farm workers, dairy producers, cattle farmer, driver, sawmill owner, grazier, pest and weed controller, ...
- Other rural workers (n=574)
  - mining, trade, hospitality, administration, education, other professional work, ...



## Occupation demographics

### Agricultural workers

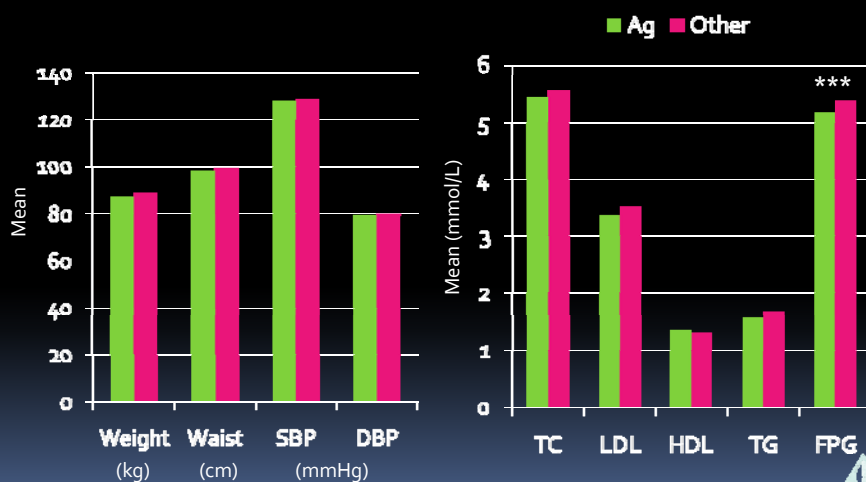
- N=265 (78% male)
- MEN
  - Mean age 52.7 (SD 12.0)
  - Education yrs 11.2 (SD 2.4)
  - Married or de facto 89%

### Other rural workers

- N=574 (47% male)
- MEN
  - Mean age 49.6 (SD 9.9)
  - Education yrs 12.2 (SD 3.1)
  - Married or de facto 89%

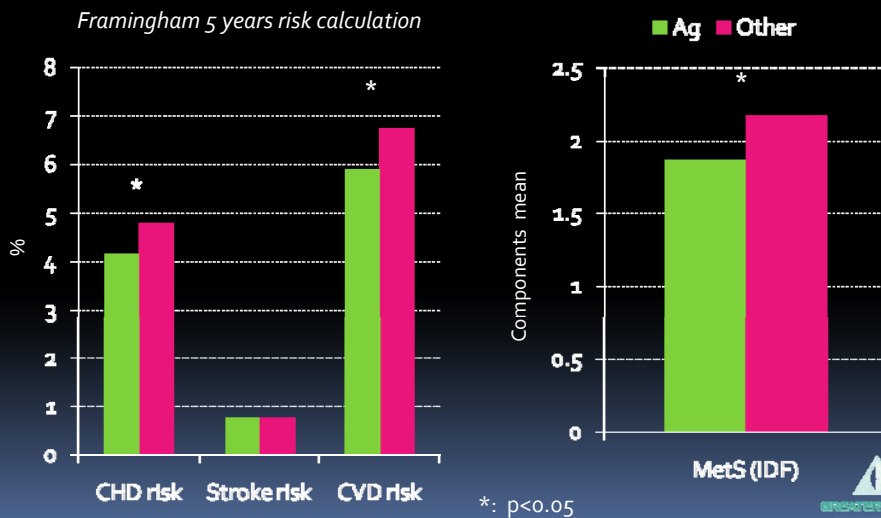


## Anthropometric & Clinical Results (Men)



## Cardiovascular risk (Men)

Framingham 5 years risk calculation



## Behavioural Results (Men)

	Agricultural Workers	Other rural Workers
	Mean (SE)	Mean (SE)
Healthy foods	2.83 (0.05)***	2.54 (0.04)
Traditional foods	3.52 (0.05)***	3.08 (0.05)
Unhealthy foods	1.96 (0.03)	1.92 (0.03)
Alcohol (std drinks / week)	9.4 (1.0)***	14.3 (0.9)
Current smokers	11.7*	21.6
<b>Physical activity</b>	<b>%</b>	<b>%</b>
Moderate to vigorous (≥ once a week)	67.7	61.8
Leisure-time (low to high)	67.5***	87.0
Occupational (carrying/heavy physical work)	86.9***	42.9

\*: p<0.05      \*\*\*: p<0.001

## Psychological Results (Men)

- Psychological distress – no difference
- Anxiety – no difference
- Depression – no difference



## Summary

- Health of rural adults worrying – particularly overweight and obesity
- Men working in the agricultural industry:
  - eat healthier
  - drink and smoke less
  - have higher occupational but lower leisure time physical activity levels
  - have lower fasting glucose
  - less metabolic syndrome
  - **lower** CHD and CVD risk



## Limitations

- Relatively small sample size.
- Only postcodes within 30 minutes of clinical test sites were sampled → reasonable comparative access to health services.
- How representative?



## Conclusion

- In this region, agricultural workers are doing better than other rural workers.
- More study is needed to understand these differences in a rural population.
- Analysis is about to begin to compare data from an urban study with our data to try and determine why disease morbidity and mortality is greater in rural areas.





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