

Why Birthdays are Good for you

A celebration of Ageing

David Spriggs

Physician/Geriatrian

Auckland District Health Board

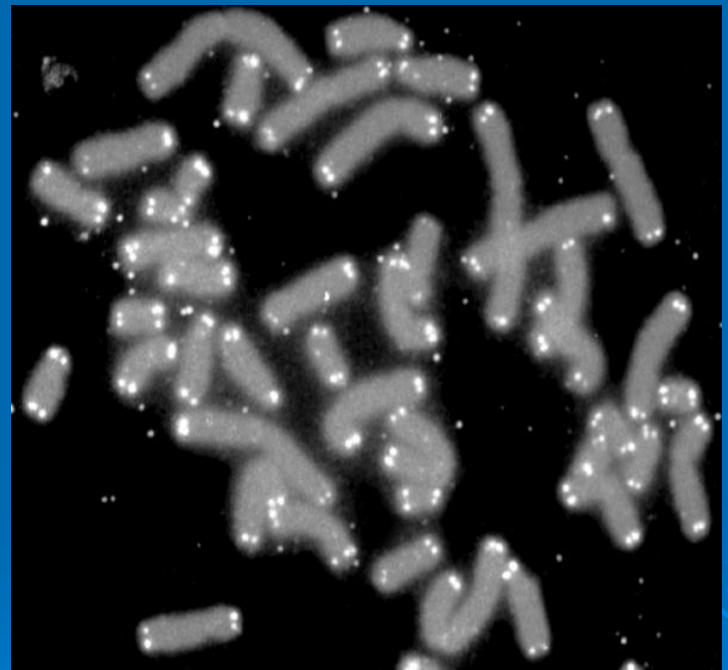
Causes of Ageing

➤ Intrinsic

- Genes, Hormones, telomere length

➤ Extrinsic

- Free radicals, radiation, wear and tear



Increasing longevity in elderly

➤ Geriatric paradoxes

- Fat,
- hypertensive,
- hyperlipidaemic elderly live LONGER

➤ Grandmother effect

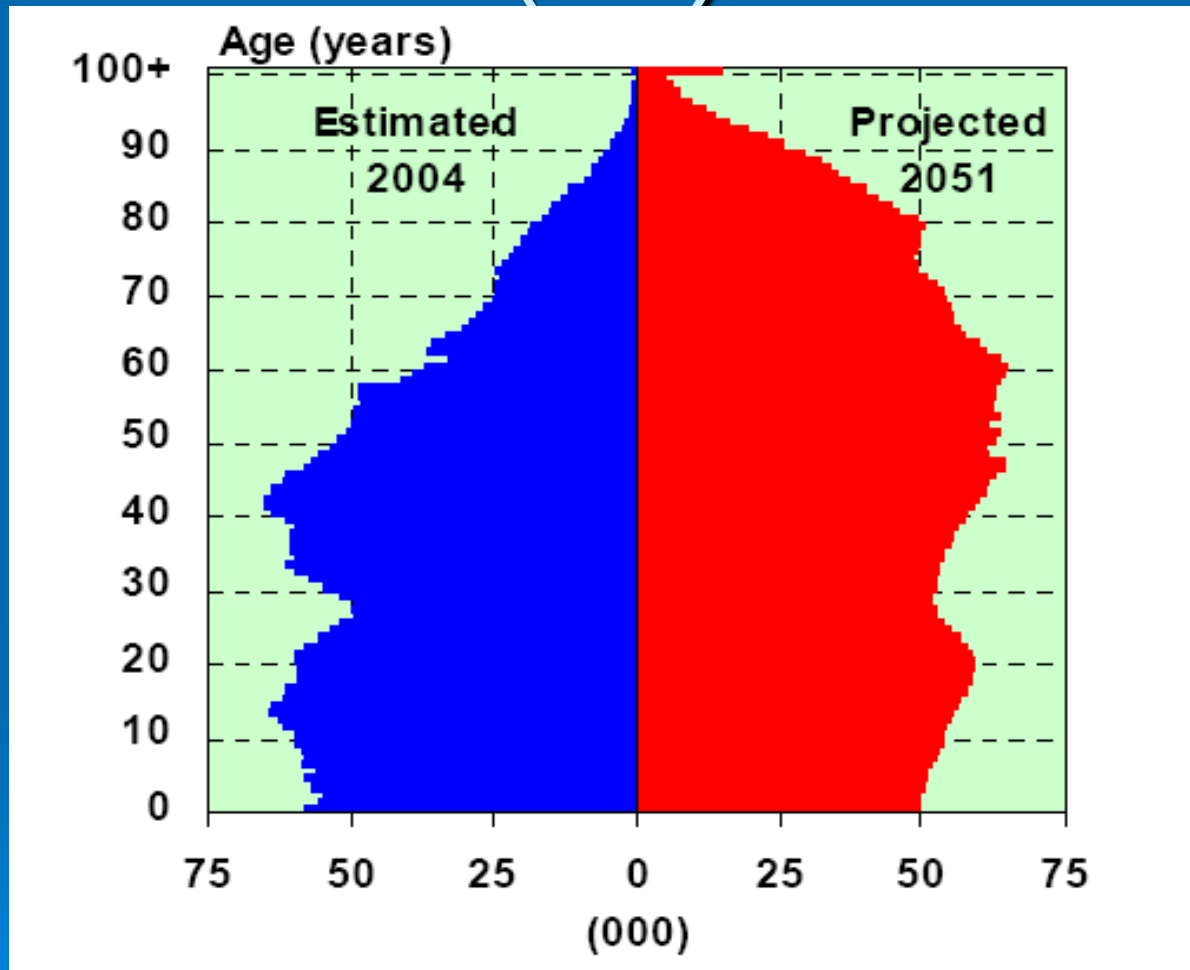
LeCouteur 2010

Issues in Ageing

- Normal
- Average
- Healthy

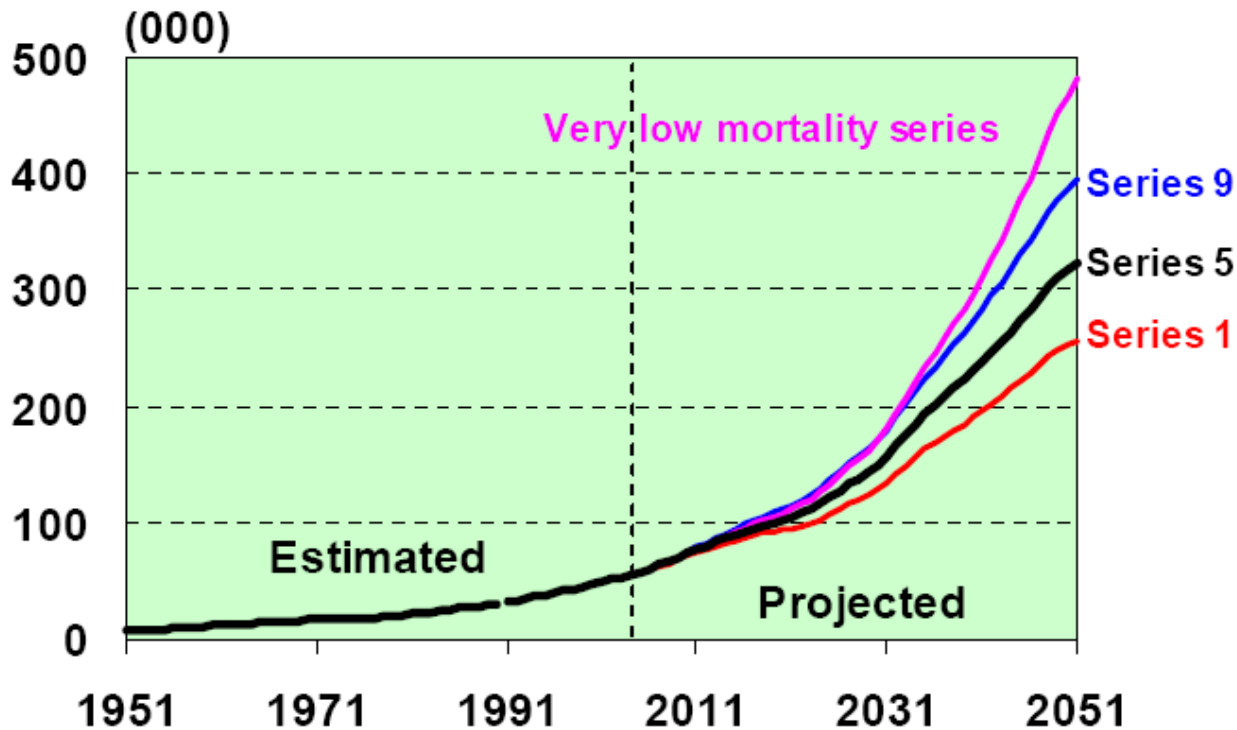
- What is disease?

Projected demographic change (NZ)



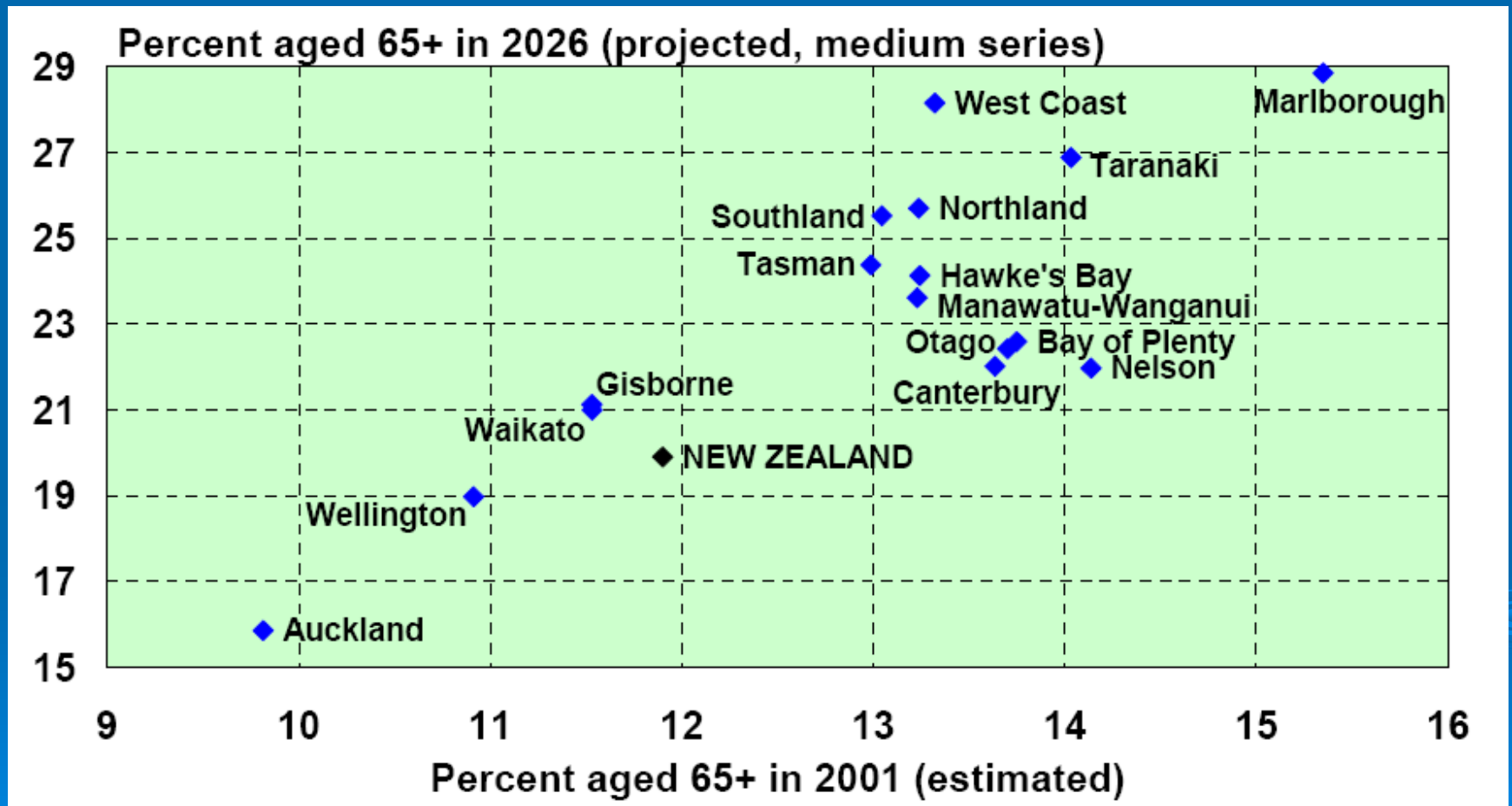
Stats NZ 2006

Numbers of people >85 years (NZ)



Under projection series 5, the 85+ age group will account for 24 percent of people aged 65+, compared with 11 percent in 2005.

Percentage >65 by region 2011-2026



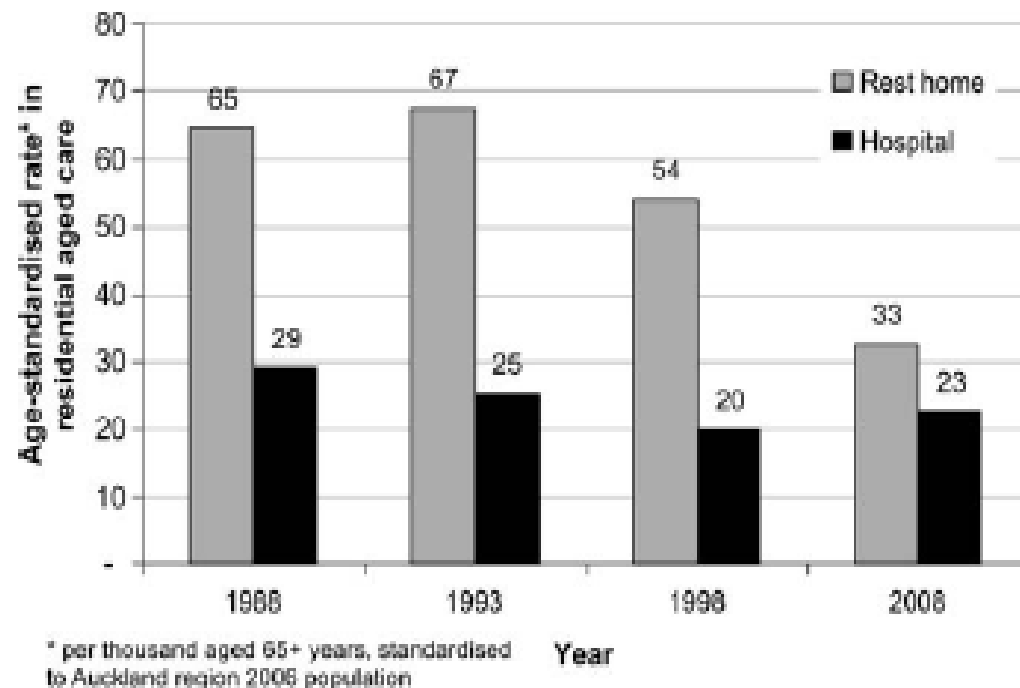
Changes in Dementia Prevalence

- Swedish data
- 85 year olds, identical assessment
- 1986-87 26.2%
- 2008-9 19.4%

$p=0.01$

Skoog AAIC Abstract 2011

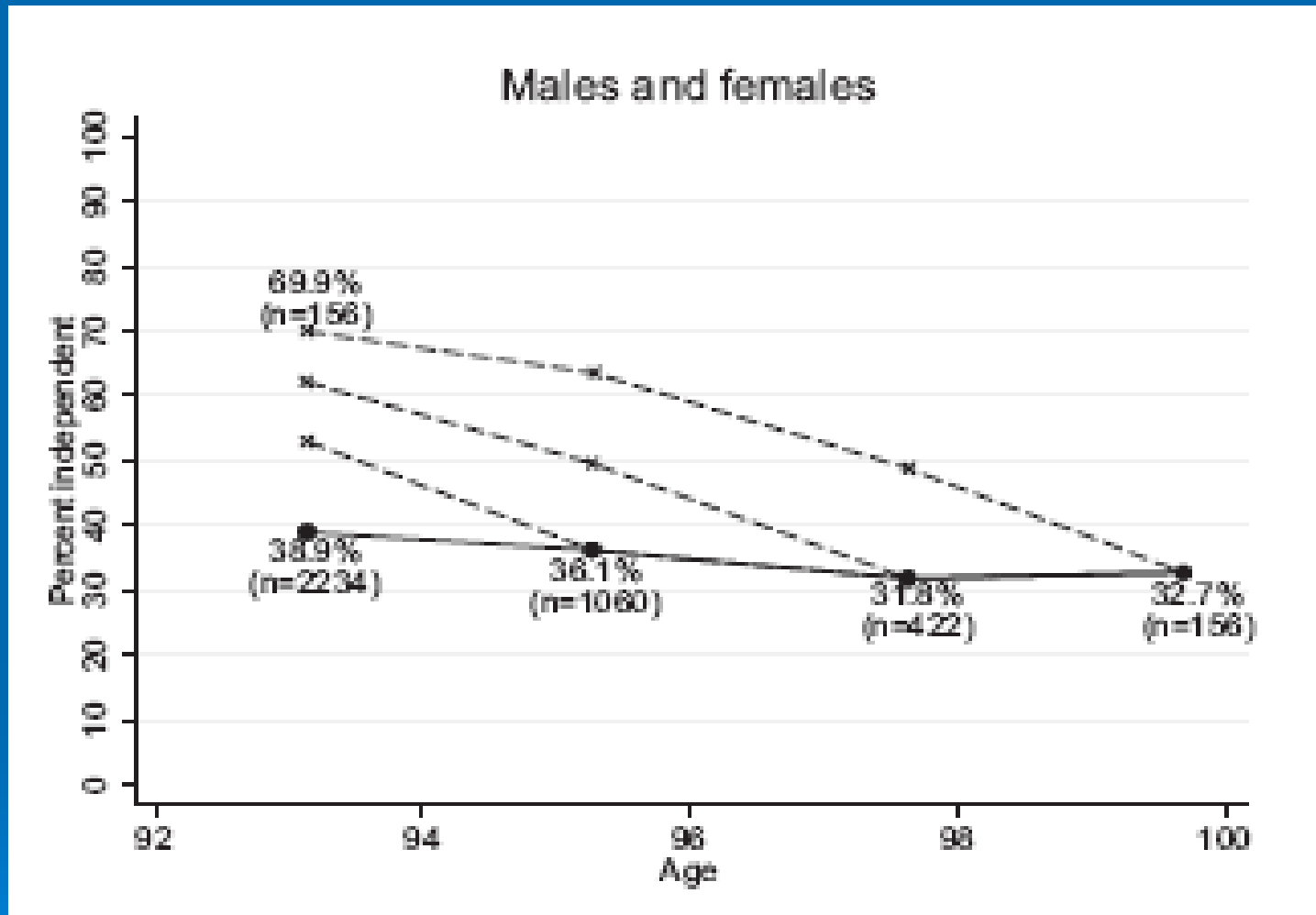
Usage of Residential care



Age-standardised rates in long-term care in Auckland, 1988–2008, by facility type.

Broad. Age and Ageing 2011

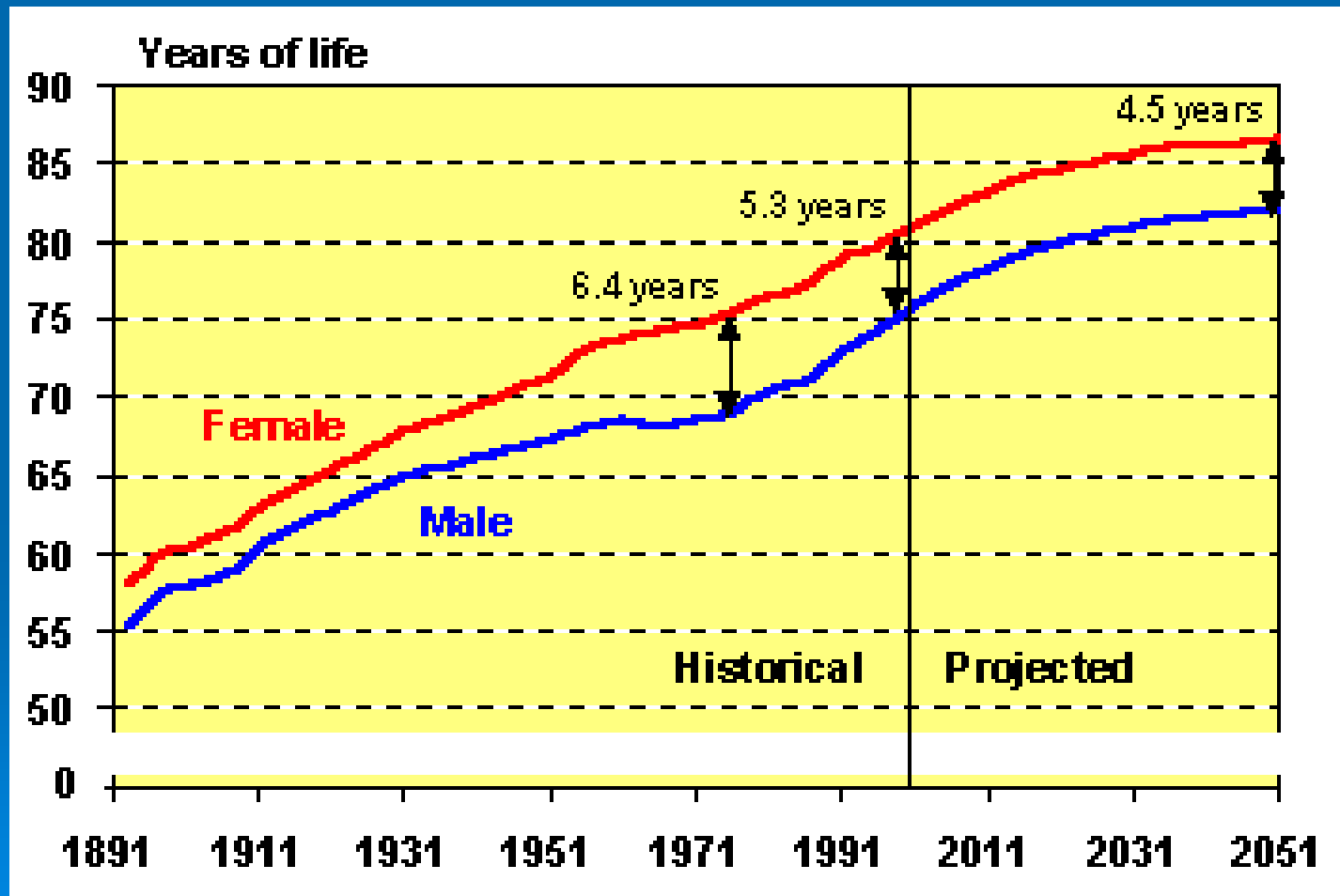
Percentages of the individuals born in 1905 classified as independent at four assessments in the period 1998–2005



Christensen K. et.al. PNAS 2008;105:13274-13279

GPCME Dunedin Aug 2012

Life expectancy at Birth (NZ)



Life expectancy 2007 NZ

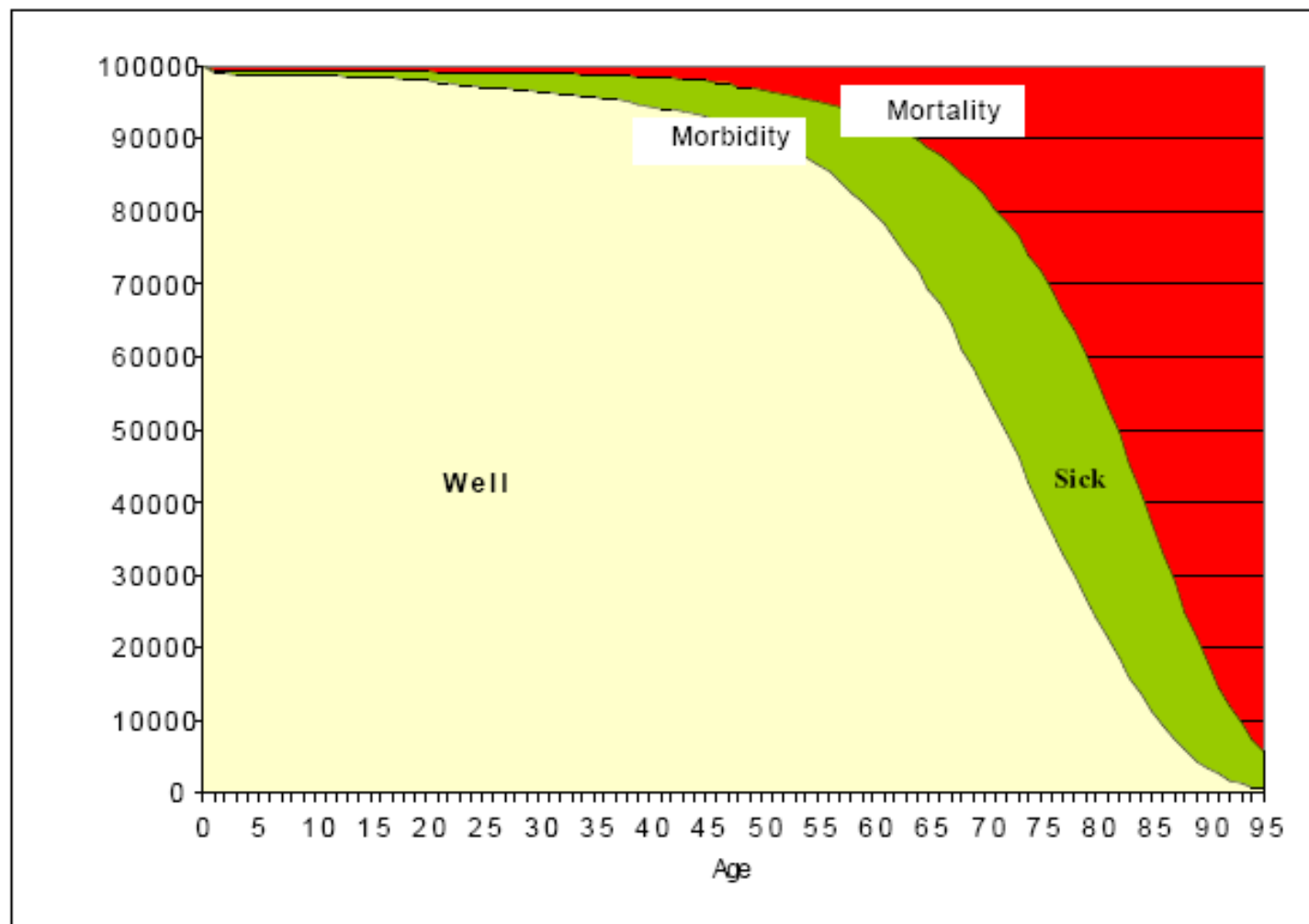
➤ Healthy life expectancy

- 69.2 males 72.2 females

➤ Life expectancy

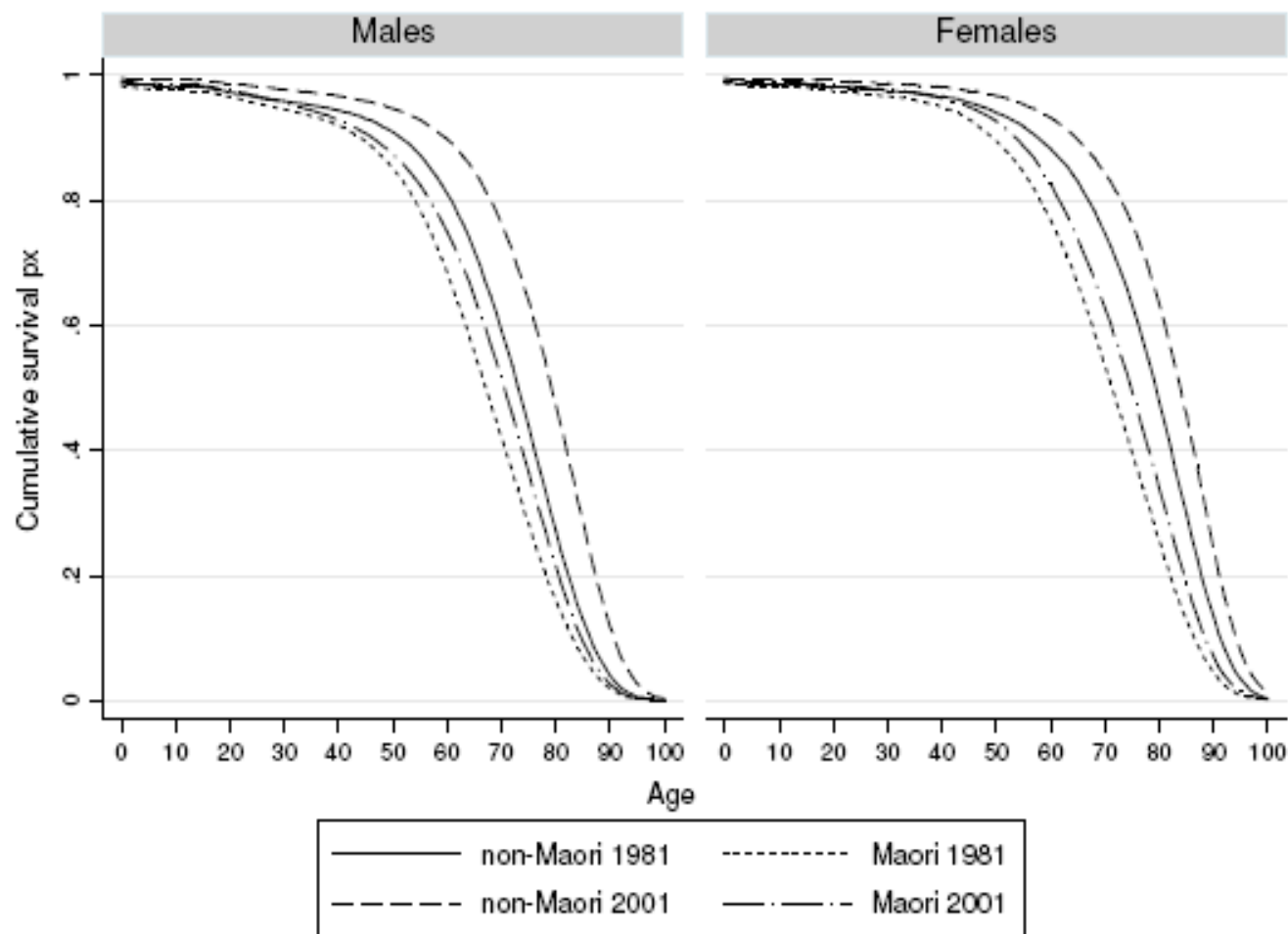
- 78.0 males 82.2 females

Figure 2.7 Hypothetical Mortality and Morbidity Curves

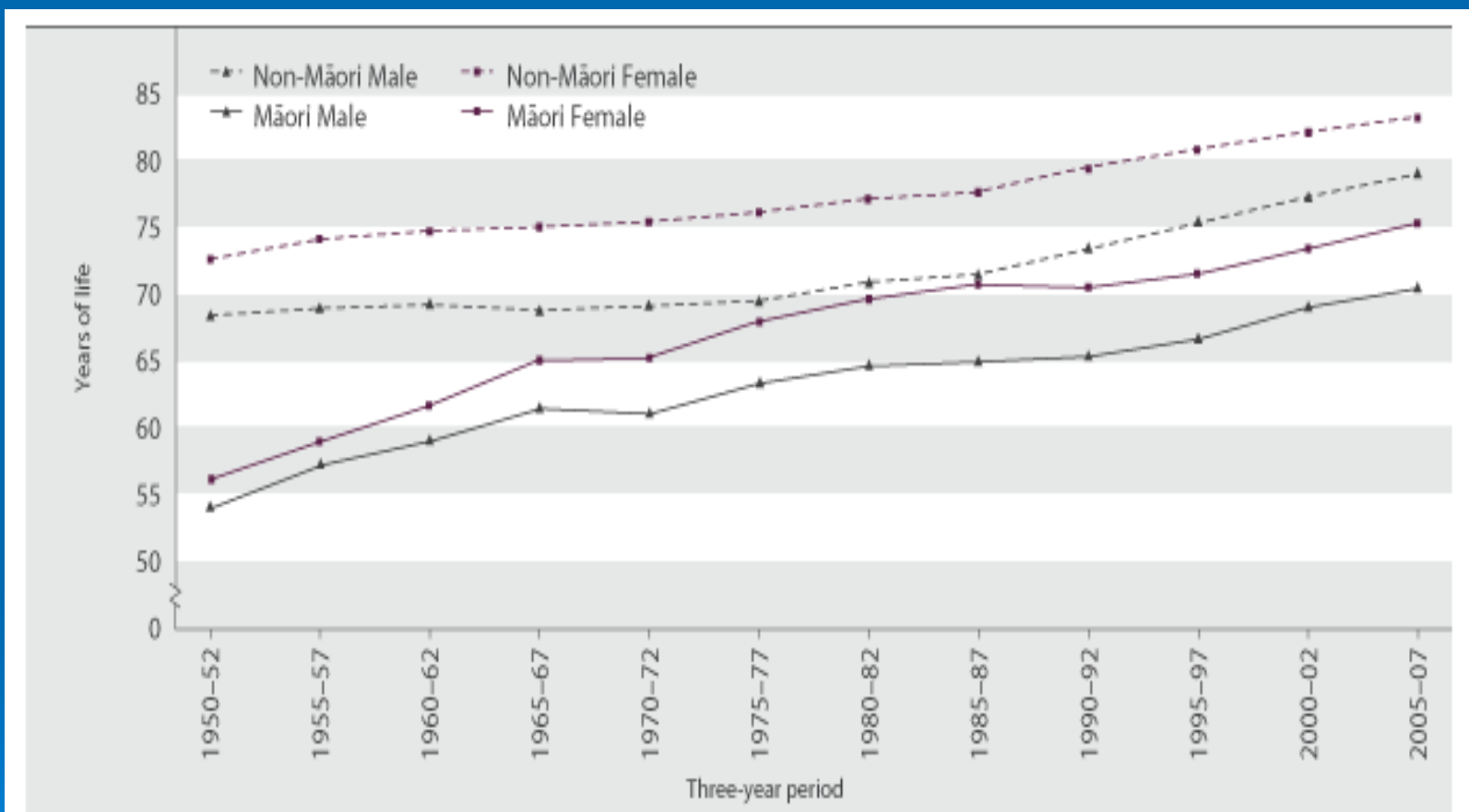


Source: Dermot O'Reilly. Long Term Health Trends Review Belfast Workshop, November 2001

Figure 2a. Cumulative survival probability by ethnicity and sex, 1981 and 2001

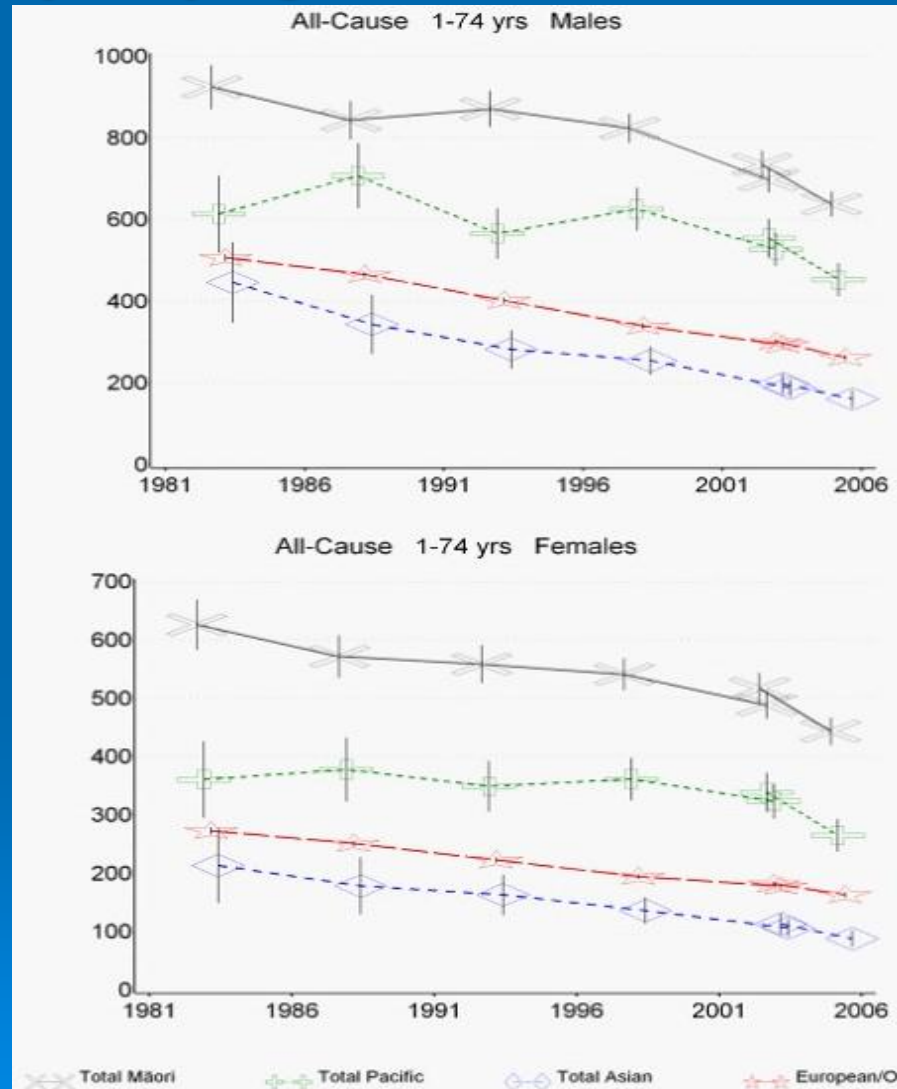


Life expectancy at birth, by ethnic group and sex, selected years, 1950–1952 to 2005–2007



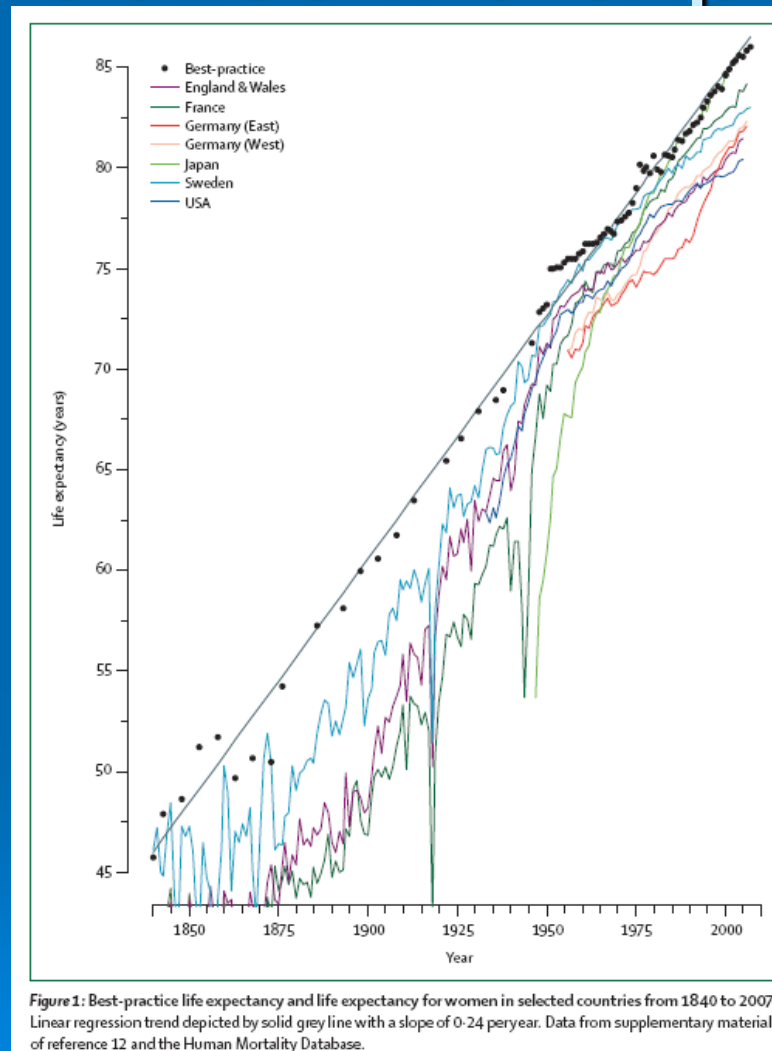
Source: Statistics New Zealand

Mortality by gender and ethnicity



Lan NZMJ 2012

Best Practice life expectancy



Christensen; Lancet 2009

Life Expectancy and Happiness

US Men

	1970	2000
35 year olds TLE %age happy	40.5 86.0	45.9 90.7
65 year olds TLE %age happy	13.0 85.8%	16.2 90.6%
85 year olds TLE %age happy	4.7 87.5%	5.6 91.7%

Yang Y, Soc Sci res 2008

Sexual Activity >70 yo

Men	Women
-----	-------

➤ +ve attitude 97%

➤ Intercourse in last
year 66%

➤ ≥ 1 /week in sexually
active 31%

➤ Sex Before marriage
88%

➤ +ve Attitude 94%

➤ Intercourse in last
year 34%

➤ ≥ 1 /week in sexually
active 26%

➤ Sex Before marriage
88%

Beckman BMJ 2008

“in my experience, old people
stop having sex for the same
reasons as they stop riding a
bicycle:

general infirmity
it looks ridiculous
never much enjoyed it
No Bicycle”

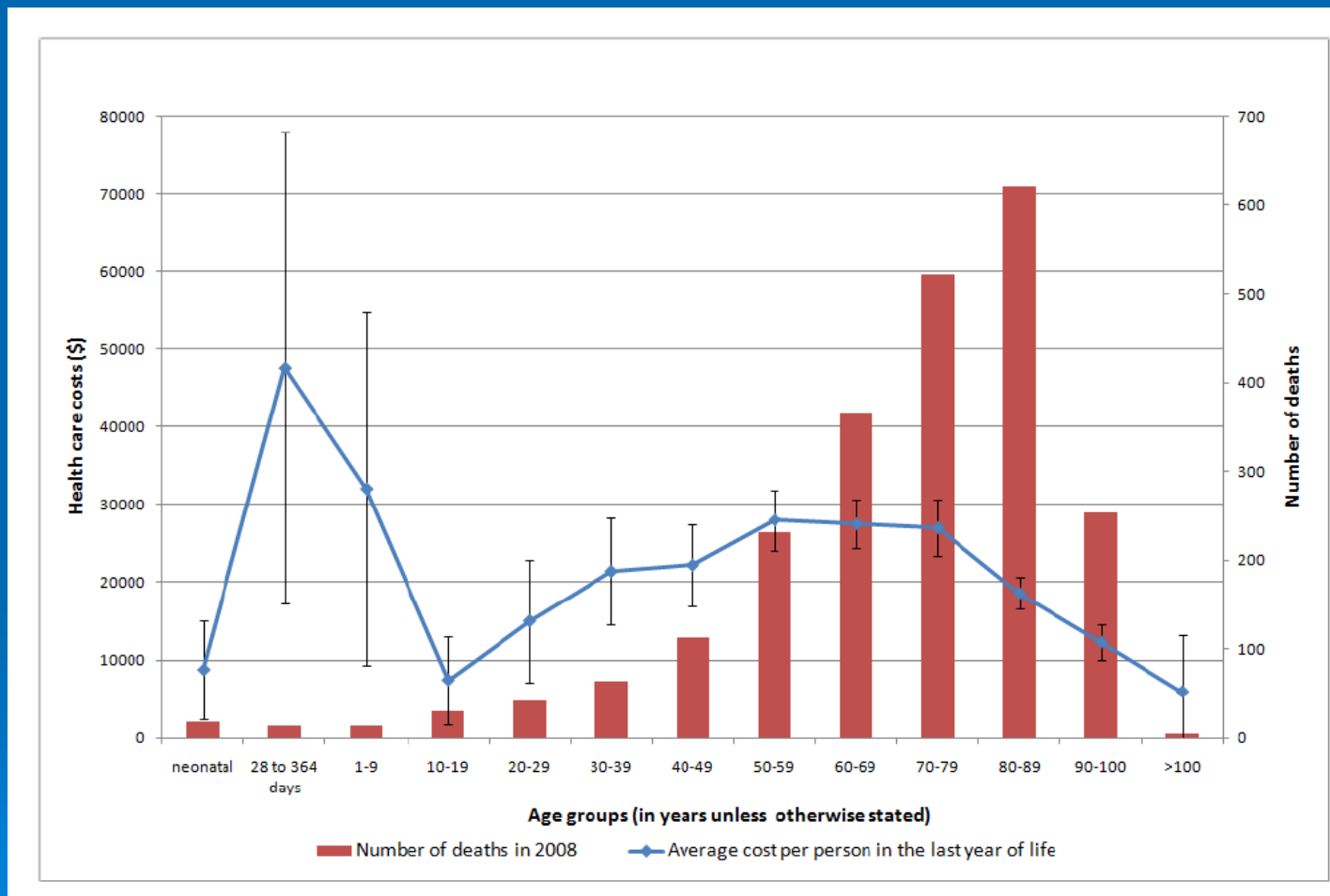
Alex Comfort

Total in-patient hospital costs in last 360 days of life (NSW 2002-3)

Age at death (years)	Cost per person (Aus \$)
65-74 n=404,398	17,927
75-84 n=676,762	14,498
85-94 n=456,101	10,403
≥ 95 n=46,892	7,028

Cost of care in last year of life

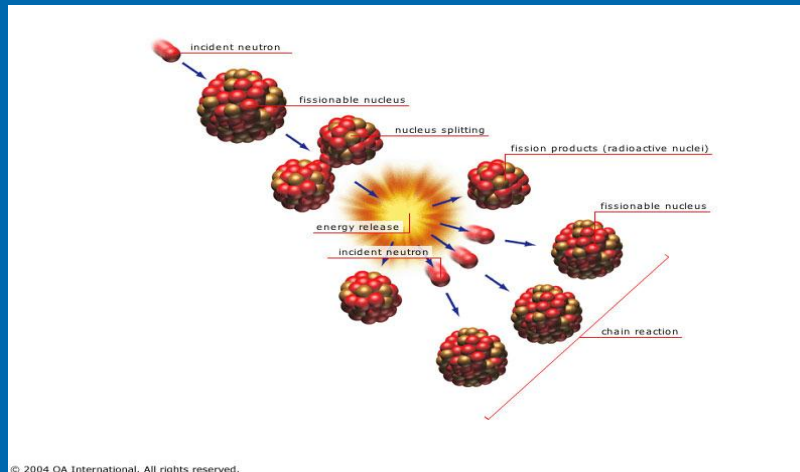
Counties Manakau



The Wonderful News

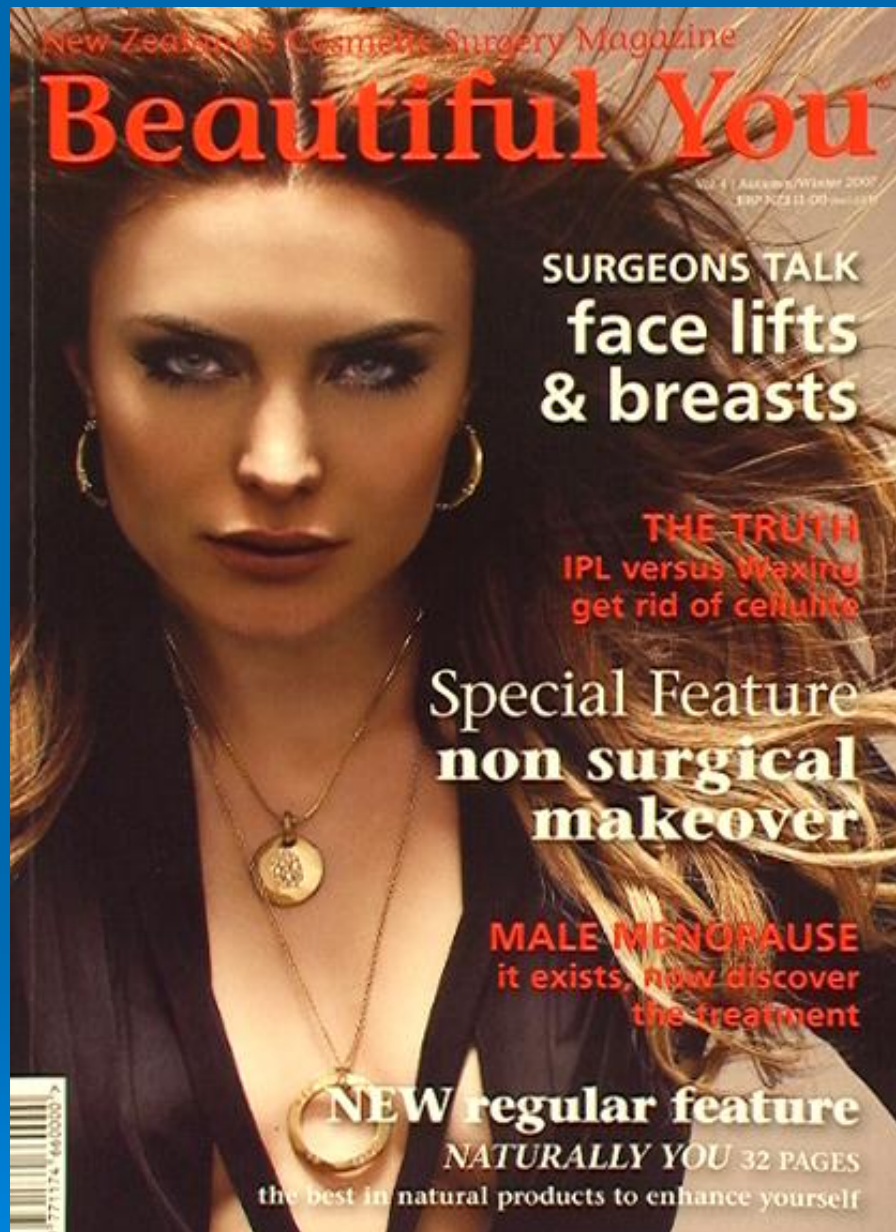
- Living longer
- Living healthier
- Living happier
- Dying cheaper

Mankind's Greatest Achievement?



TV Newscasters





Beautiful You | Non Surgical

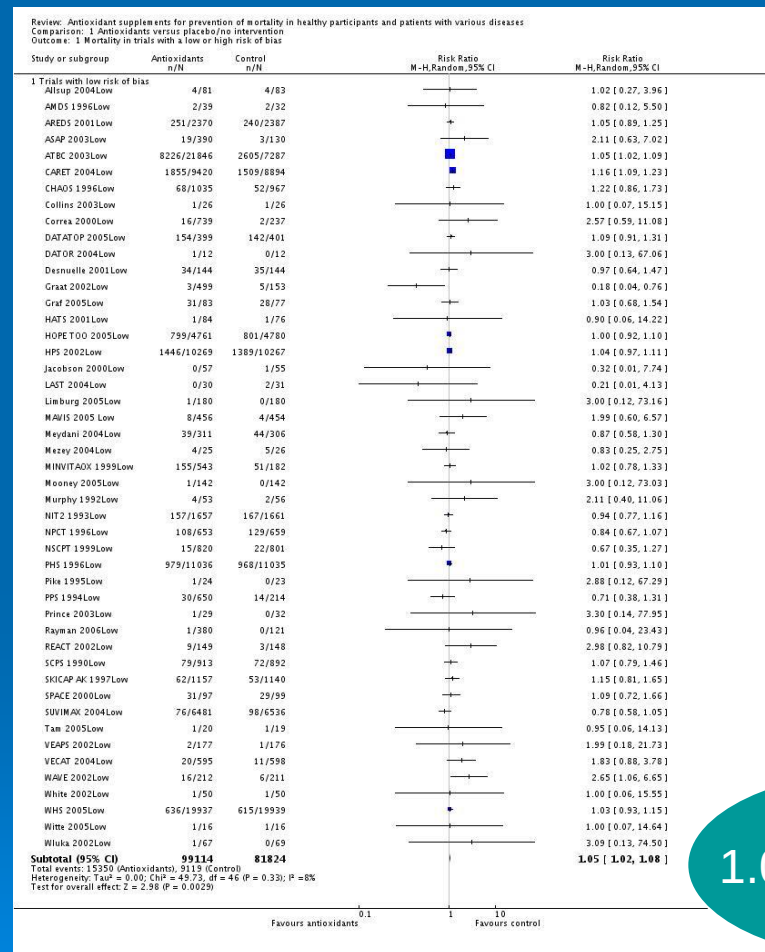


Beautiful You
Non Surgical makeover

U the latest way to stay young!

We are a nation that is becoming extremely aware of aging. We are eating organic food, booking in for enhancing treatments and eventually surgically updating ourselves. One of the most important ways to stay young is by adding to your health with supplements.

Antioxidants versus placebo/no intervention, Mortality in trials with a low risk of bias



1.05 (1.02-1.08)



Aging and Fountain-of-Youth Hormones

Paul M. Stewart, M.D.

- “The search for eternal youth will continue, but the reversal of age-related decreases in the secretion of DHEA and testosterone through "physiologic" replacement regimens offers no answer and should not be attempted”.

NEJM Oct 19 2006



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Silicone lasts
Forever

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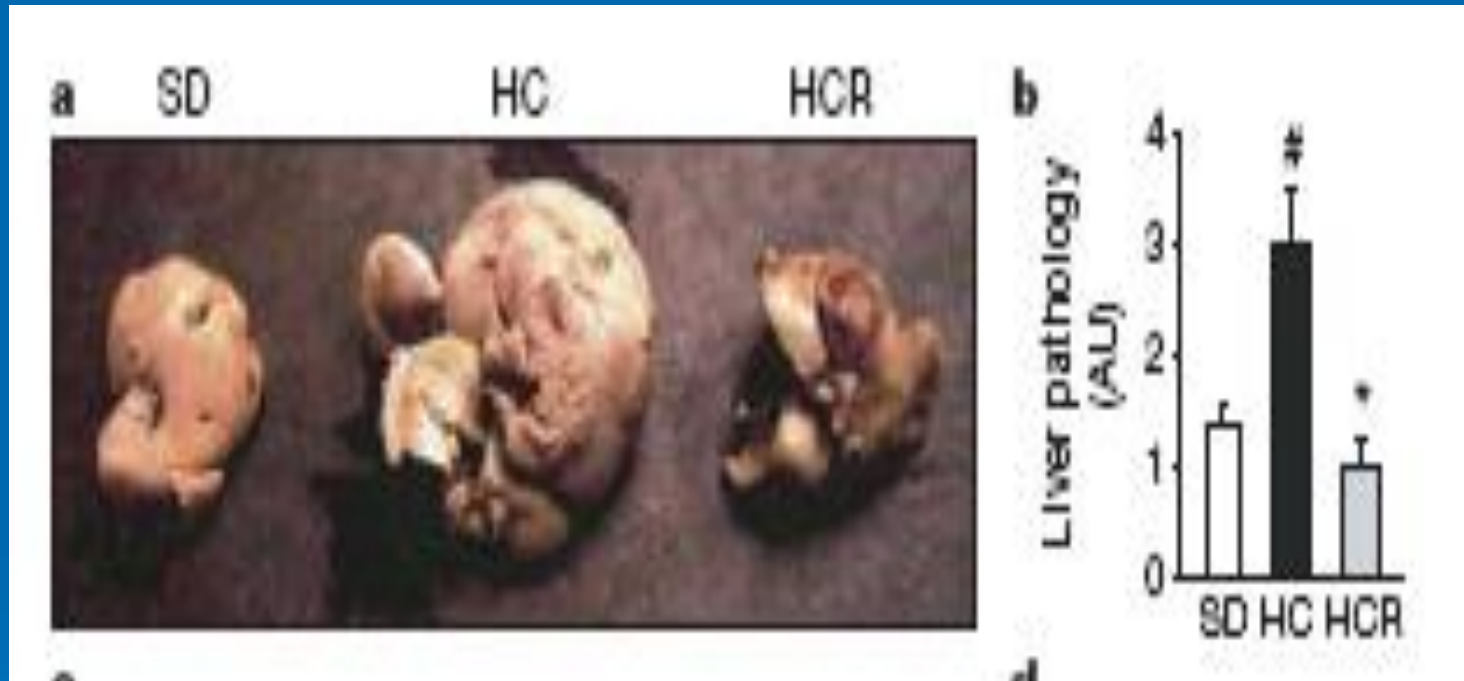
ARTICLES

Resveratrol improves health and survival of mice on a high-calorie diet

Joseph A. Baur^{1*}, Kevin J. Pearson^{2*}, Nathan L. Price², Hamish A. Jamieson⁷, Carles Lerin⁸, Avash Kalra², Vinayakumar V. Prabhu³, Joanne S. Allard², Guillermo Lopez-Lluch⁹, Kaitlyn Lewis², Paul J. Pistell², Suresh Poosala⁴, Kevin G. Becker³, Olivier Boss¹⁰, Dana Gwinn¹¹, Mingyi Wang⁵, Sharan Ramaswamy⁶, Kenneth W. Fishbein⁶, Richard G. Spencer⁶, Edward G. Lakatta⁵, David Le Couteur⁷, Reuben J. Shaw¹¹, Placido Navas⁹, Pere Puigserver⁸, Donald K. Ingram^{2,12}, Rafael de Cabo² & David A. Sinclair¹

Resveratrol (3,5,4'-trihydroxystilbene) extends the lifespan of diverse species including *Saccharomyces cerevisiae*, *Caenorhabditis elegans* and *Drosophila melanogaster*. In these organisms, lifespan extension is dependent on Sir2, a conserved deacetylase proposed to underlie the beneficial effects of caloric restriction. Here we show that resveratrol shifts the physiology of middle-aged mice on a high-calorie diet towards that of mice on a standard diet and significantly increases their survival. Resveratrol produces changes associated with longer lifespan, including increased insulin sensitivity, reduced insulin-like growth factor-1 (IGF-1) levels, increased AMP-activated protein kinase (AMPK) and peroxisome proliferator-activated receptor- γ coactivator 1 α (PGC-1 α) activity, increased mitochondrial number, and improved motor function. Parametric analysis of gene set enrichment revealed that resveratrol opposed the effects of the high-calorie diet in 144 out of 153 significantly altered pathways. These data show that improving general health in mammals using small molecules is an attainable goal, and point to new approaches for treating obesity-related disorders and diseases of ageing.

Resveritrol and Heart size

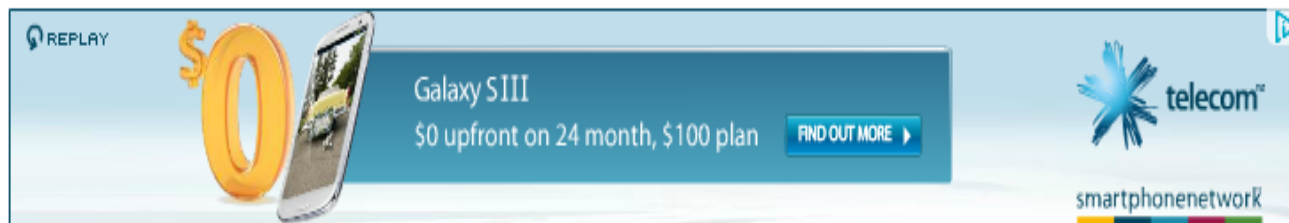


- SD Standard Diet, HC High Calories, HCR High cal and Resveritrol
Baur, Nature 2007

Science

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University Suspects Fraud by a Researcher Who Studied Red Wine

By NICHOLAS WADE

Published: January 11, 2012

A charge of widespread scientific fraud, involving 26 articles published in 11 journals, was leveled by the [University of Connecticut](#) today against Dipak K. Das, one of its researchers, whose work reported health benefits in red wine.

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The (loony) future

- Actuarial Escape velocity
- Mind Uploading



The Fate of the Dinosaurs



First Senior moment ever

GPCME Dunedin Aug 2012