

# Aging Successfully

John Morley

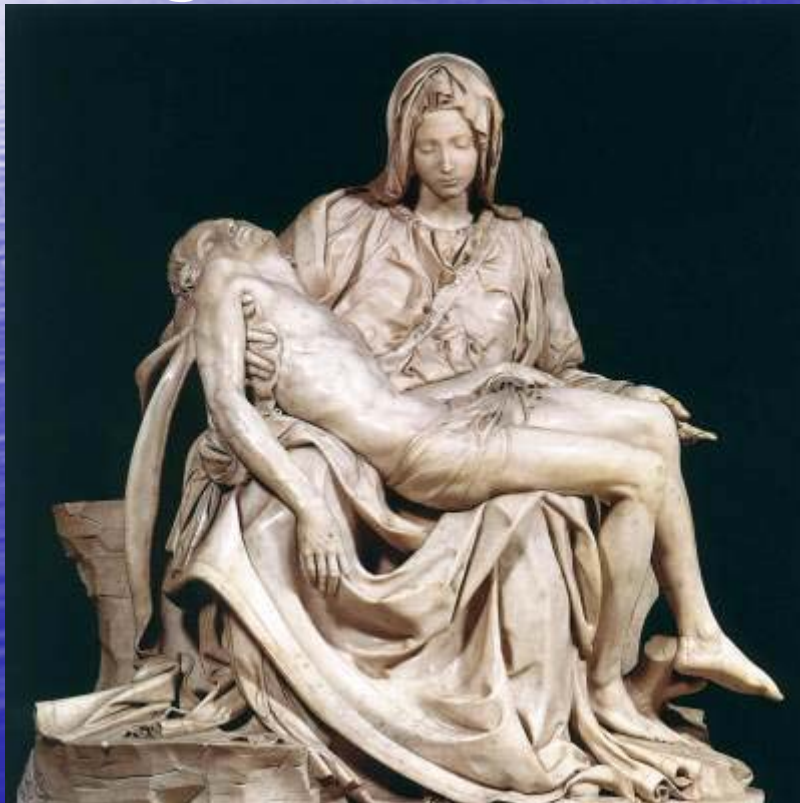
Saint Louis University  
GERIATRICS



# Michelangelo and the Pietas

## 米高安哲奴與其作品

- 1500
- Age 25



1550 – 1555  
Completed at 80



**“Old age is like a plane flying  
through a storm.  
Once you are aboard there is  
nothing you can do about it.”  
- Golda Meier**

老年就像一架在風暴中航行的飛機，  
當你到達這階段後，你根本不能再作什麼。

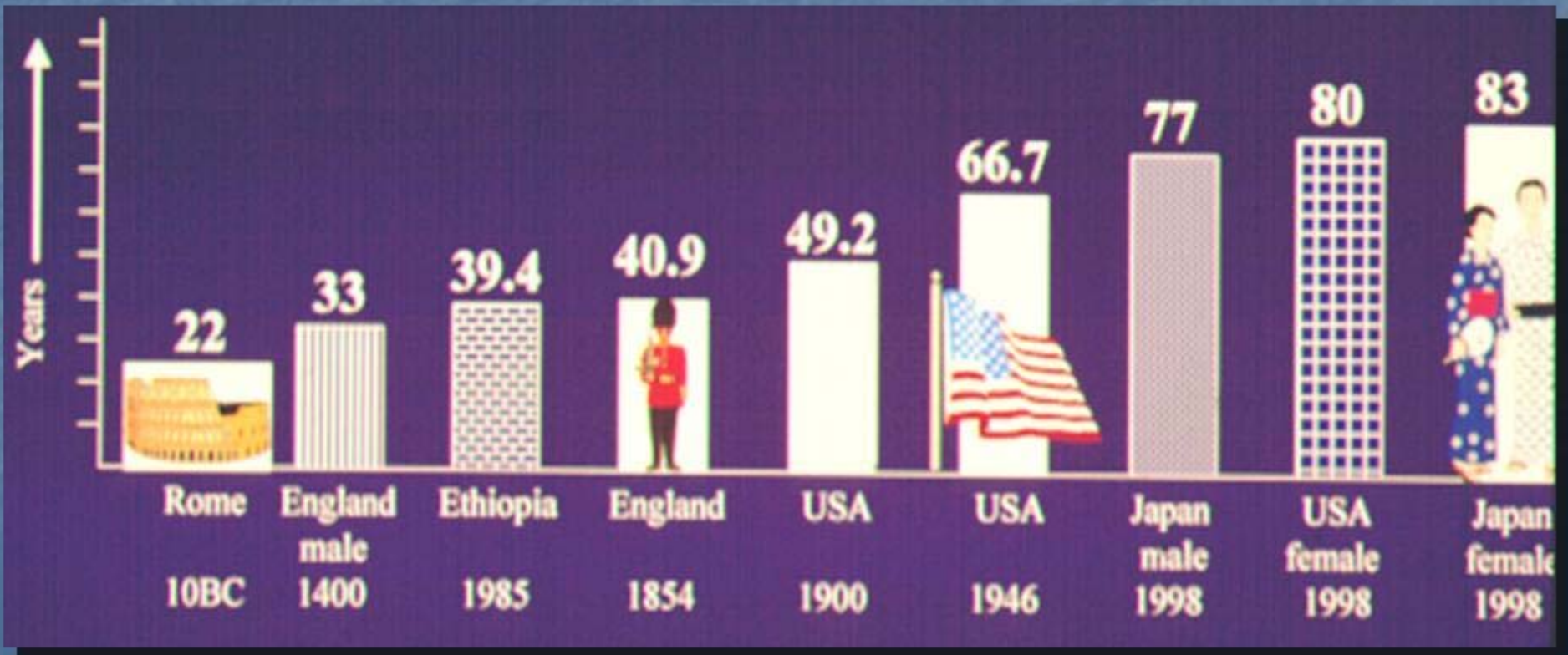


# Lifespan is Increasing

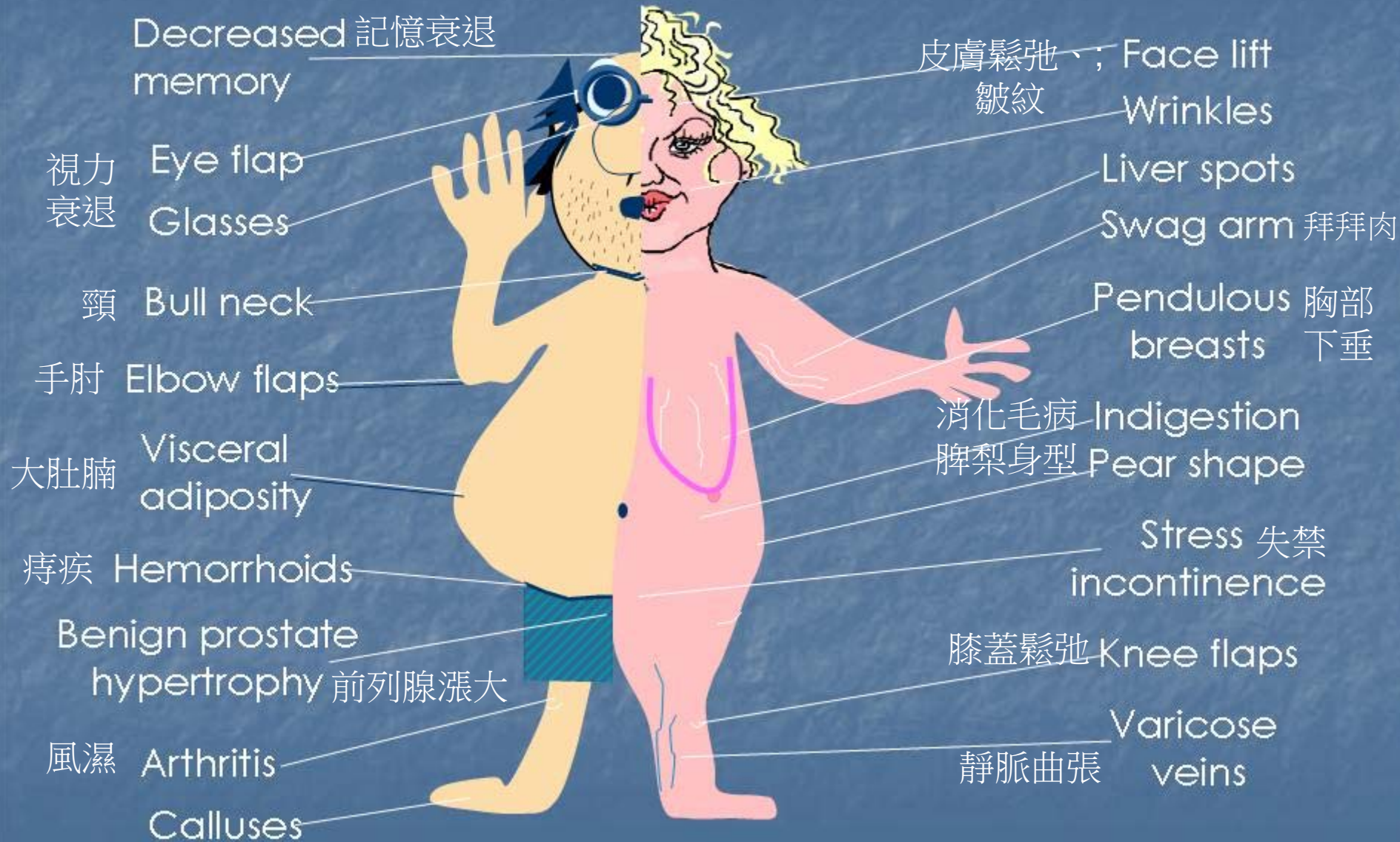
人的壽數不斷上升



Jeanne Calment



# The Typical Boomer Reaches 50



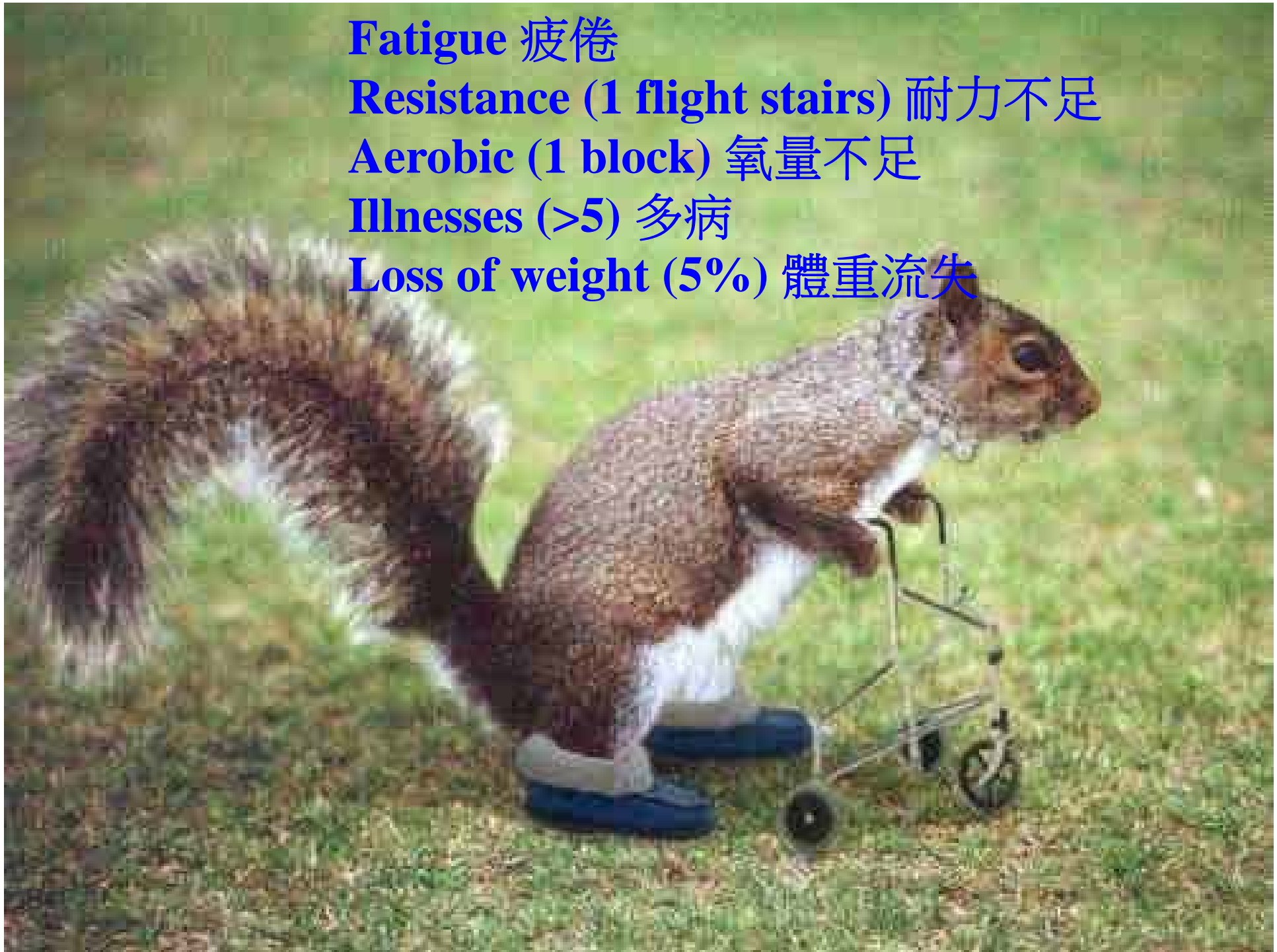
**Fatigue 疲倦**

**Resistance (1 flight stairs) 耐力不足**

**Aerobic (1 block) 氧量不足**

**Illnesses (>5) 多病**

**Loss of weight (5%) 體重流失**



# Roger Bacon

(c.1214-1294)

- Controlled diet 飲食節制
- Proper rest 適量休息
- Exercise 運動
- Moderation life style  
適當生活模式
- Good hygiene 良好衛生
- Inhaling the breath of a young virgin  
保持年青心境





Get some 適量  
exercise 運動



Do not smoke  
不吸煙



Watch your  
weight  
留意自己體重

# To Age Successfully

擁有豐盛晚年秘密



Manage crises  
well  
好好處理危機



Don't abuse 不要  
alcohol 酗酒



Enjoy a stable  
marriage  
享受穩定婚姻



# Aging Successfully (豐盛晚年秘笈)

## A Guide to Health Promotion Over the Lifespan



### Prior to Birth

1. Choose long-lived parents
2. Have your mother get regular check-ups during pregnancy
3. Have your mother not smoke or drink alcohol



4. Have your mother take pre-natal vitamins including folate



### 0-20 Years

1. Exercise regularly
2. Avoid obesity
3. Ingest adequate calcium
4. Eat nutritious foods
5. Wear your seatbelt
6. Do not smoke or drink
7. Get your vaccinations
8. Avoid violence and illicit drugs



# Aging Successfully (豐盛晚年秘笈)

## A guide to Health Promotion Over the Lifespan

### 60-80 Years

1. Exercise regularly, including balance & resistance exercises.
2. Avoid weight loss
3. Ingest adequate calcium and vit. D
4. Eat fish
5. Wear your seatbelt
6. Drink in moderation & do not smoke
7. Screen for breast & colon cancer, high blood pressure, osteoporosis & diabetes
8. Get your cholesterol checked
9. Have flu and pneumococcal vaccinations
10. Pap smears (females)
11. Have regular mental activity and socialize!
12. Avoid taking too many medicines

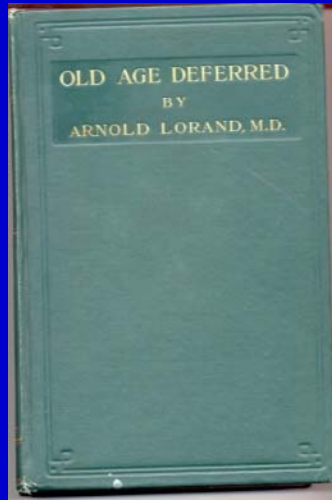


### 80+ Years



1. Exercise regularly, including balance & resistance exercises.
2. Avoid weight loss
3. Ingest adequate calcium and vit. D
4. Be screened for osteoporosis
5. Wear your seatbelt
6. Drink in moderation & do not smoke
7. Have your blood pressure checked
8. Monthly breast self-exams (females)
9. Have flu and pneumococcal vaccinations
10. Safety-proof your home to prevent falls, if you are unsteady, use a cane & consider hip protectors
11. Have regular mental activity: socialize and avoid being depressed
12. Avoid taking too many medicines
13. Keep doing what you are doing. Remember, most of your physicians won't reach your age!





# Old Age Deferred by Arnold Lorand MD 1910



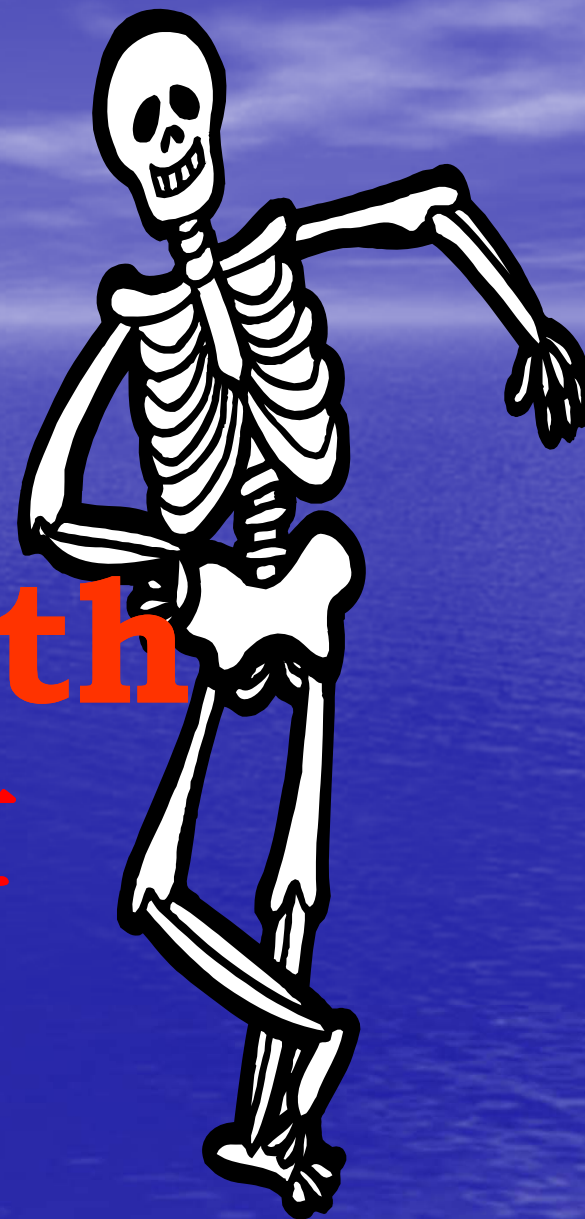
- “We occasionally witness the peculiar fact that persons who live very moderately and eat very sparingly, and who totally abstain from alcohol nevertheless become old before their time, while there are those .....addicted to the pleasures of a bounteous table and unstinted wine and spirits enjoy a green old age”

# Big is Beautiful

- Large babies at birth have better grip strength at 70  
大體型的嬰兒在70歲時有較好的手握力
- Big babies at one year have less atherosclerosis,  
lower systolic blood pressure and less glucose  
intolerance as adults  
1歲時體型大的嬰兒在成年後較少患上血管粥樣硬化、  
有較低的上血壓及較少出現血糖不耐受症
- Nutritional shortages 5 to 20 years of age lead to  
more diabetes and ischemic heart disease  
在5-20歲曾經試過營養缺乏的人較易患上糖尿病及缺  
血性心臟病

**Weight Loss  
Leads to Death**

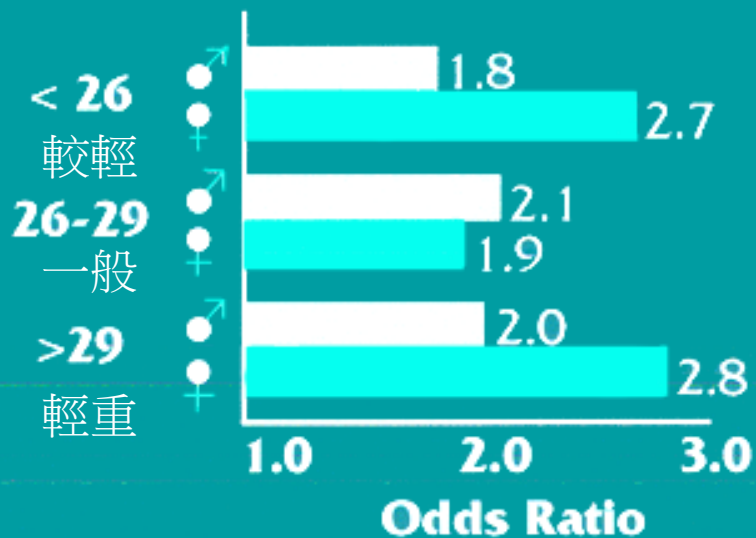
**體重流失會導致死亡**



# Weight Loss Leads to Death 體重流失會導致死亡

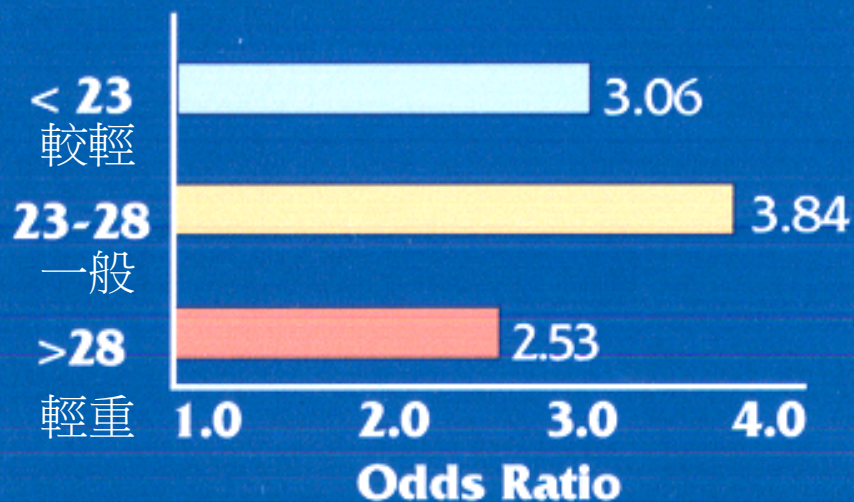
Pamuk *et al*, Am J Epidemiol  
136:686, 1992

**BMI** 身高體重指標

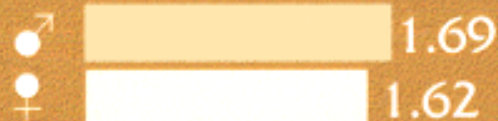


Reynolds *et al*, JAGS 48:1409,  
1999

**BMI** 身高體重指標



Lozonczy *et al*, Am J Epidemiol  
141:312, 1995



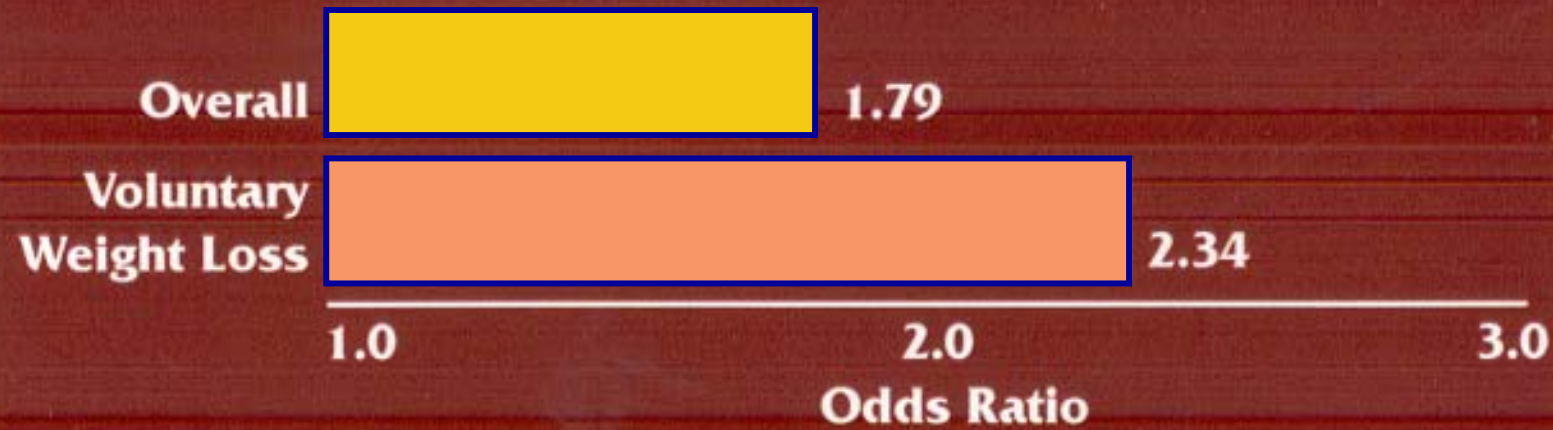
DeGroot *et al*, J Nutr Hlth Age  
6:4-8, 2002





## Weight Loss Leads to Hip Fracture

Ensrud *et al*, JAGS 51:1740, 2003



THEN

NOW



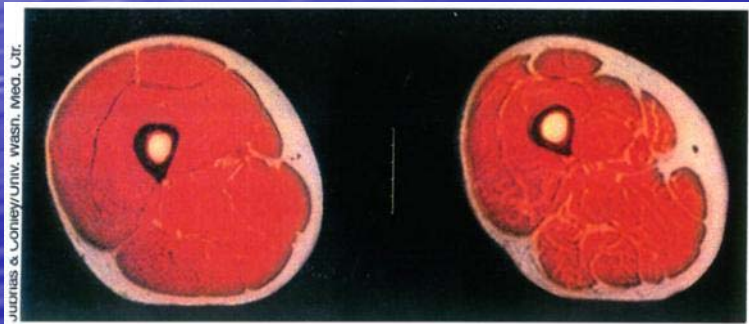
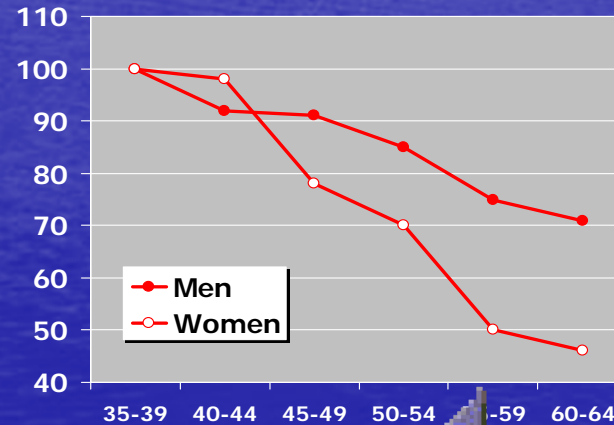
"I'll be back!"



"Oh, my back!"

# SARCOPENIA 缺肌症: *Age Related Loss of Muscle Mass*

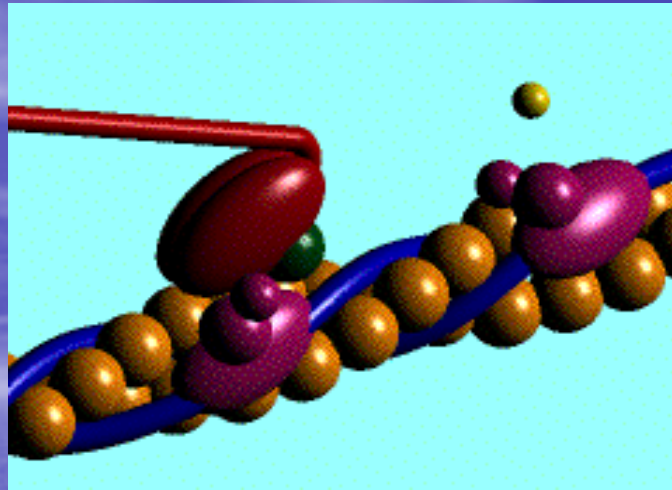
Clean and jerk  
world weightlifting  
records



JULIUS & CORTNEY/UNIV. WASH., MED. CTR.







*Treatment for Sarcopenia is*  
**RESISTANCE EXERCISE**  
缺肌症治療-肌肉耐力訓練



# SARMS

(選擇性雄激素受體調節劑)

## STEROIDS類固醇

Nandrolone

Oxandrolone

Oxymethalone

## NONSTEROIDAL非類固醇

2-Quinolone

Coumarin

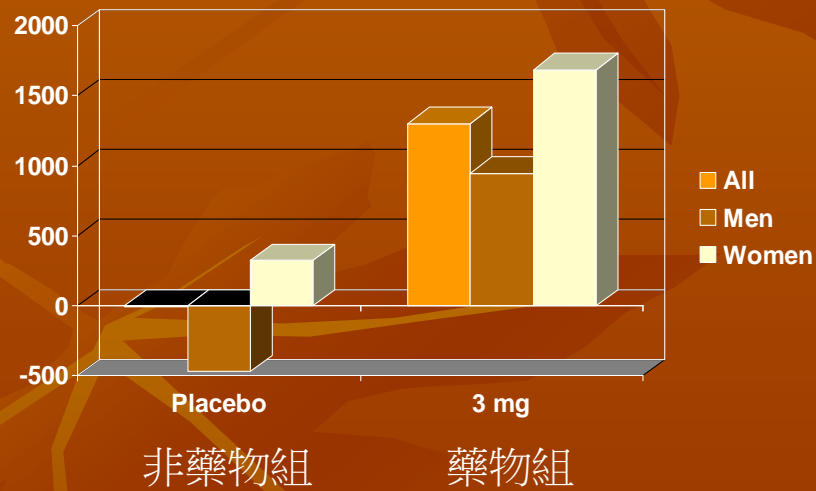
Bicalutamide



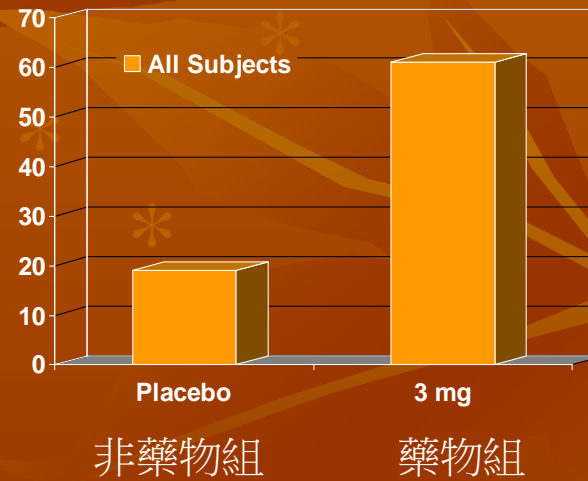
# GTx SARM (Ostarine)

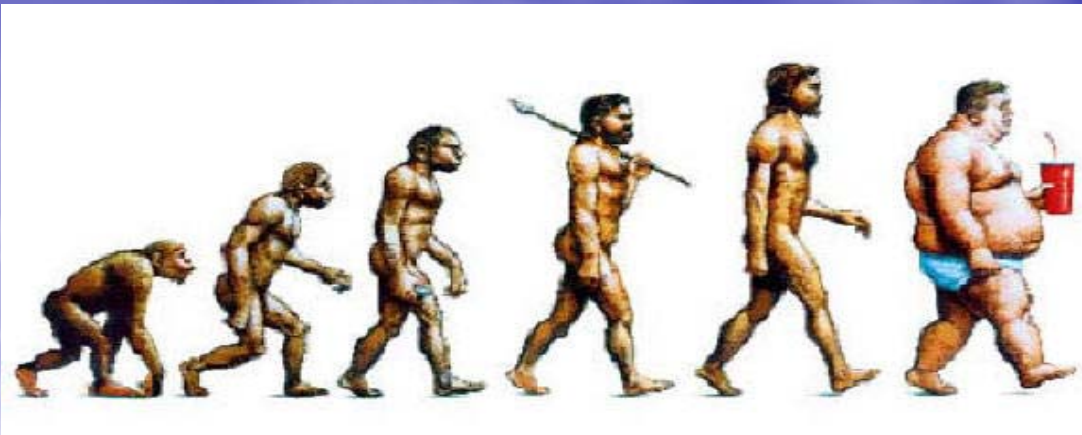
n=120, Mean age 64.8 yrs

Fat Free Mass (Dexa)  
去脂部份



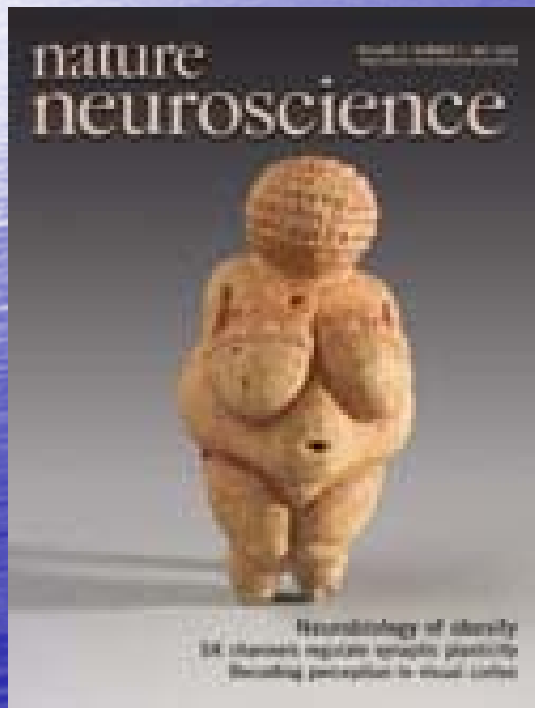
Stair Climb Power(Watts)  
步行樓梯情況



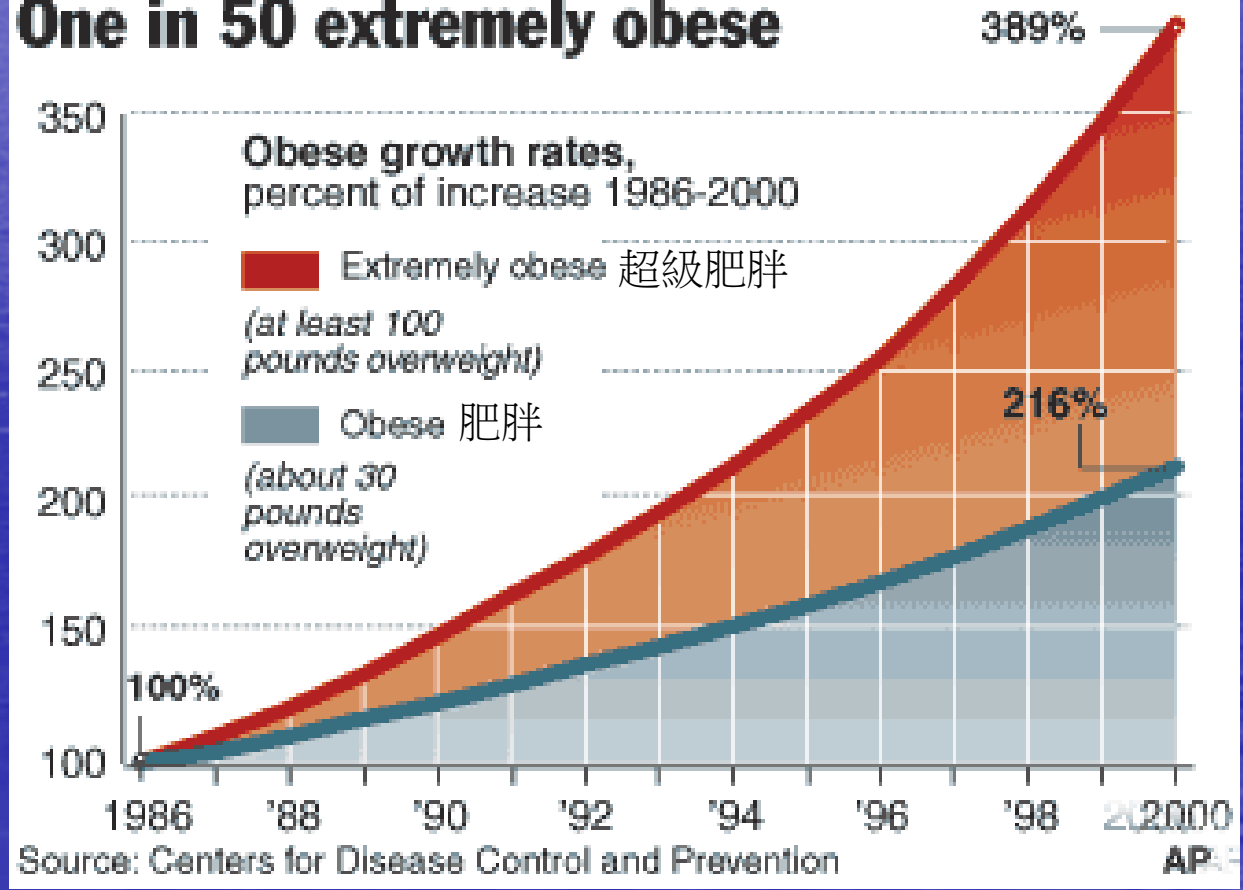


# OBESITY

## 肥胖



### One in 50 extremely obese





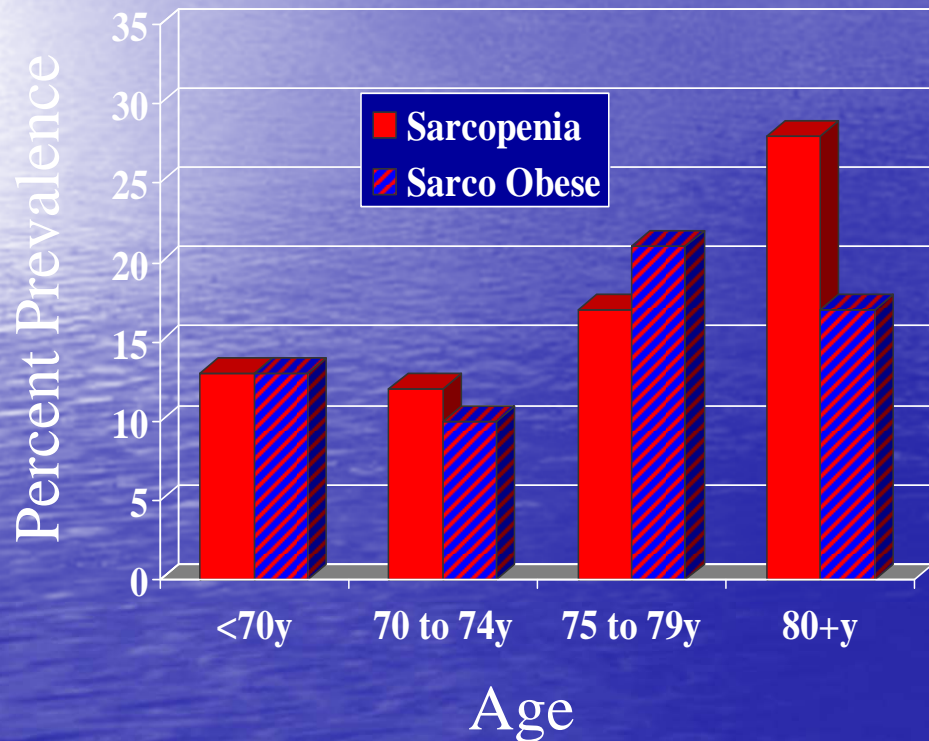
=

Body  
Weight  
體重

# SARCOPENIC OBESITY

(肥胖缺肌症)

“Fat Frail”



Morley et al J Clin Med 2001; 137:231-43

**IN THE NEW MEXICO AGING PROCESS STUDY WE FOUND *OBESSE SARCOPENIA* TO BE LONGITUDINALLY THE BEST PREDICTOR OF FUTURE DISABILITY AND MORTALITY.**

肥胖缺肌症是一個最能推測未來殘疾及死亡率的指標

# Positive effects of exercise

## 運動的好處

- Increased cognition and decreased brain atrophy  
增強認知力及減少腦部萎縮
- Decreased dysphoria  
減少焦慮
- Enhanced VO2 max  
增加最大攝氧量
- Decreased sarcopenia and frailty  
減少缺肌症及虛弱
- Increased bone mineral density  
增加骨質密度



Frances Wessels, age 84,  
performed with Robbie Kinter, age  
39, an original modern dance piece.



# The Exercise Prescription

## 運動注意事項

持久性



Endurance



Yoga  
瑜珈



Balance  
平衡力



Resistance  
耐力



Posture  
姿勢



# Vitality is Associated with Activity

## 生命力與活動是有關連的

Older persons who get  
out of the house daily  
have better outcomes  
than those who stay  
inside

出外較多的長者比  
常留在家的長者  
有較好的身體狀況





Who is using more energy?  
誰消耗較多能量？





# SPF



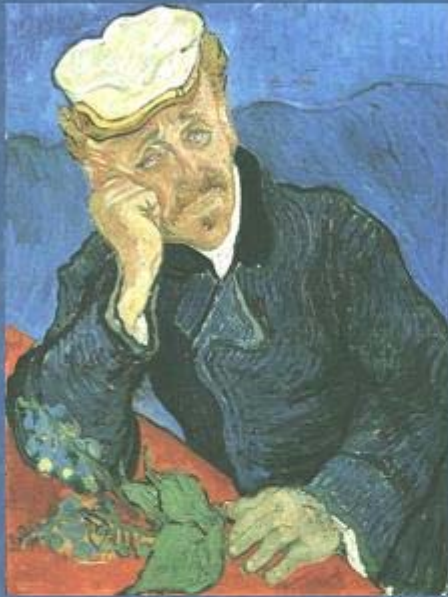
- Spontaneous Physical Fun (activity) 非計劃性的活動
- Evidence that it may be related to orexin 證據顯示可能與食慾激素有關
- Pima Indians 皮馬族印第安人  
The fidgeting diet 不定飲食





# The Polypharmacy Conundrum

(多種藥劑後遺症)



## Effect of Medication Reduction

Meds reduced from 13.1 to 8.2

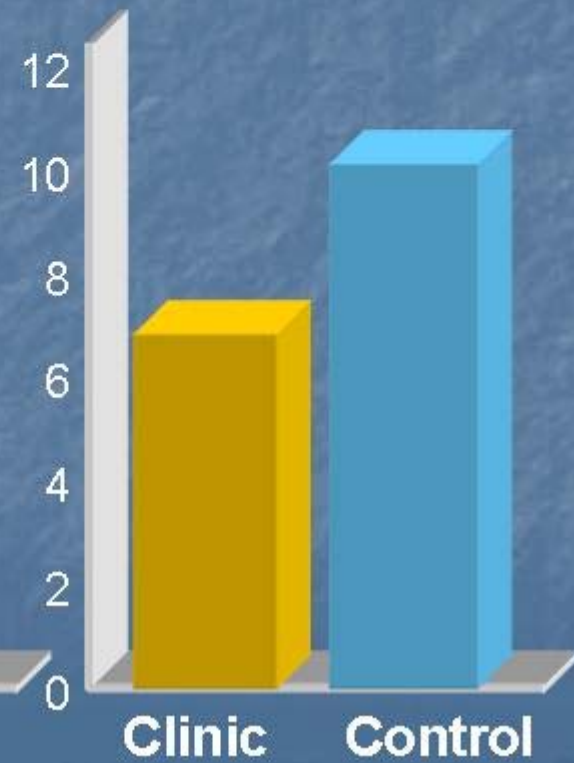
### Hospitalizations

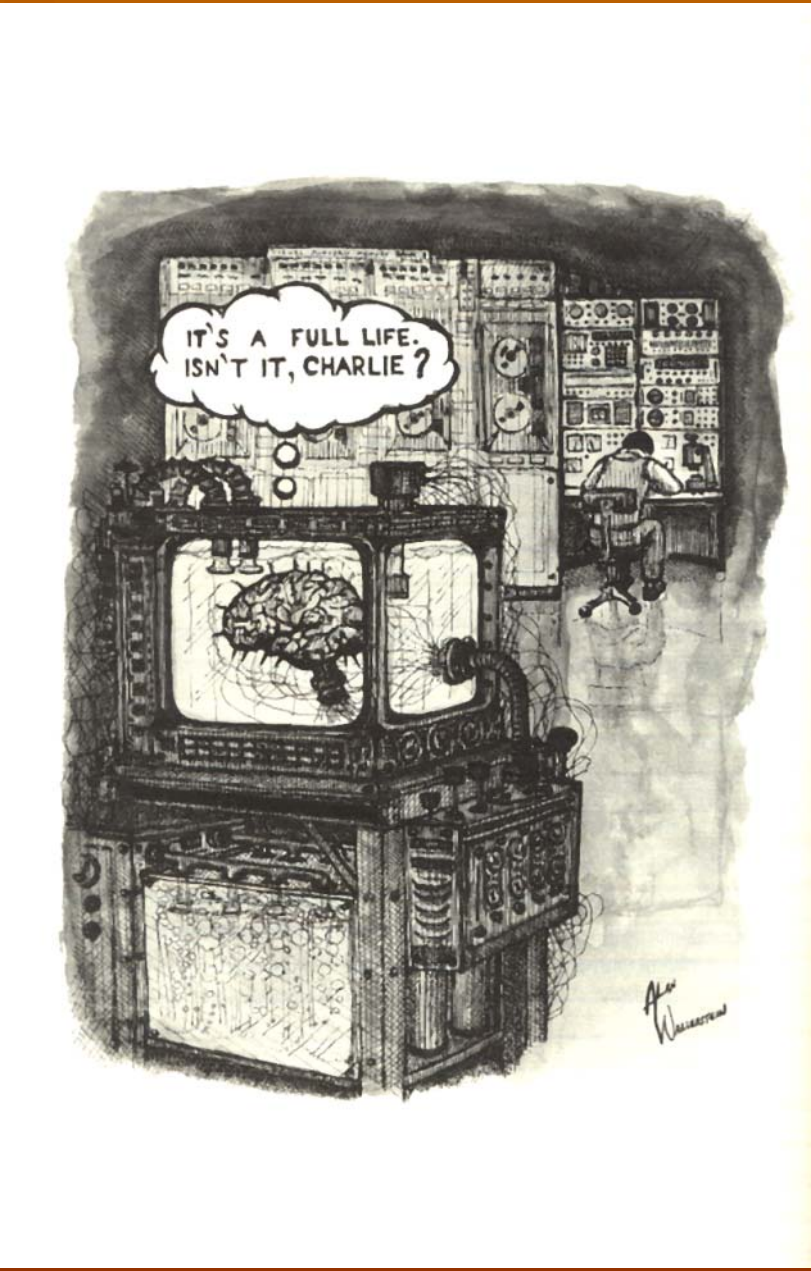
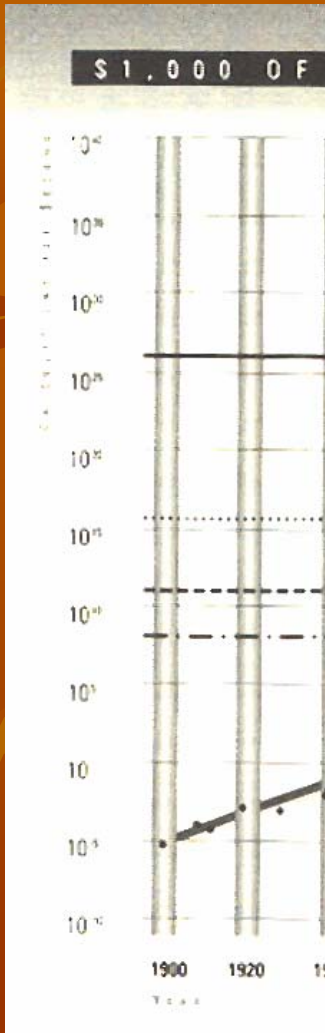
$p < 0.0002$



### Deaths

N.S.





# Is it time for geriatricians to teach about Robo Sapiens ?

老人科專科醫生需要教授“機械人種”嗎？







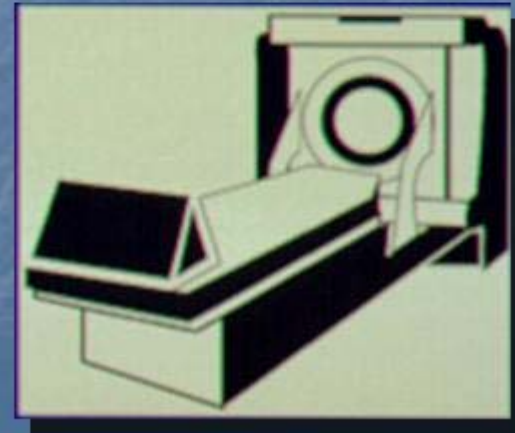
**High Touch**

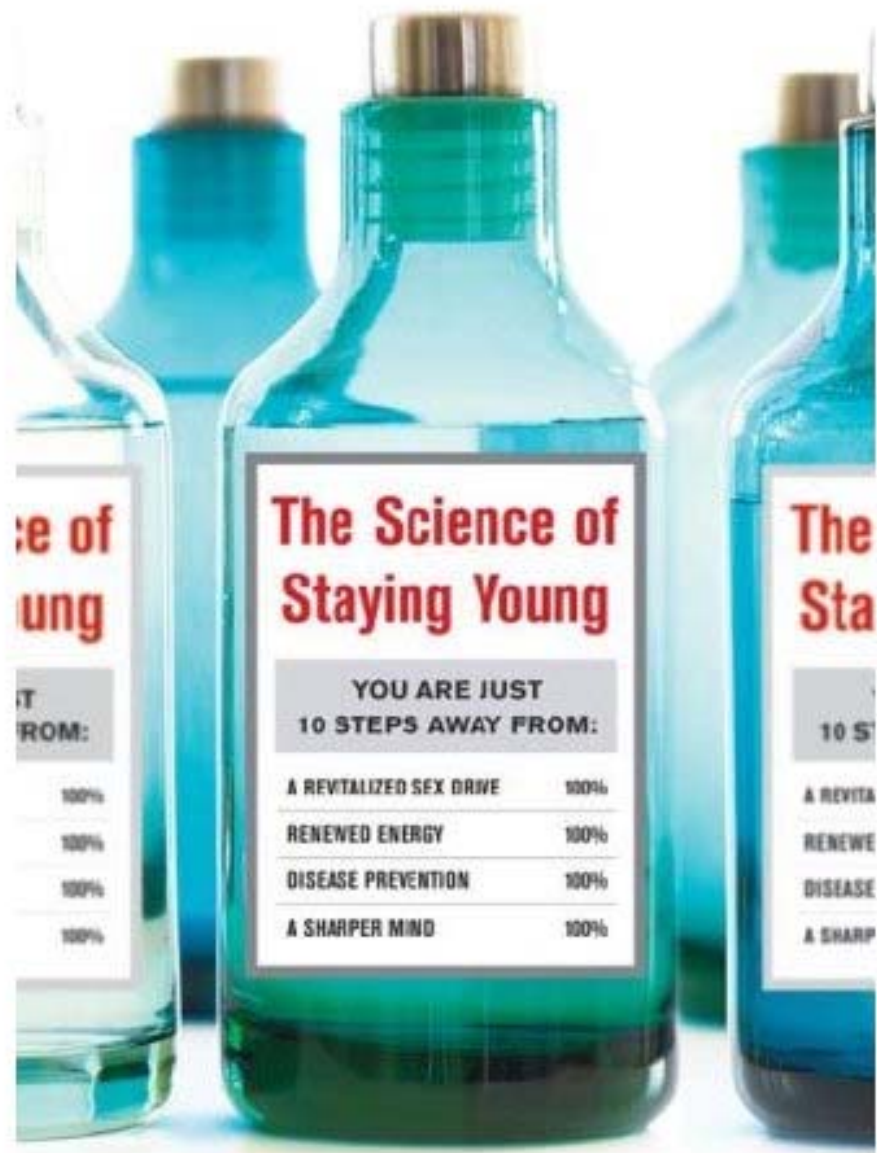
重視關懷

VS

**High Tech**

重視科技





# The Science of Staying Young

YOU ARE JUST 10 STEPS AWAY FROM:

- A REVITALIZED SEX DRIVE 100%
- RENEWED ENERGY 100%
- DISEASE PREVENTION 100%
- A SHARPER MIND 100%

JOHN E. MORLEY, M.D. & SHERI R. COLBERG, PH.D.

