



## Concord Health and Ageing in Men Project (CHAMP)

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## CHAMP Chief Investigators

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## Primary Objective

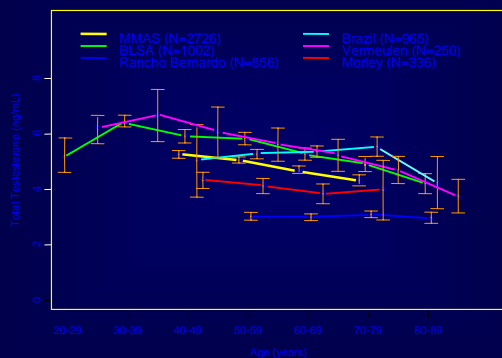
Do declines in reproductive hormones with age lead to increased risk of:

- Osteoporosis and fractures?
- Reduced muscle mass and strength?
- Cognitive impairment?
- Urinary symptoms?

## Secondary Objectives

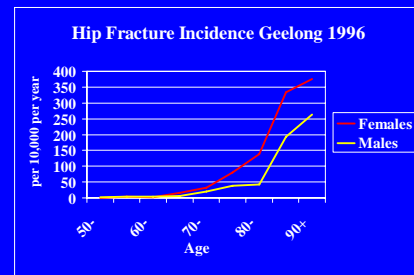
- To describe the prevalence of testosterone deficiency
- To describe the prevalence and incidence of, and identify risk factors for:
  - Osteoporosis and fractures
  - Sarcopaenia
  - Dementia and Alzheimer's disease
  - Urinary symptoms and incontinence
  - Impaired mobility and functional dependence

## Age-Related Decline in Blood Testosterone



New England Research Institute

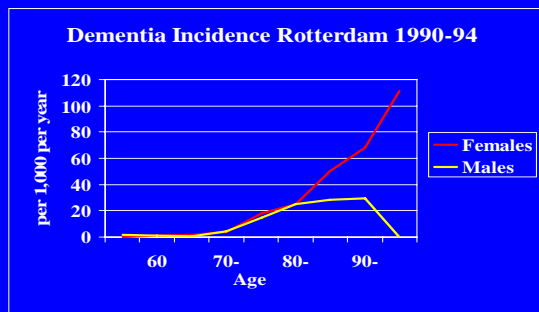
## Hip Fracture Incidence



Source: Sanders et al. Osteoporosis Int 1999;10:240-7

Lifetime risk of hip fracture: 15% in women; 6% in men

## Dementia Incidence



Source: Ott et al. Am J Epidemiol 1998;147:574-80

## Studies of Old Men

STUDY	Sample Size
Massachusetts Male Aging Study (MMAS)	1709 aged 40-70
European Male Ageing Study (EMAS)	3200 aged 40-79
Rotterdam Study	2939 (1197 aged 70+)
Dubbo Osteoporosis Study	709 (287 aged 70+)
Australian Longitudinal Study of Ageing	772 aged 70+

Are you a man  
over the age of 70?



Join our world leading study of men's health

**CHAMP**  
CANADIAN HEALTH AND AGEING  
— 90 MEN PROJECT —

If you are a man aged 70 or older who lives in the Burwood, Canada Bay or Strathfield areas, Concord Hospital doctors invite you to join CHAMP. To find out more, call Melissa Litchfield on 1800 174 287.

CHAMP is funded by the National Health & Medical Research Council to improve health of older men.

## CHAMP Study Population

- Males aged 70 years and over
- Resident in Burwood, Canada Bay or Strathfield LGAs
- Live in community (not nursing home)

## Selection of Subjects

- Electoral Roll: letter and telephone calls
- Media coverage and local advertising

## Measurements

Self-completed questionnaire (1 hour)

THEN

Clinic visit (3 hours):

- Blood tests
- Cognitive function
- Questionnaire
- Muscle strength
- Urinary function
- DEXA (bone, muscle, fat)

## Questionnaires and Examinations

### Questionnaires

- Activities of Daily Living (Katz, Rosow-Breslau)
- CAGE (alcoholism screen)
- Duke Social Support Index
- Geriatric Depression Scale
- Goldberg Anxiety Scale
- Independent Activities of Daily Living (IADL)
- Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE)
- International Consultation on Incontinence Questionnaire
- International Prostate Symptom Score (IPSS)
- Neuropsychiatric Inventory (abbreviated)
- Physical Activity Scale for the Elderly (PASE)
- SF12
- Alcohol intake
- Family history (dementia, fractures, prostate cancer)
- Health service use
- Medical history
- Medications
- Sexual and reproductive history
- Smoking history
- Sociodemographics

### Examinations

- Balance (static and dynamic)
- Bladder ultrasound (post-void residual)
- Blood pressure (lying and standing)
- Chair stand
- Cognitive function
  - Addenbrooke's Cognitive Examination
  - Colour, sort, form
  - Logical memory (story)
  - Mini Mental State Examination (MMSE)
  - Trails B
- Dual Energy X-ray Absorptiometry (DEXA)
  - Body composition
  - Hip and spine BMD
  - Lateral vertebral morphometry
- Gait (video)
- Grip strength
- Heart rate
- Heel ultrasound
- Height and weight
- Quadriceps strength
- Spirometry (FEV1)
- Urowflow
- Vision (acuity, contrast sensitivity, depth perception)
- Walking speed/steps (6 metre walk)

## Blood Tests

### Blood Tests (fasting)

- Albumin
- Calcium, phosphate
- Cholesterol (total and HDL)
- Creatinine, urea
- Electrolytes
- Full blood count
- Glucose
- Liver function tests (bilirubin, ALP, GGT, ALT)
- Prostate Specific Antigen (optional)
- Triglycerides
- Bone turnover markers
- PTH
- Reproductive hormones (estrogen, FSH, LH, SHBG, testosterone)
- Vitamin D
- Stored blood for DNA, biomarkers of ageing

## Dementia Study

- Dementia screen:
  - MMSE < 27 or IQCODE > 3.6
- Clinical examination
  - by geriatrician
  - additional informant questionnaire
- Consensus meeting
  - geriatricians x 3 and neuropsychologist

## Follow-Up

- Baseline measures repeated every two years
  - Funded for first follow-up only
- 4 monthly phone calls to ascertain falls, fractures, hospital admissions, nursing home/hostel admission

## Progress to Date

- Recruitment and baseline data collection: Jan. 2005 to May 2007
- 1705 subjects recruited
- Participation rate just under 50%
- 2 year follow-ups commenced Feb. 2007

## Follow-Up

- 4 monthly phone calls
  - 46 deaths (2.7%)
  - 20 withdrawn (1.2%)
- 2 year follow-up clinic visits
  - 201 booked
  - 12 refusals (6.0%)

### Participation Rates in Studies with Clinic Visit

STUDY	PARTICIPATION RATE
Blue Mountains Eye Study	83%
Rotterdam Study	73%
Massachusetts Male Aging Study	53%
Dubbo Osteoporosis Study	42% (in males)
Australian Longitudinal Study of Ageing	41%
Berlin Aging Study	27%

### Age Distribution

AGE GROUP	CHAMP	Study Area
70-74	39%	42%
75-79	32%	31%
80-84	18%	15%
85-89	8%	8%
90+	3%	4%

### Country of Birth

COUNTRY	CHAMP	Study Area
Australia	50%	39%
Italy	19%	18%
UK	4%	4%
Greece	4%	5%
China	3%	5%

### Conclusions

- CHAMP is one of the world's largest clinic-based studies of the health of older men
- There is a vast amount of data to be analysed!!!!

### CHAMP Staff

- Melisa Litchfield
- Therese Alting
- Janet Gilchrist
- Maggie Hayes
- Angeline Koh
- Cindy Kok
- Golnar Musavi
- Diane Pinkerton
- Tamara Ribaric
- Anita Sharma
- Fiona Stanaway
- Suzanne Todd