

Plenary I: Metabolic Syndrome

Moderator: Alice Y.Y. Cheng
September 27, 2008

Learning Objectives

- Identify and discuss the importance of dyslipidemia and HDL in the evaluation of a patient
- Recognize the relationship between cardiometabolic risk factors in the same patient
- Develop treatment strategies for these cardiometabolic risk factors



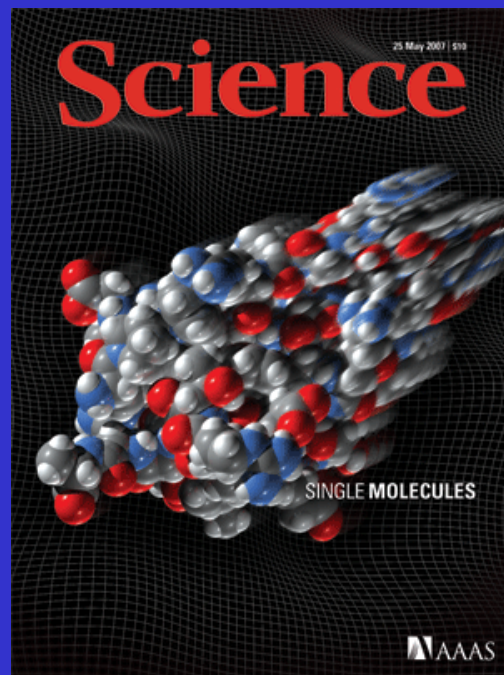


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All: 24386 **Review: 6765**

Items 1 - 20 of **24386**

- 1:** [Islami H, Shabani R, Haliti N, Bexheti S, Koliqi R, Raka D, Sukalo A, Izairi R, Dauti H, Qehaja](#)
 In vitro examination of degenerative evolution of adrenergic nerve endings in pu
in newborns.
Bosn J Basic Med Sci. 2008 Aug;8(3):220-5.
PMID: 18816252 [PubMed - in process]
- 2:** [Sierra-Johnson J, Romero-Corral A, Somers VK, Lopez-Jimenez F, Mälarstig A, Brismar K, H](#)
[Héllenius ML.](#)
 IGF-I/IGFBP- 3 ratio: a mechanistic insight into the metabolic syndrome.
Clin Sci (Lond). 2008 Sep 24. [Epub ahead of print]
PMID: 18816247 [PubMed - as supplied by publisher]
- 3:**

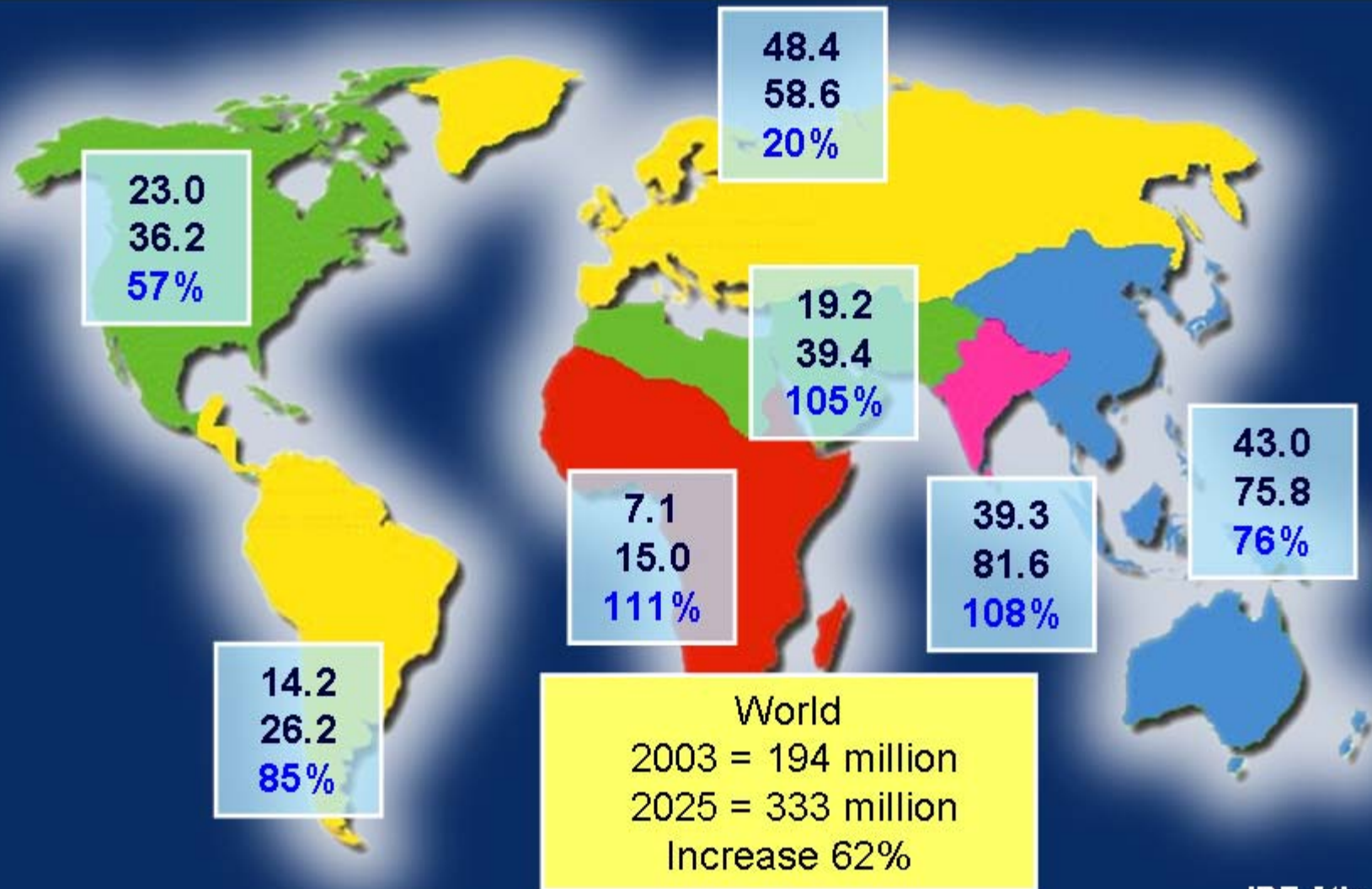


Metabolic syndrome

- Cluster of metabolic abnormalities that typically occur together and results in significantly increased risk of
 - Type 2 diabetes
 - Cardiovascular disease

Why should I care?

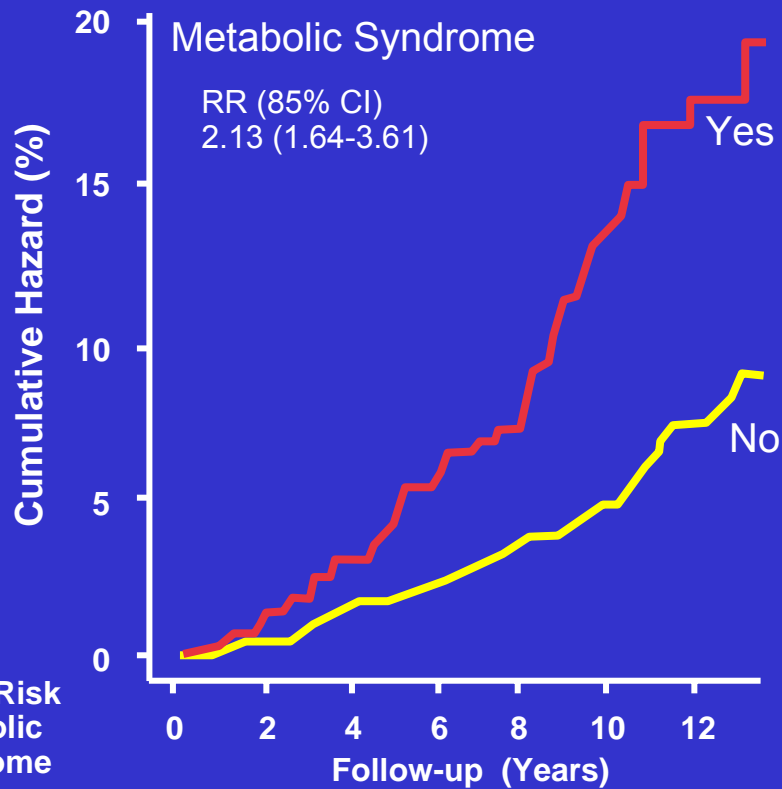
Global Projections for the Diabetes Epidemic: 2003-2025 (millions)



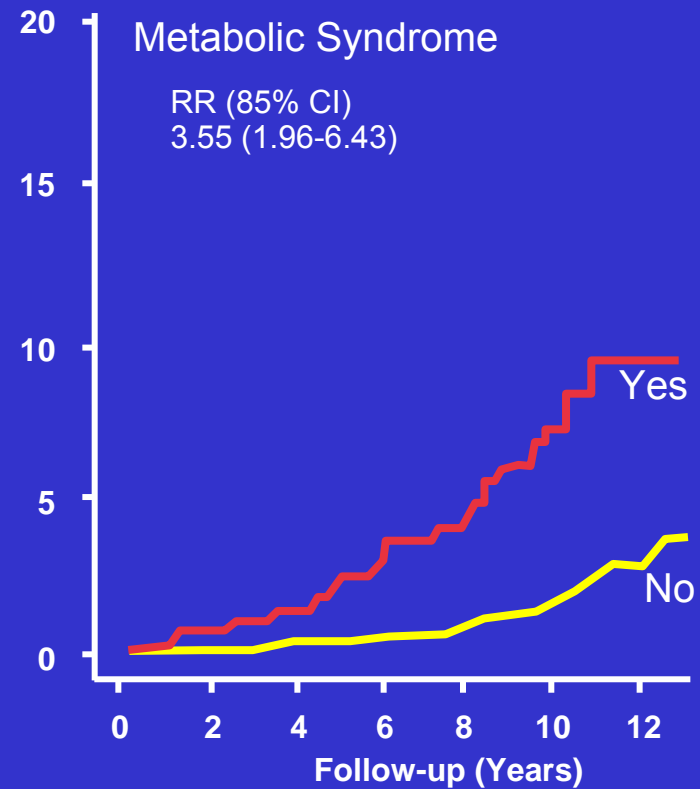
Cardiovascular disease =
26.6% of deaths

Metabolic Syndrome: Total and CV Mortality

All-Cause Mortality



Cardiovascular Disease Mortality



Median follow-up (range) for survivors was 11.6 (9.1-19.7) years

Lakka HM et al. *JAMA*. 2002;288:2709-2716.

How is it defined?

NCEP-ATP III

3 or more of the following:

1. Waist circumference greater than
 - 102 cm in men
 - 88 cm in women
2. Dyslipidemia
 - Triglycerides > 1.7 mmol/L
 - HDL-C < 1.04 mmol/L (men); 1.30 mmol/L (women)
3. Blood pressure $\geq 130/85$ mmHg
4. Fasting plasma glucose ≥ 5.6 mmol/L

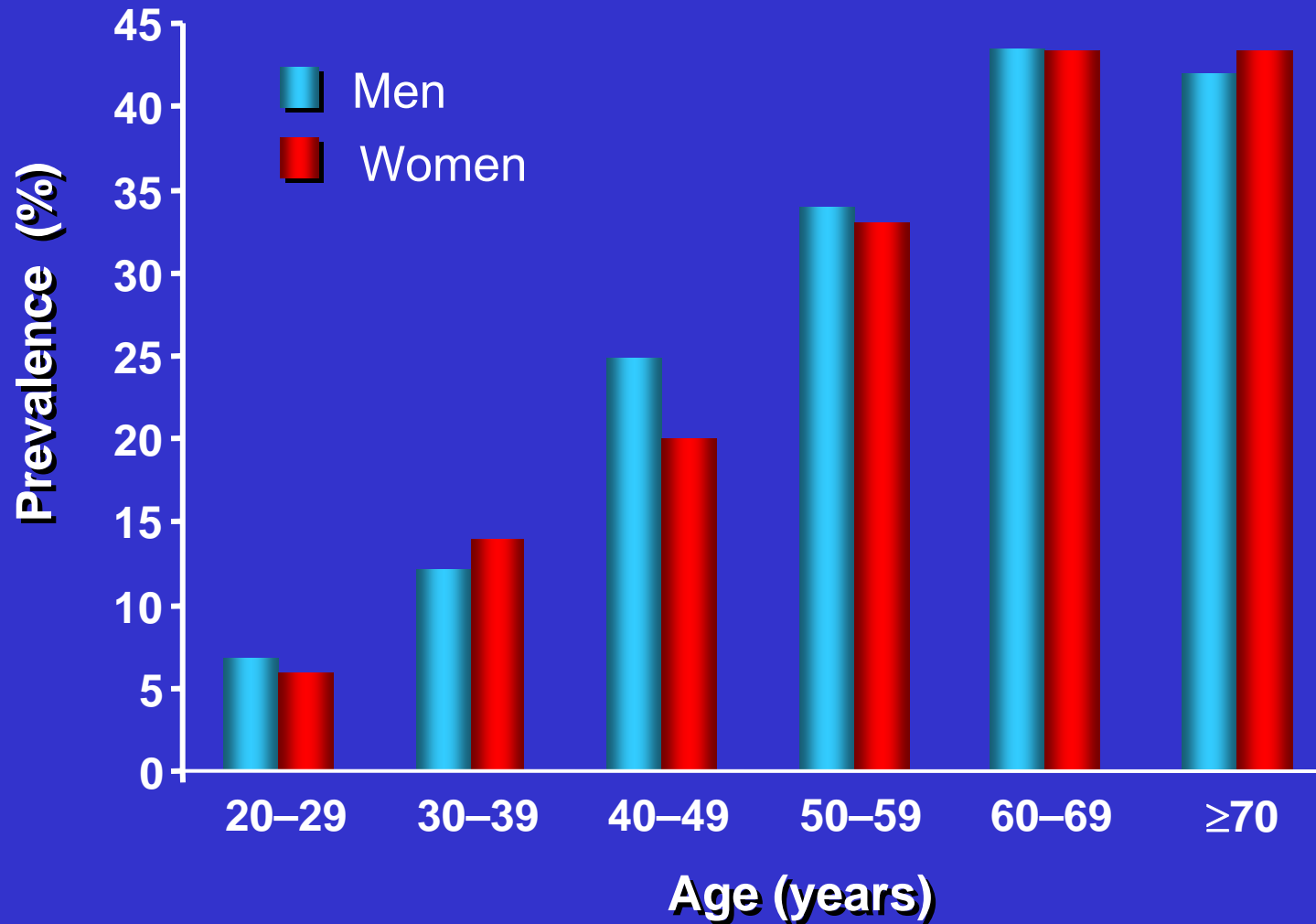
IDF

- **↑ WAIST CIRCUMFERENCE**

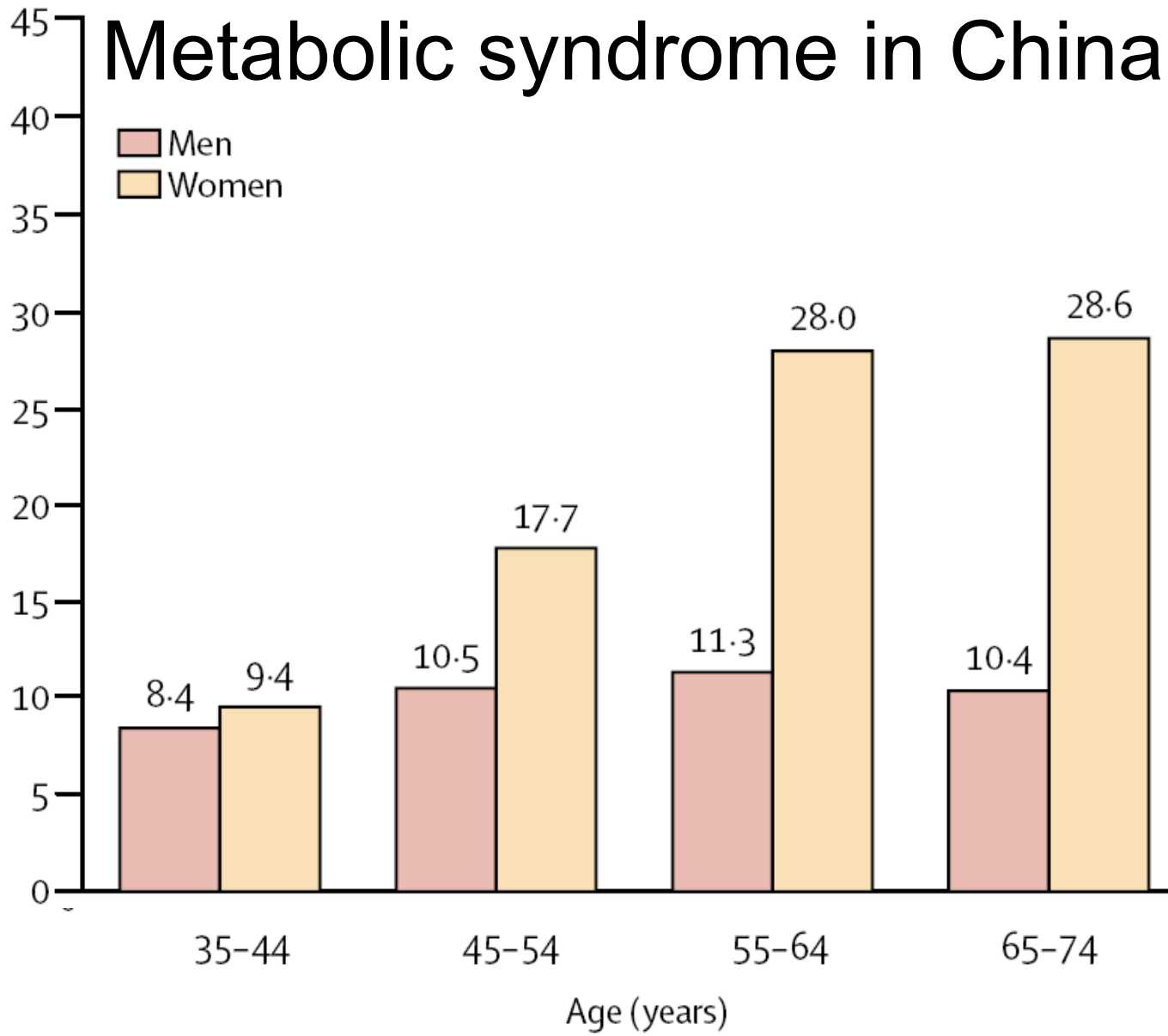
Plus ≥ 2 of

- **↑ Triglycerides (≥ 1.7 mmol/L)**
- **↓ HDL cholesterol**
 - Men < 1.0 mmol/L
 - Women < 1.3 mmol/L
- **↑ Blood pressure $\geq 130 / \geq 85$ mm Hg**
- **↑ fasting glucose ≥ 5.6 mmol/L or diabetes**

NHANES III: Prevalence of The Metabolic Syndrome Among US Adults (ATP III)



Metabolic syndrome in China

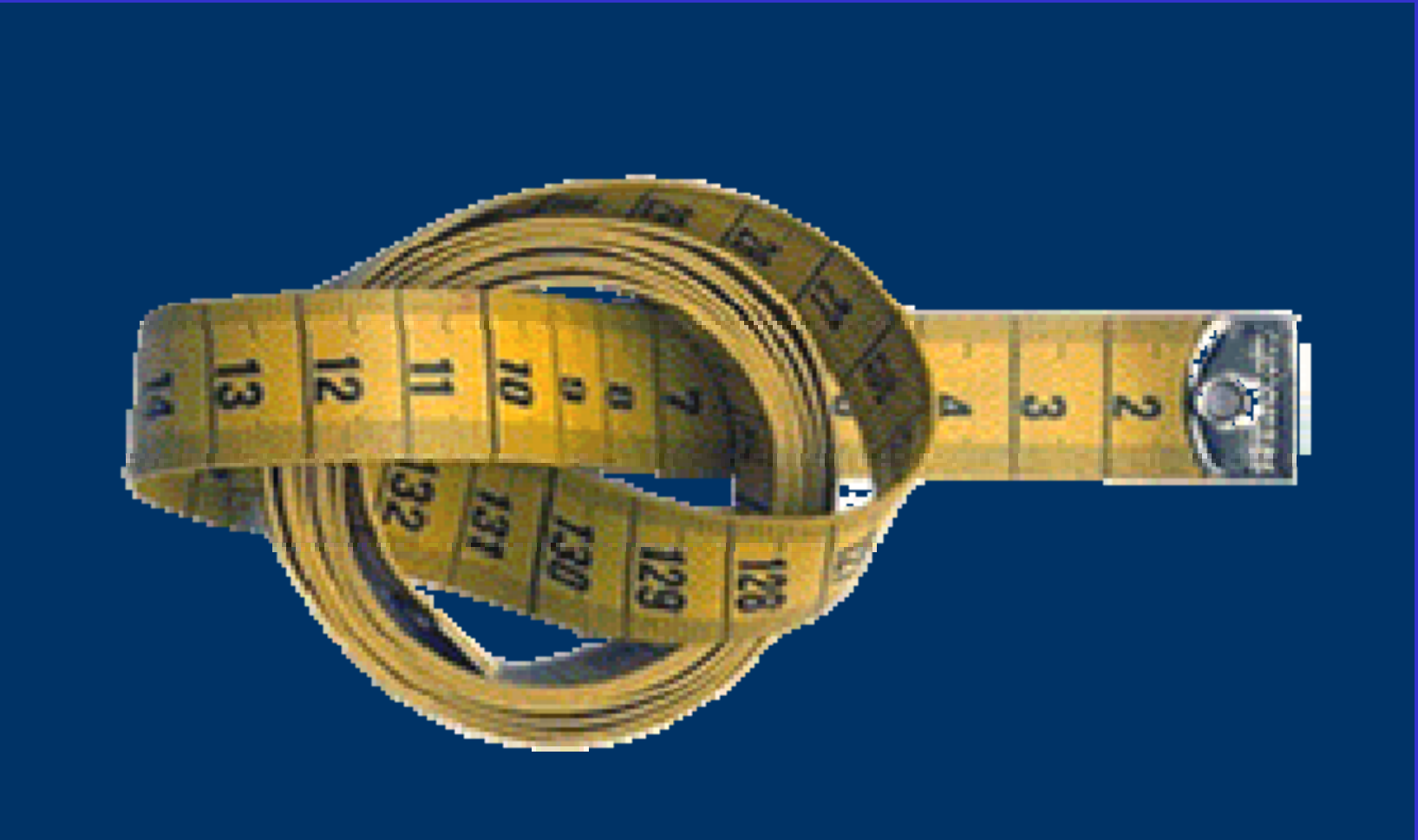


Gu et al. Lancet 2005;365:1398.

IDF waist circumference

- **IDF criteria:**

	Men	Women
Europid	≥ 94 cm (37.0 in)	≥ 80 cm (31.5 in)
South Asian	≥ 90 cm (35.4 in)	≥ 80 cm (31.5 in)
Chinese	≥ 90 cm (35.4 in)	≥ 80 cm (31.5 in)
Japanese	≥ 85 cm (33.5 in)	≥ 90 cm (35.4 in)



Vital Statistic – Waist Circumference



IDF

- **↑ WAIST CIRCUMFERENCE**

Plus ≥ 2 of

- **↑ Triglycerides (≥ 1.7 mmol/L)**
- **↓ HDL cholesterol**
 - Men < 1.0 mmol/L
 - Women < 1.3 mmol/L
- **↑ Blood pressure $\geq 130 / \geq 85$ mm Hg**
- **↑ fasting glucose ≥ 5.6 mmol/L or diabetes**



Mr. Chan

- 48 year old man presents for annual physical
- self-employed entrepreneur
- not seen in office for over 3 years
- no meds
- smoker x 15 years
- drinks alcohol when socializing with clients

Mr. Chan

- Ht 180 cm, wt 90 kg
- WC 100 cm
- BP 138/85
- TC 5.3, TG 2.8, HDL 0.9, LDL 3.2
- FPG 6.1

Is there a cause for concern?
Why has this developed?
What can be done now?