

# The Trend of Health Status and Lifestyles in the Older Japanese

Hiroshi Shibata,MD,PHD

Dean and Professor ,Faculty of  
Health Sciences, University of  
Human Arts and Sciences

# Health in the Elderly

1. Longevity

= long further life expectancies

2. High functional capacity

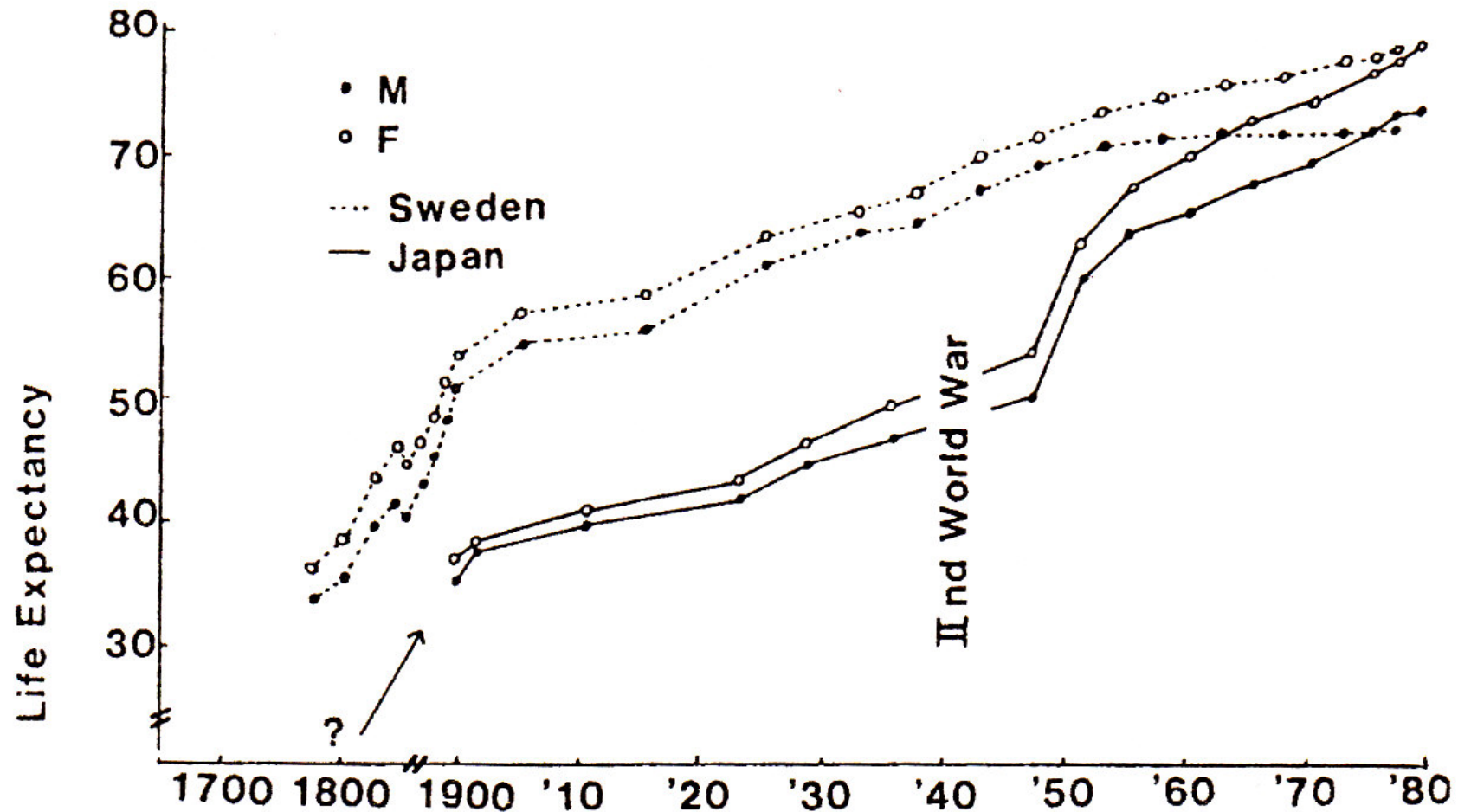
= long active life expectancy

3. High mental competence

= high life satisfaction and free from cognitive impairment

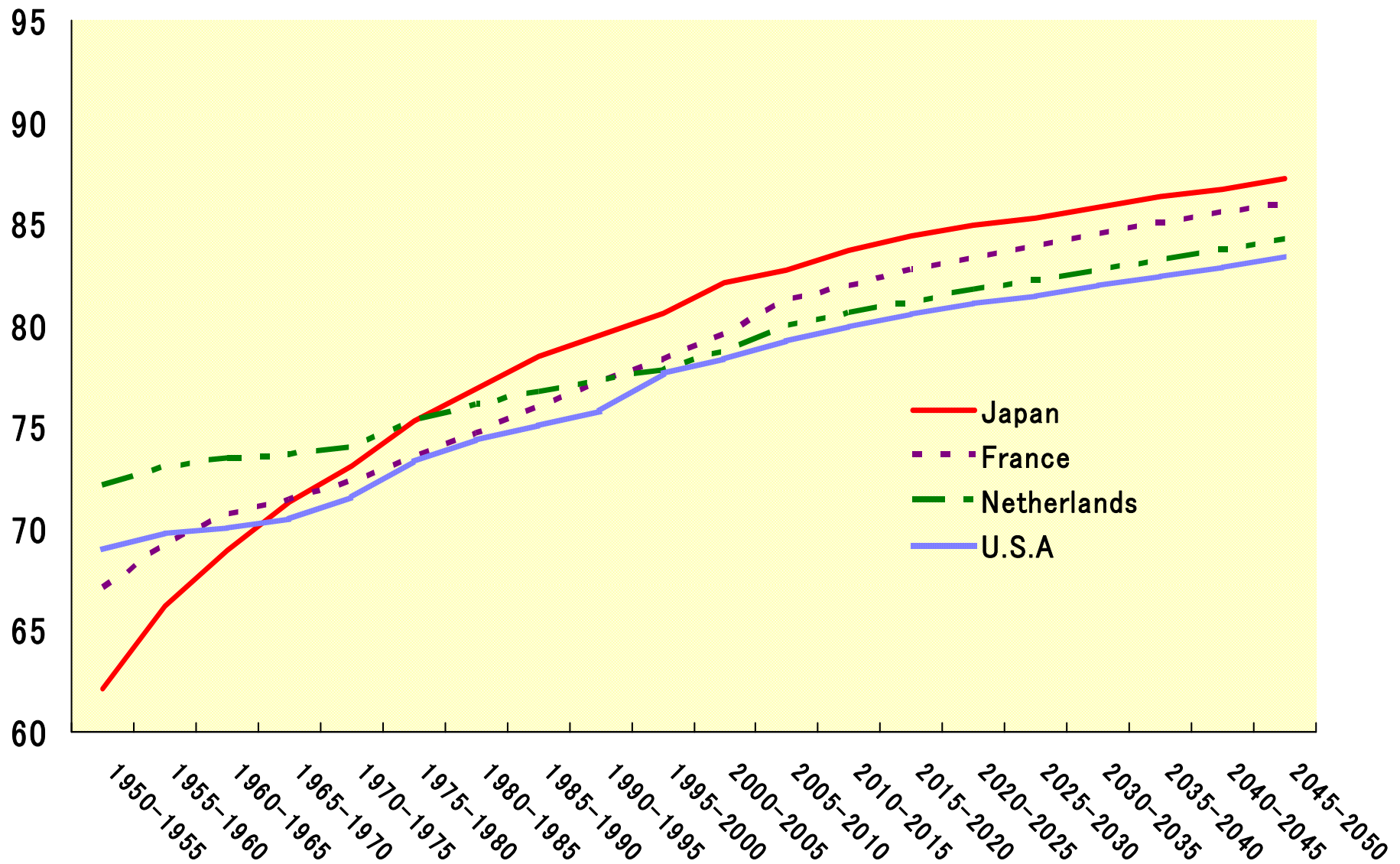
# Lifestyles Relevant to Each Component of the Health

1. Longevity ← nutritional factors, attained in 20th century
2. High functional capacity ← additionally physical exercise, to be attained in 21th century
3. High mental competence ← additionally social involvement



Secular trends of life expectancy in Japan and Sweden. Based on data from United Nations: Demographic Yearbook.

Svanborg A, Shibata H et al ; Acta Med Scand 1985;218:5-17



**Life Expectancies at Birth  
in Both Sexes Combined (U.N.2008)**



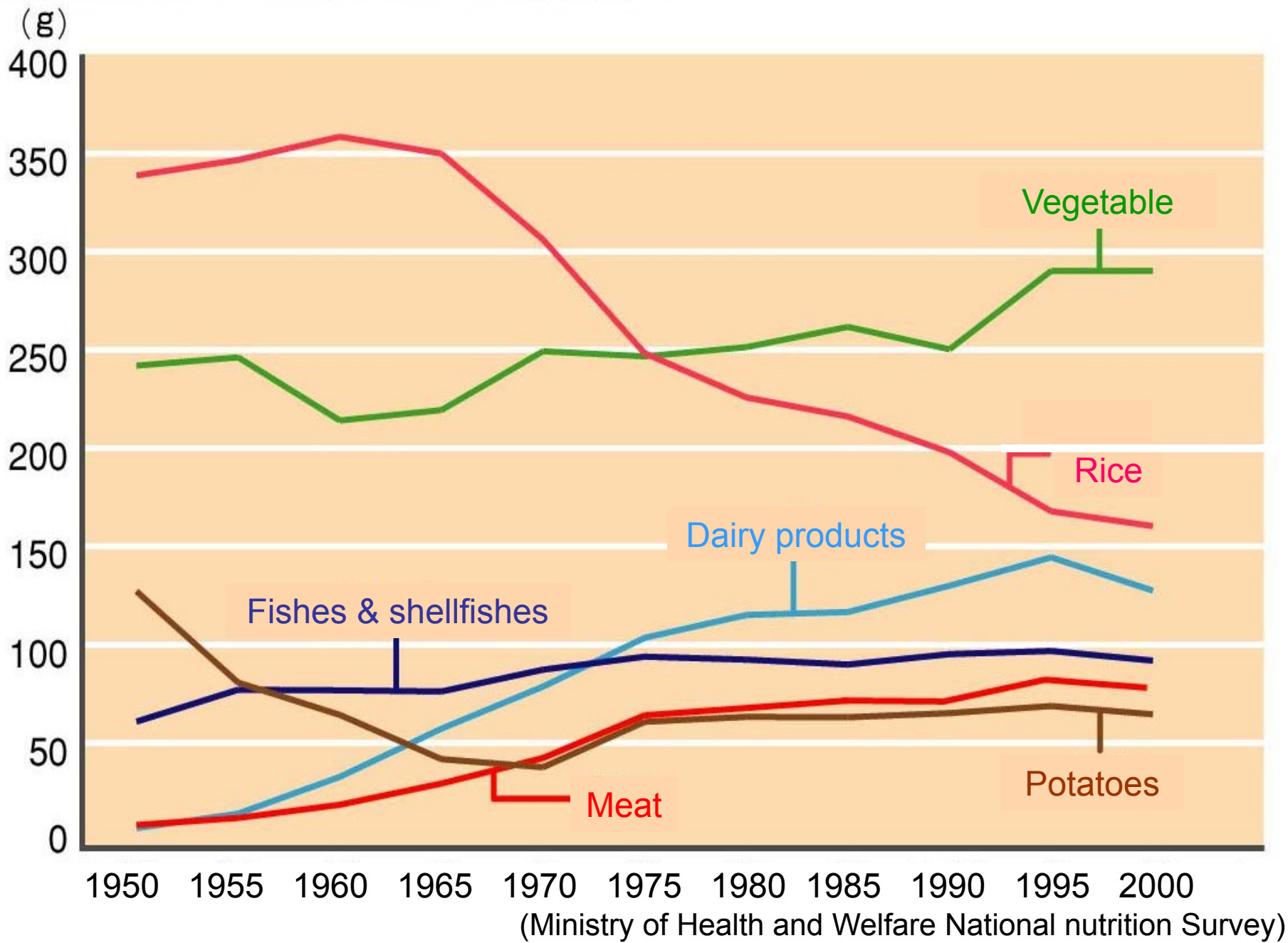
# Foods Taken Daily per Capita in Middle-class Japanese Adults (1918)

Rice	525g
MISO (fermented salty bean)	94g
Salty pickled Vegetables	70g
Salty Salmon	20g

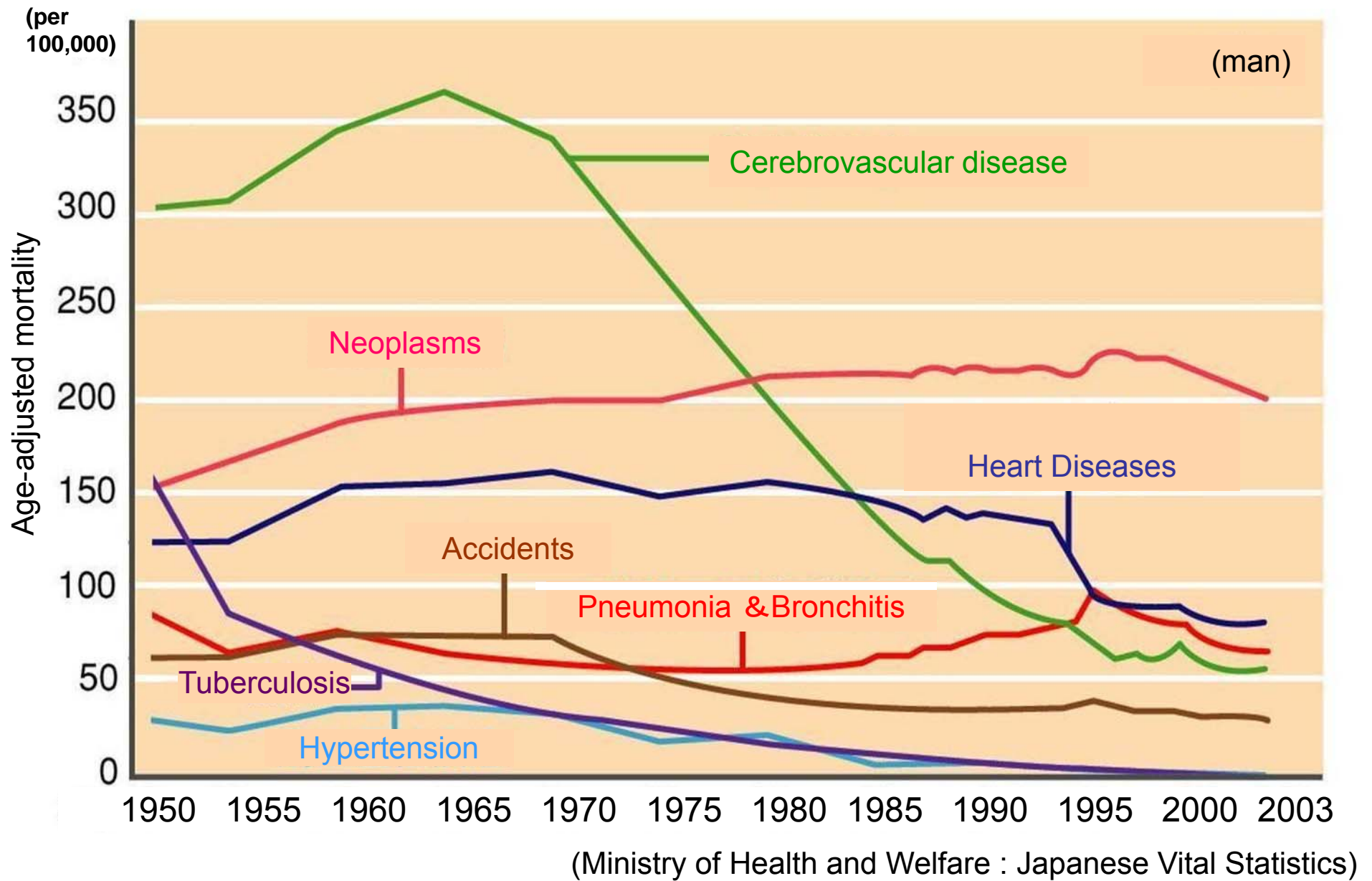
# Nutrient intakes Taken Daily per Capita in Middle-class Japanese Adults (1918)

Energy	2104Kcal	Fe	7.0mg
Protein	53.1 g	Na	6481mg
Fat	13.6 g	(Nacl	17.3g)
Carbohydrate	419.4 g	VA	6 IU
Fiber	4.7 g	VB1	0.72mg
Ca	163mg	VB2	0.31mg
P	986mg	VC	8mg

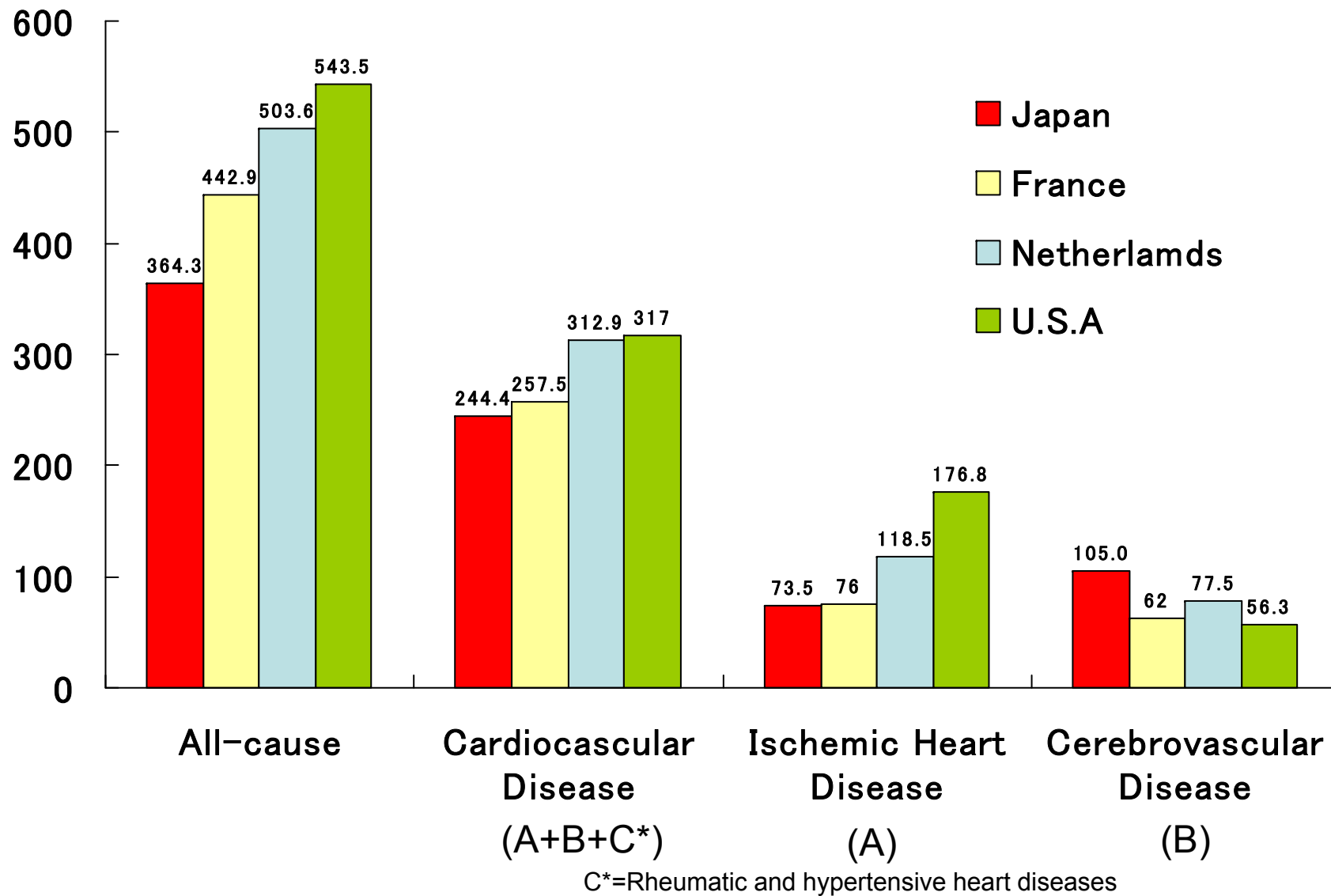




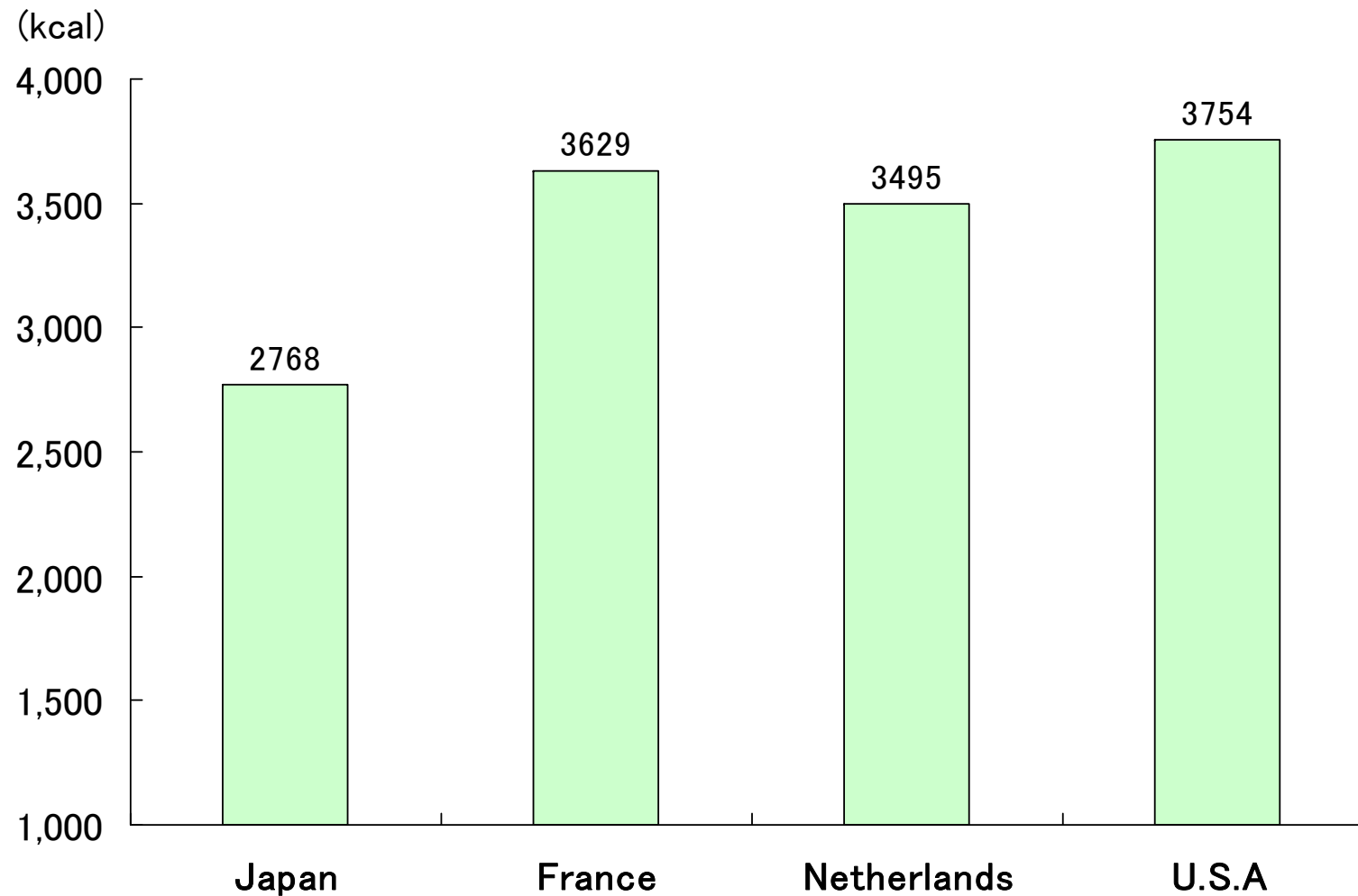
**Secular Trend of Food Intakes per Capita since the 2<sup>nd</sup> World War in Japan**



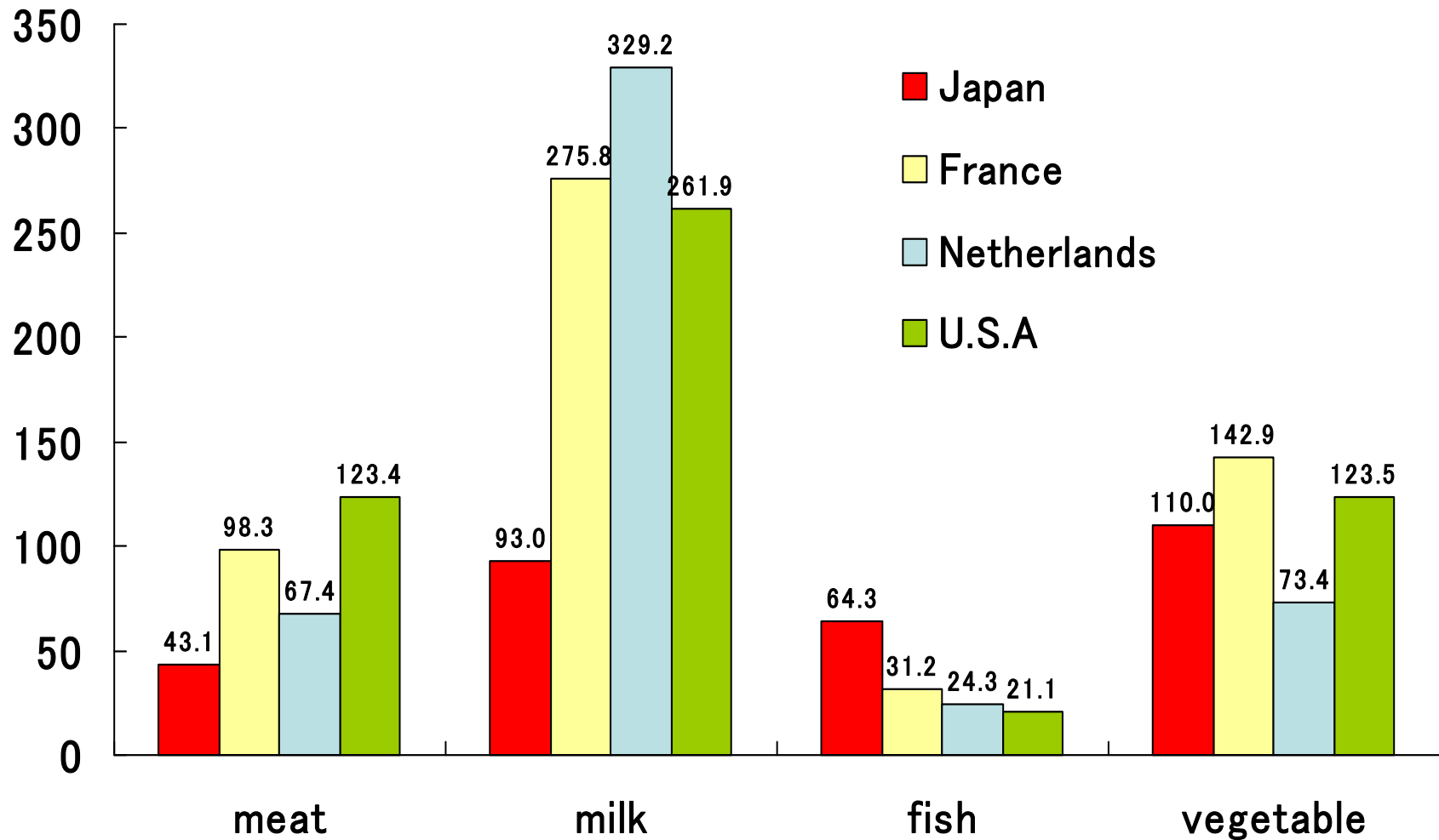
**Secular Trend in Causes of Death since the 2<sup>nd</sup> World War in Japan**



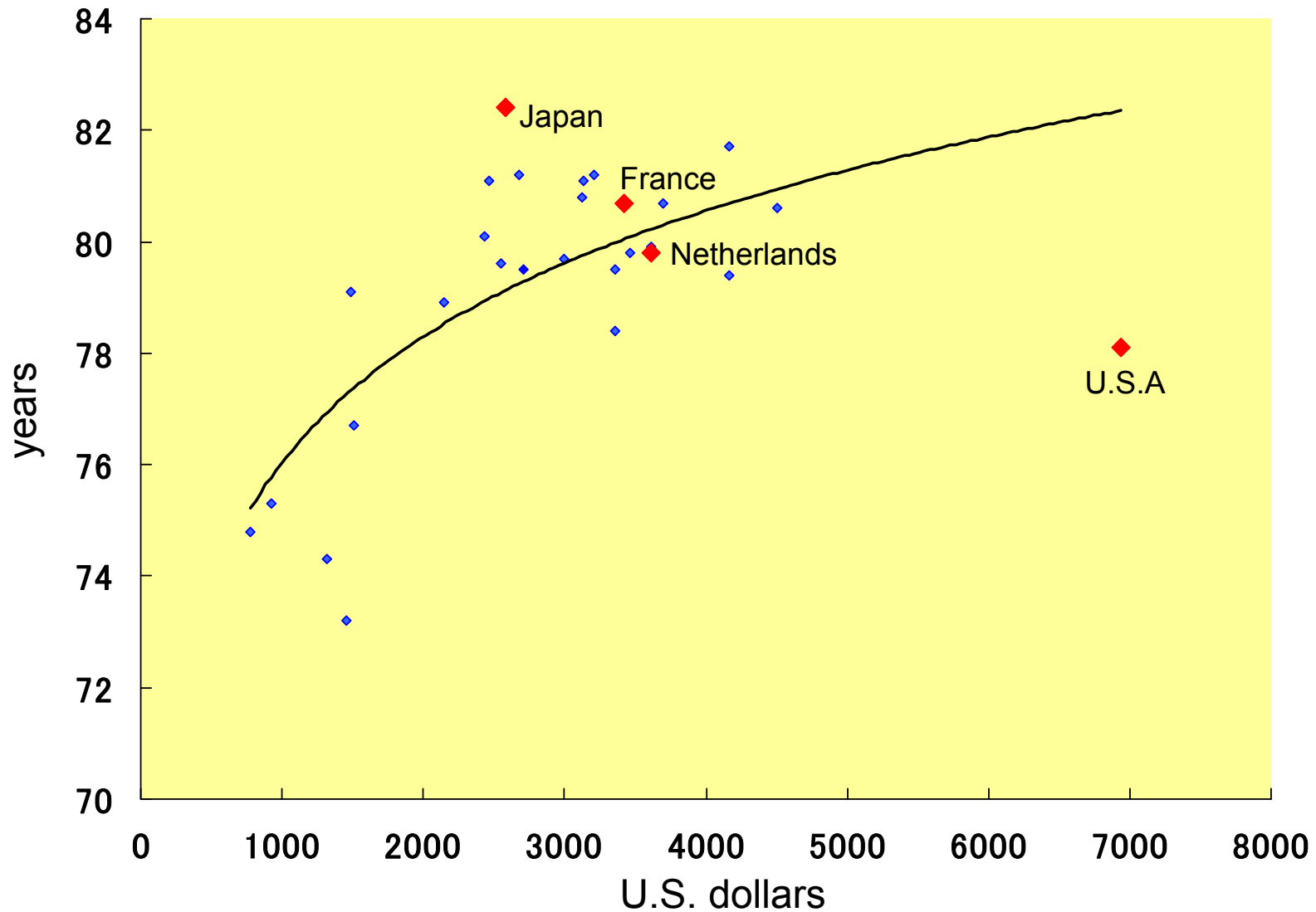
# Cross-cultural Comparisons of Mortality per 100,000 (WHO, 2002)



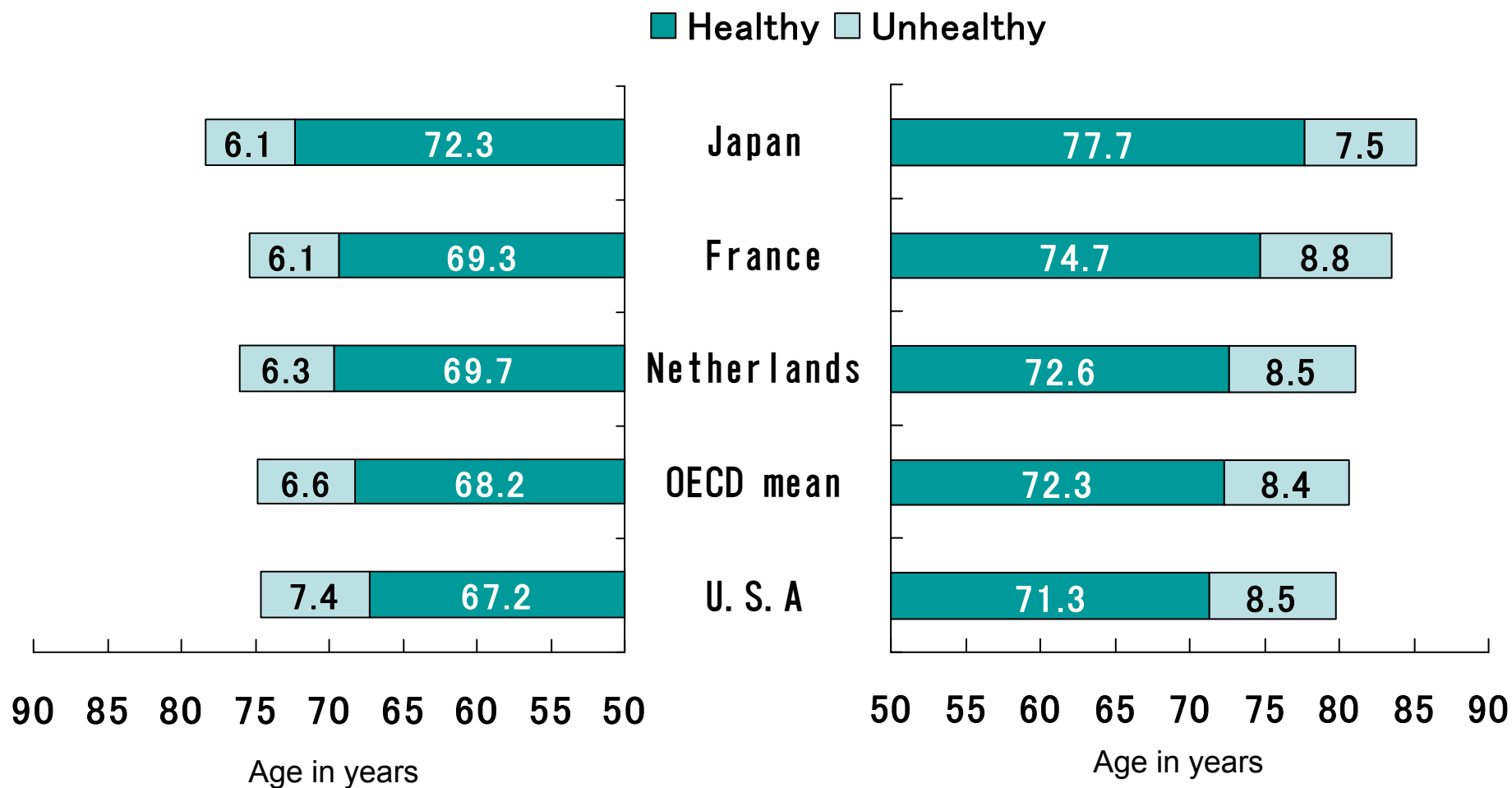
## Cross-cultural Comparisons of Energy Supply per Capita per Day (FAO, 2003)



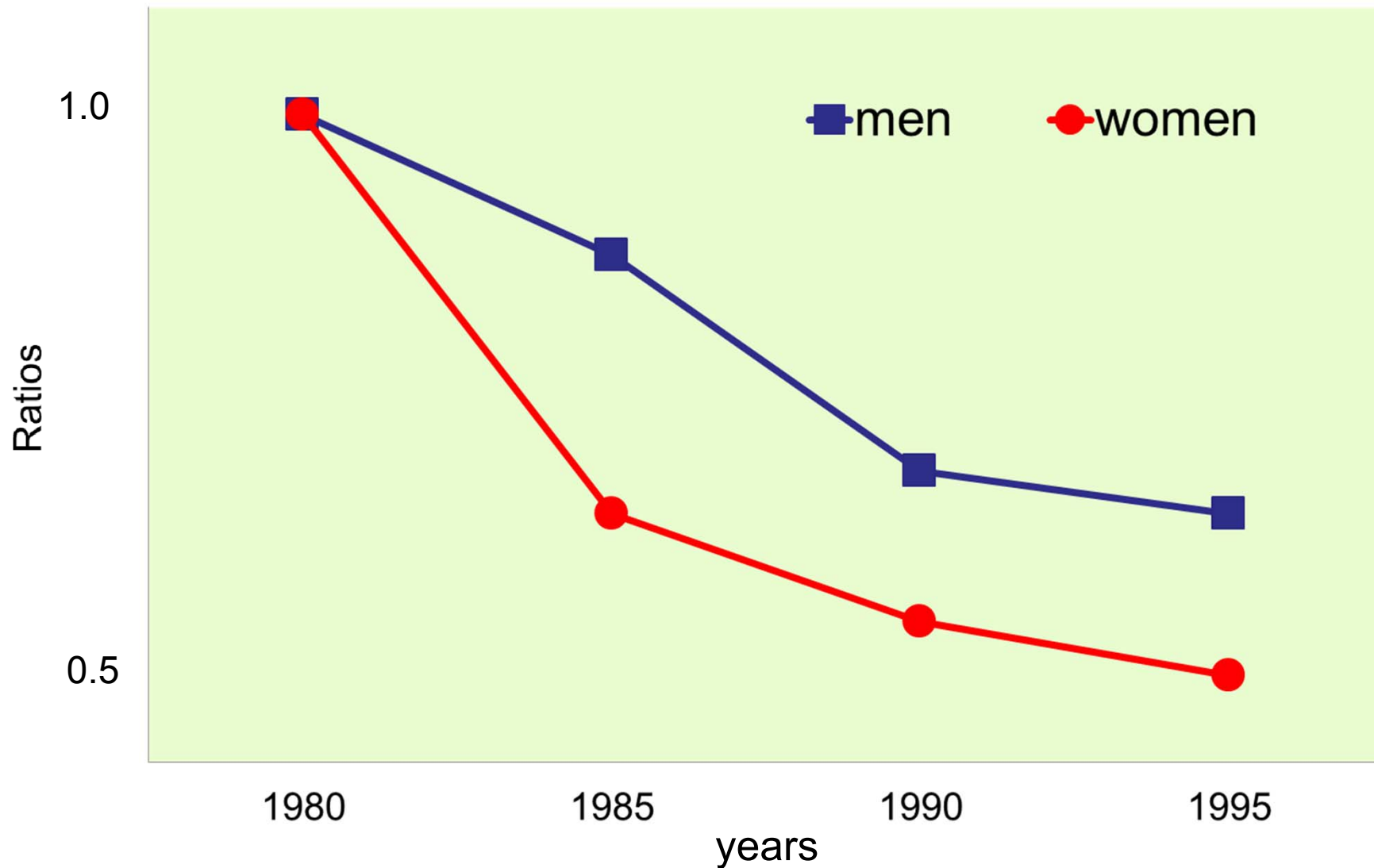
**Food Supply per Capita (kg/year)**  
**(FAO, 2003)**



Total Medical Expenditures and Life Expectancies at Birth (OECD 2007)

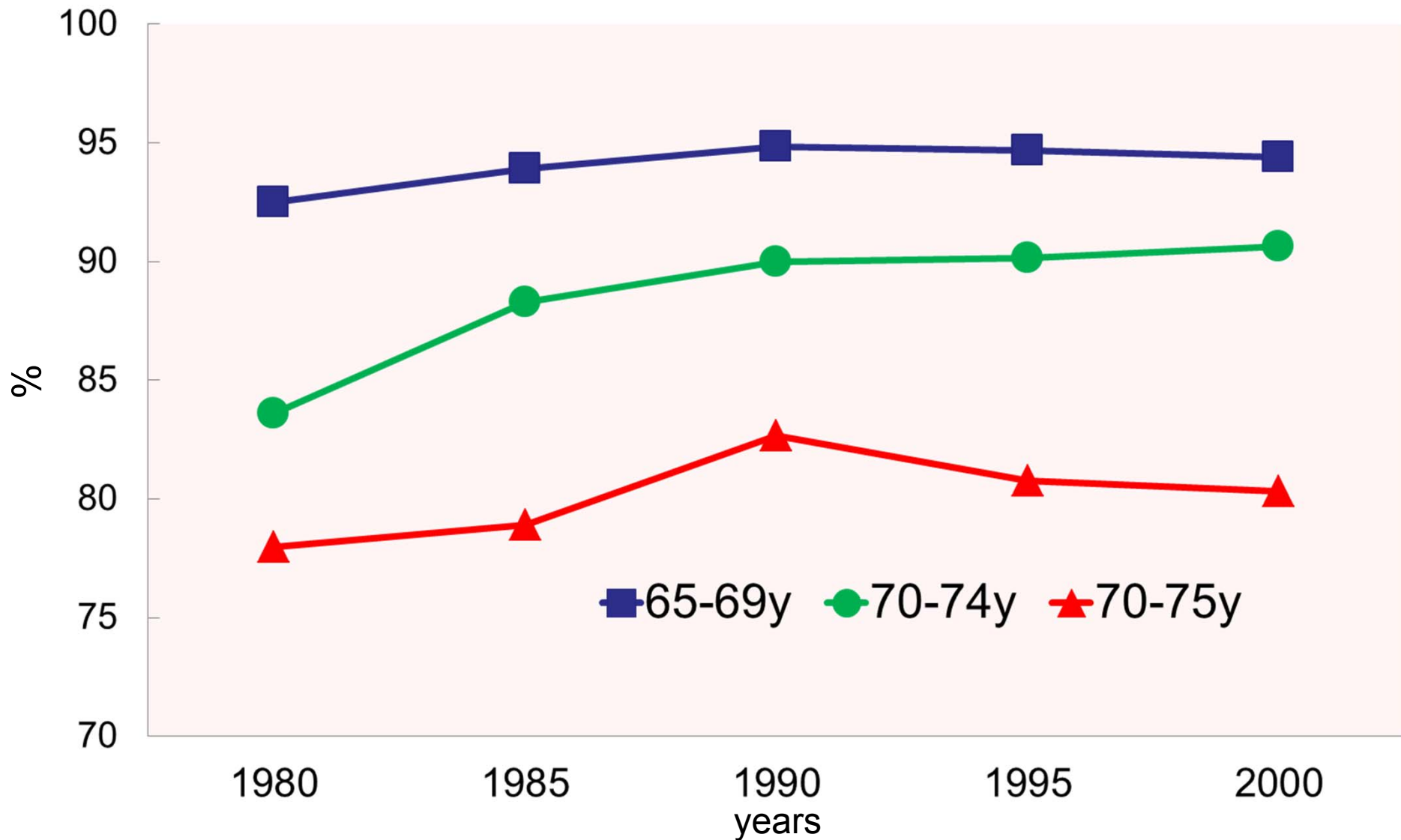


Cross-cultural Comparisons of Healthy and Unhealthy Life Expectancies at Birth (OECD.2003)

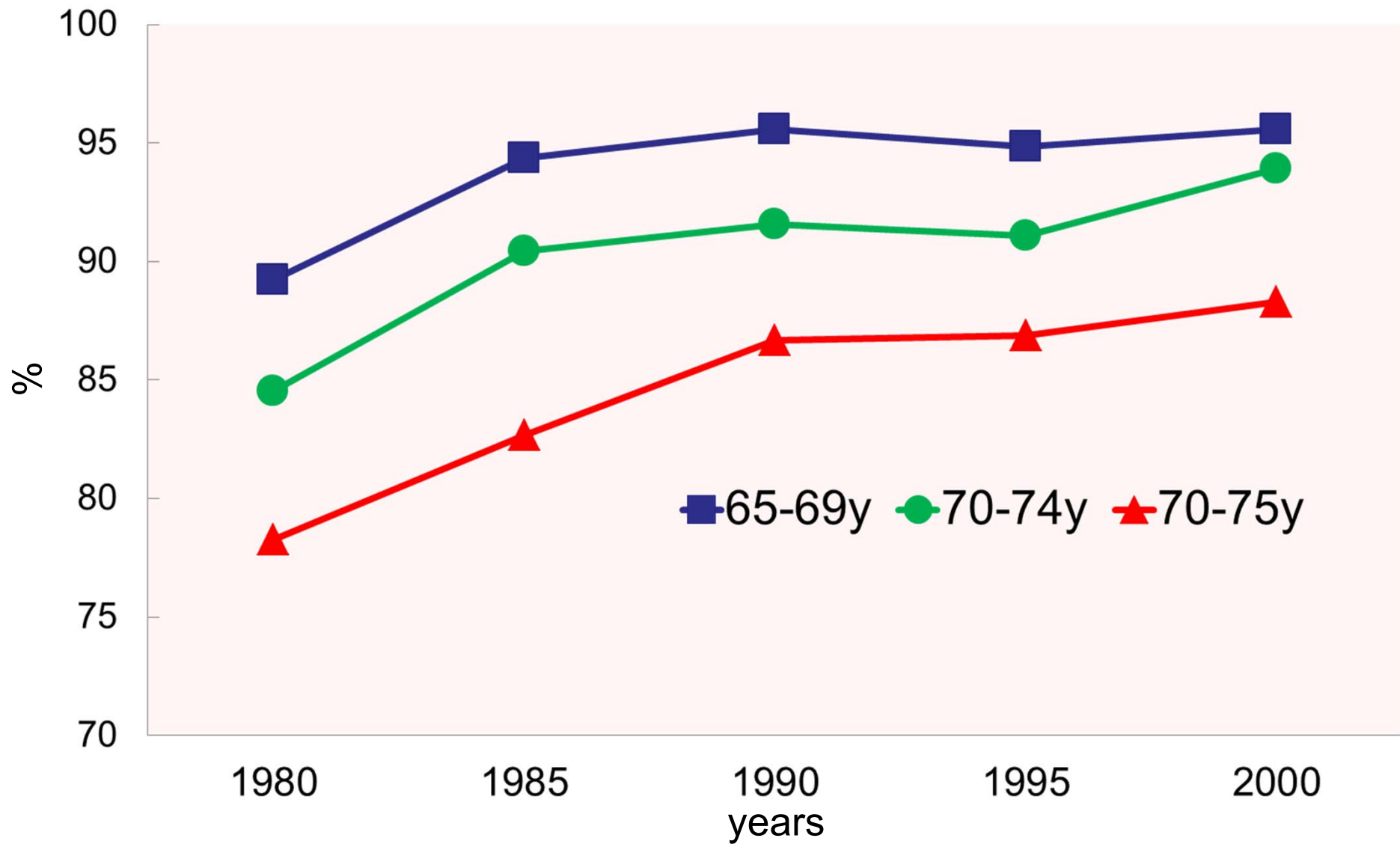


Trend in Ratios of Age-adjusted Prevalence in Disability Measured by ADL in Residents Aged 65 years and Over in Tokyo Metropolis (Shibata,2002)

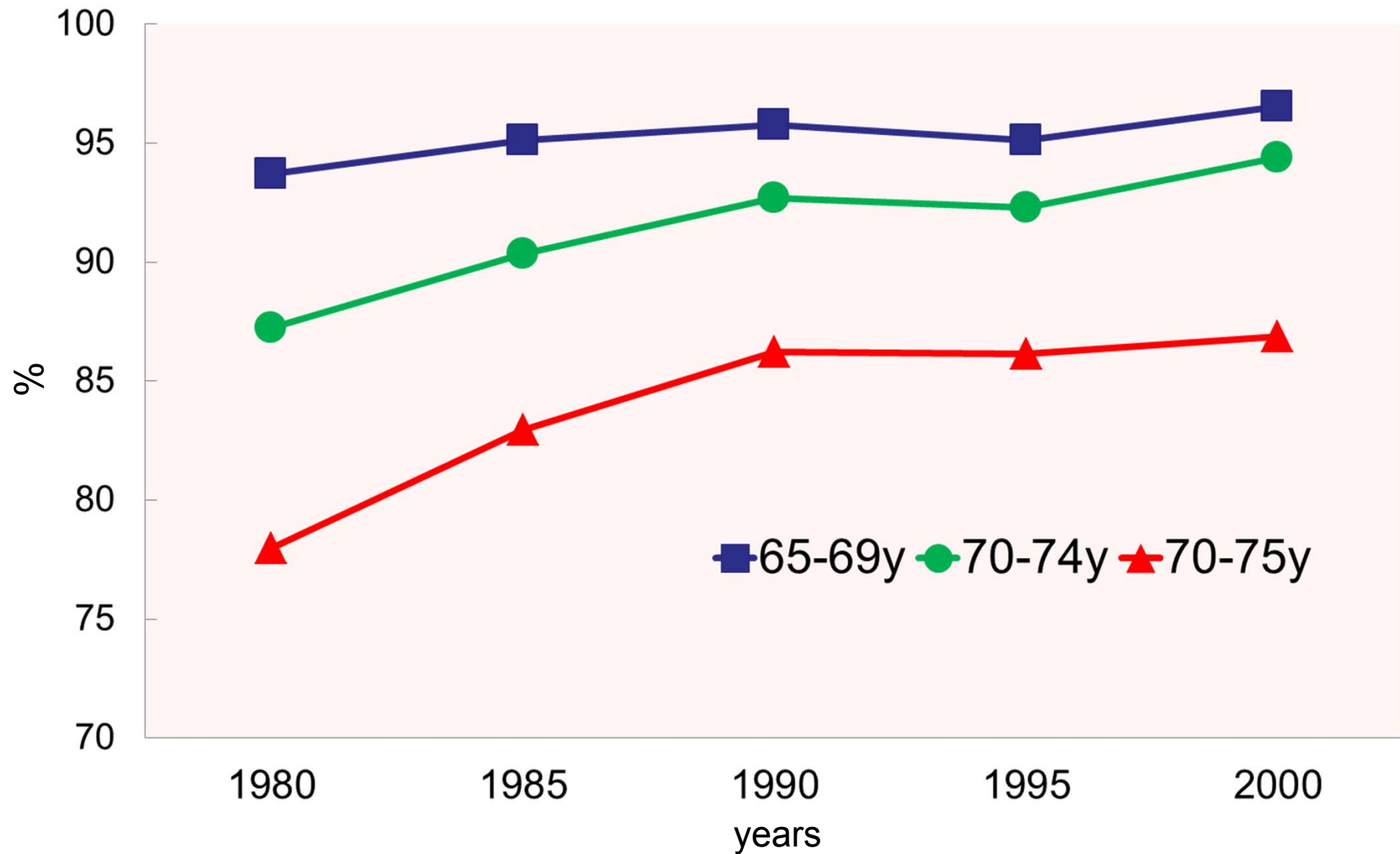




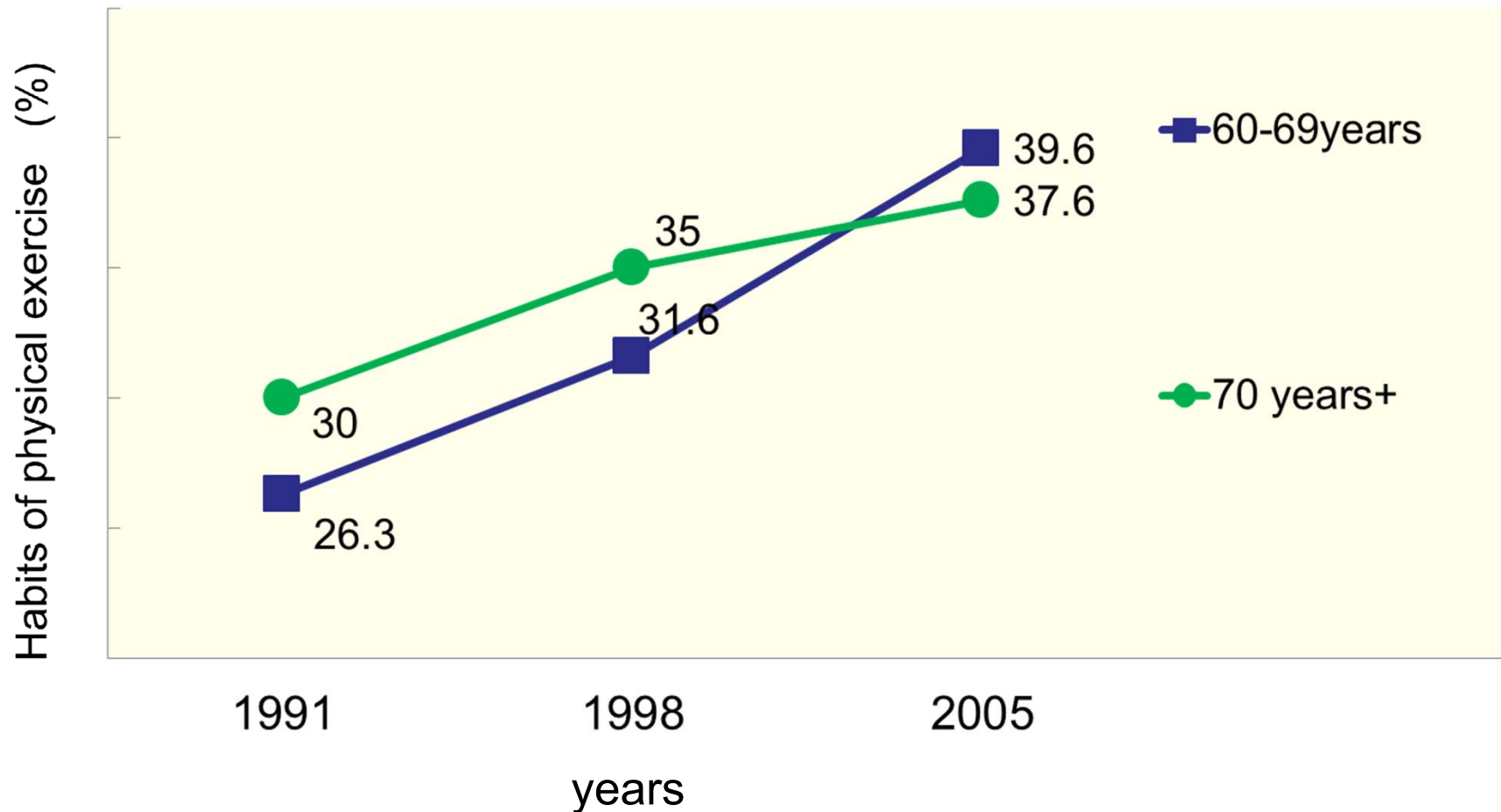
Trend of Competent Walking Ability in Residents Aged 65 years and Over in Tokyo Metropolis  
(Shibata,2003)



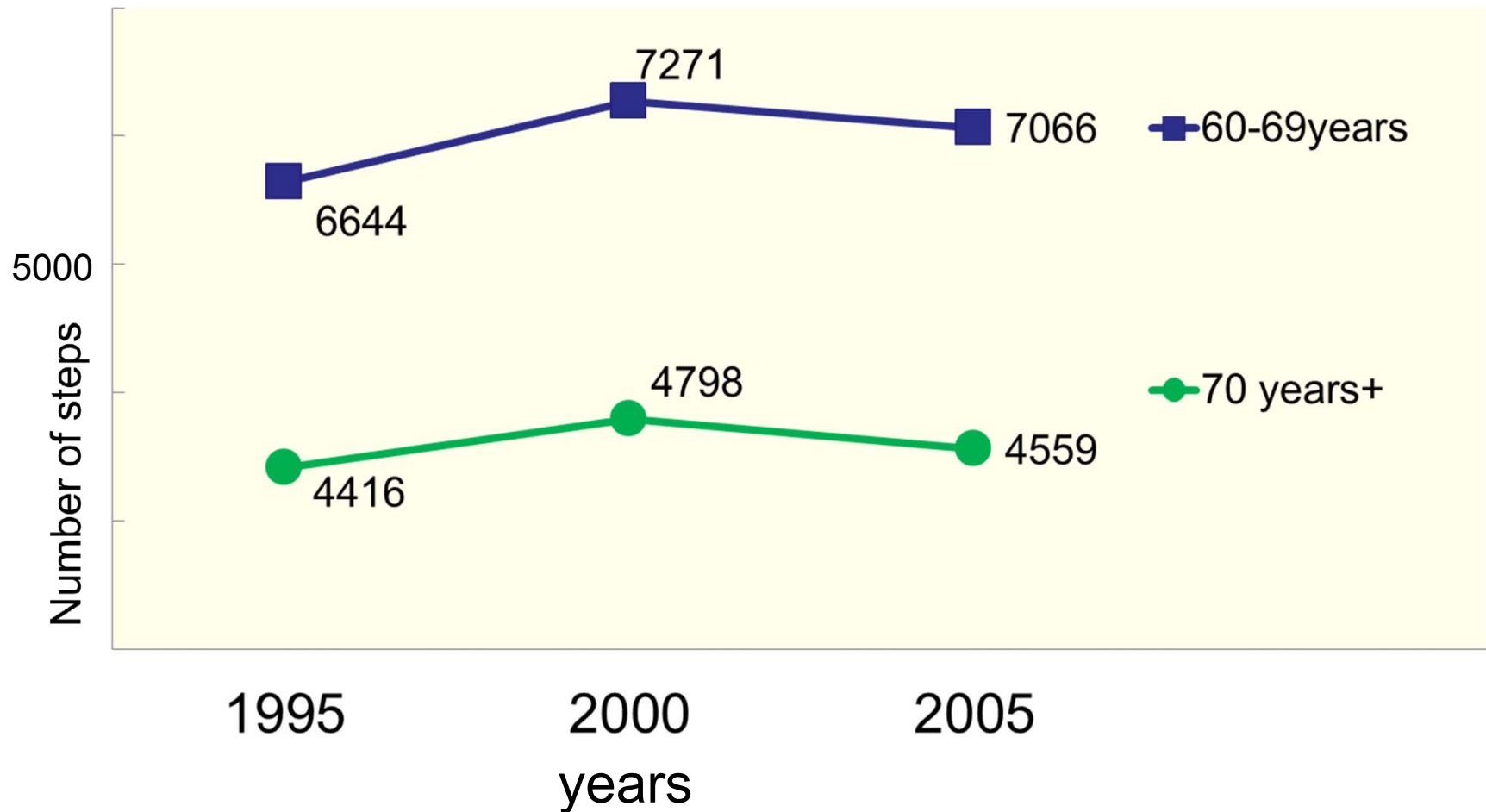
Trend of Competent Visuality in Residents Aged 65 years and Over in Tokyo Metropolis (Shibata,2003)



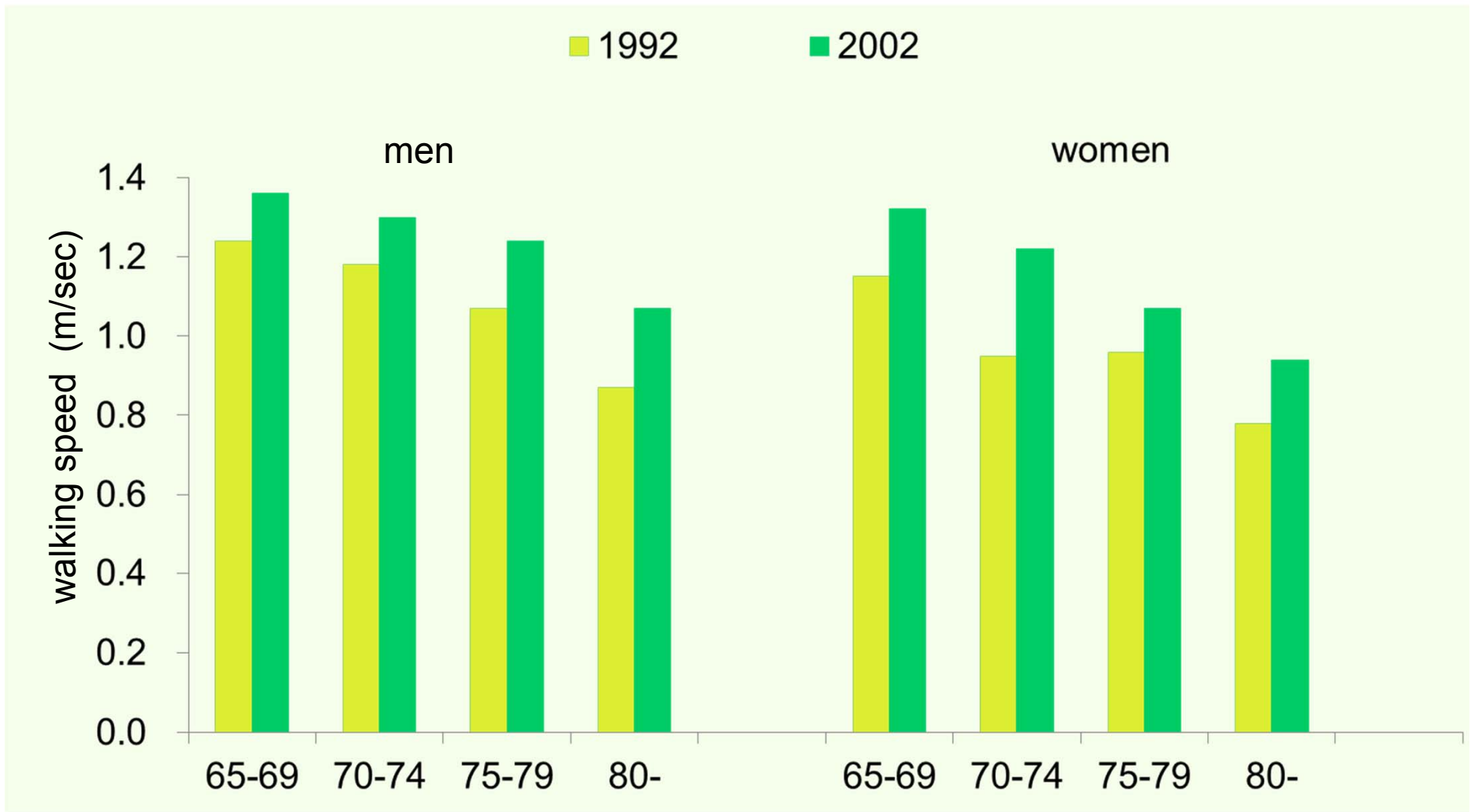
Trend of Competent Hearing in Residents Aged 65 years and Over in Tokyo Metropolis (Shibata,2003)



Trend in Rates Engaged in Regular Exercise  
( $\geq 30$  minutes at one occasion,  $\geq 2$  times a week,  
and continuation for one year)  
(National Health and Nutrition Survey)



Trend in the Number of Steps a Day (measured by pedometer) in Japanese Aged 60 Years and Over (National Health and Nutrition Survey)



Cohort Difference in Walking Speed in Residents Aged 65 Years and Over in N Village in Akita Prefecture  
(Suzuki T : Healthist 304: 2,2010)

		65 years + in 1992	Age in 2002	
Grip (kg)	Men	30.2±6.9	69+	30.0±6.6
	Women	18.2±4.9	75+	18.2±5.3
Time standing on a foot with eye open (sec)	Men	36.6±24.0	69+	36.8±23.0
	Women	25.6±23.0	68+	25.8±22.1
Usual walking speed (m/sec)	Men	1.16±0.27	76+	1.17±0.30
	Women	1.00±0.27	76+	1.00±0.27
Maximum walking speed (m/sec)	Men	1.92±0.44	69+	19.2±0.42
	Women	1.56±0.40	73+	1.55±0.38

Age in 2002 Showing similar values (parameters of physical fitness) in 65 years + at 1992

(Suzuki T : Healthist 304: 2,2010)

# Factors Contributing to Subjective Well-being in the Japanese Elderly (60y+) in a Longitudinal Interdisciplinary Study

---

	Base line Survey 1987	Follow-up Survey 1990
No. of Subjects (60y+)	2200	1285

---



# Factors at Baseline and of Longitudinal Changes Contributing to the Subjective Well-being in 1990 (3years later)

			Men	Women
Receiving Support	Baseline	↑	n.s.	n.s.
	Changes	↑	↑	n.s.
Providing Support	Baseline	↑	n.s.	↑
	Changes	↑	↑	↑

Controlling for age, education, presence of spouse, presence of children, economic status and ADL

# Longitudinal Interdisciplinary Study in a Representative Sample of Japanese Aged 70 years and Over

---

	1999 Baseline	2002 Follow-up
Sample No	2000	
Respondents No	1405 (70.3%)	1062 (72.0%)

---

(Shibata H, 2003)

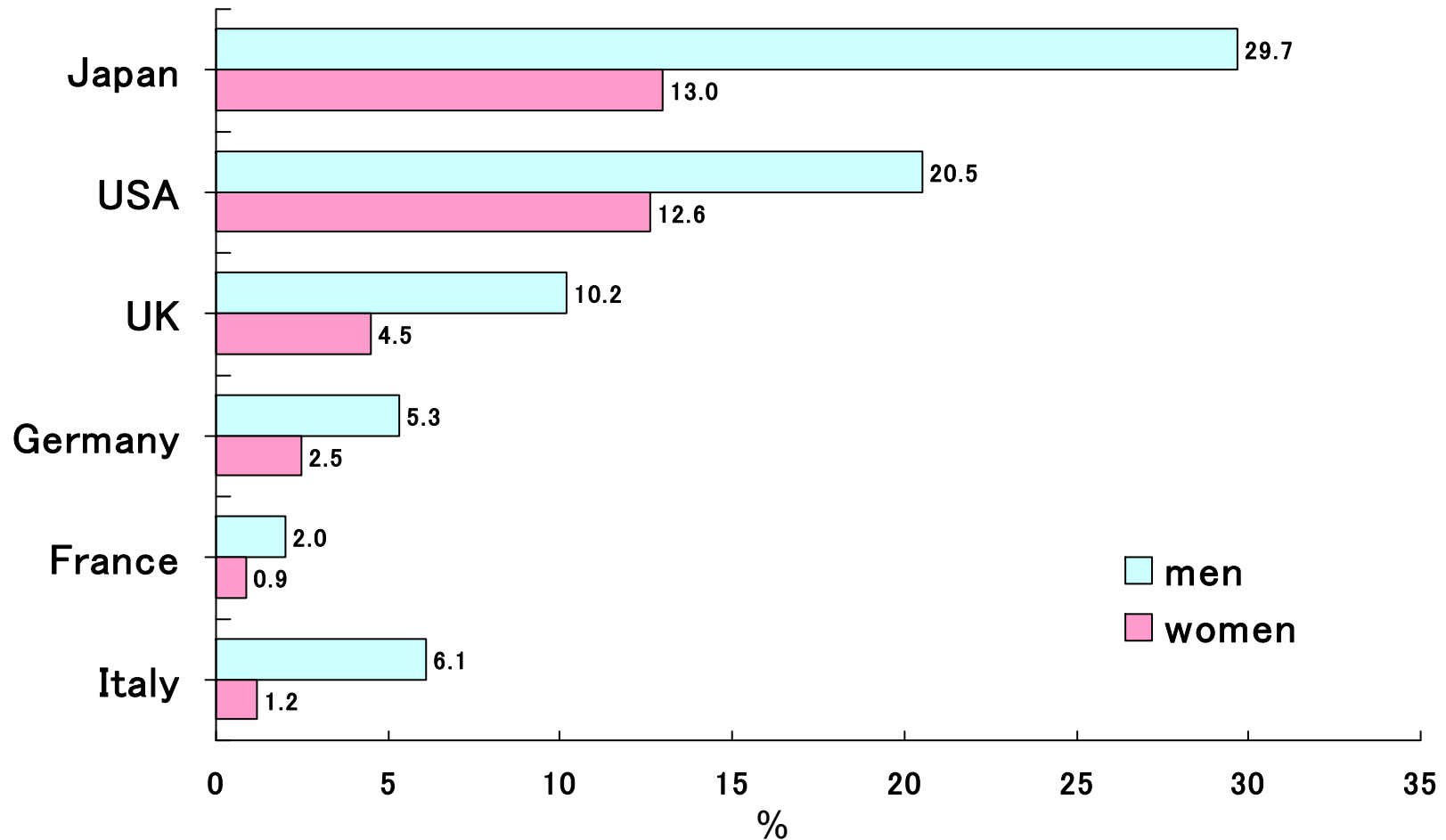
# Relationship of Total Time a Week Used for Productivity at Baseline(1999) to Outcomes(2002)

	ADL Impairment	Cognitive Impairment	Mortality
1 Time for paid labor	↓	—	—
2 Time for house management	↓↓	↓↓↓	—
3 Time for volunteer activities	—	—	—
4 Total time (1+2+3)	↓↓↓	↓↓↓	↓

↓; P<.10    ↓↓; P<.05    ↓↓↓; P<.01

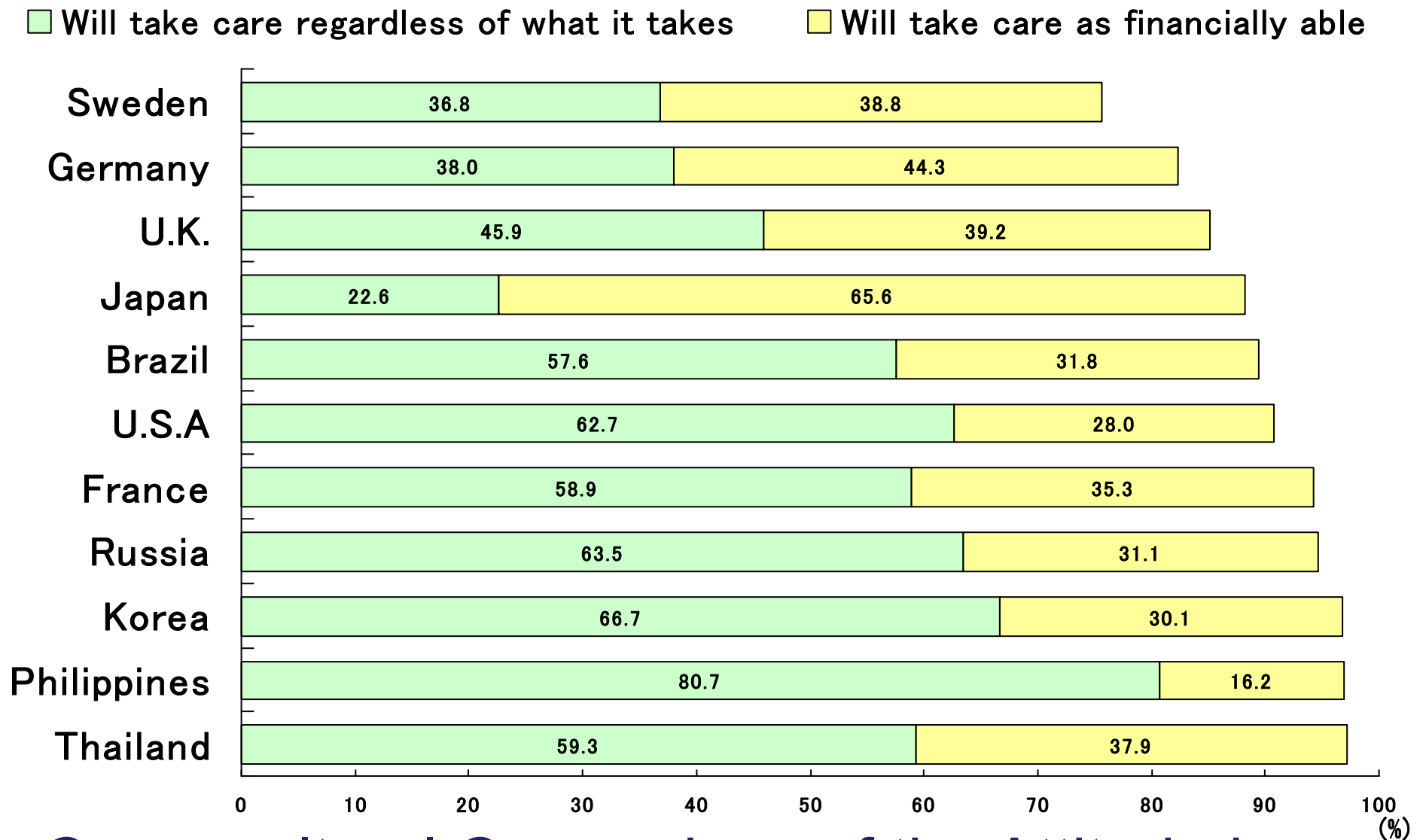
Controlling for Age, Sex, Education, ADL ,Cognition No. of Chronic Diseases at Baseline.

(Shibata H, 2003)



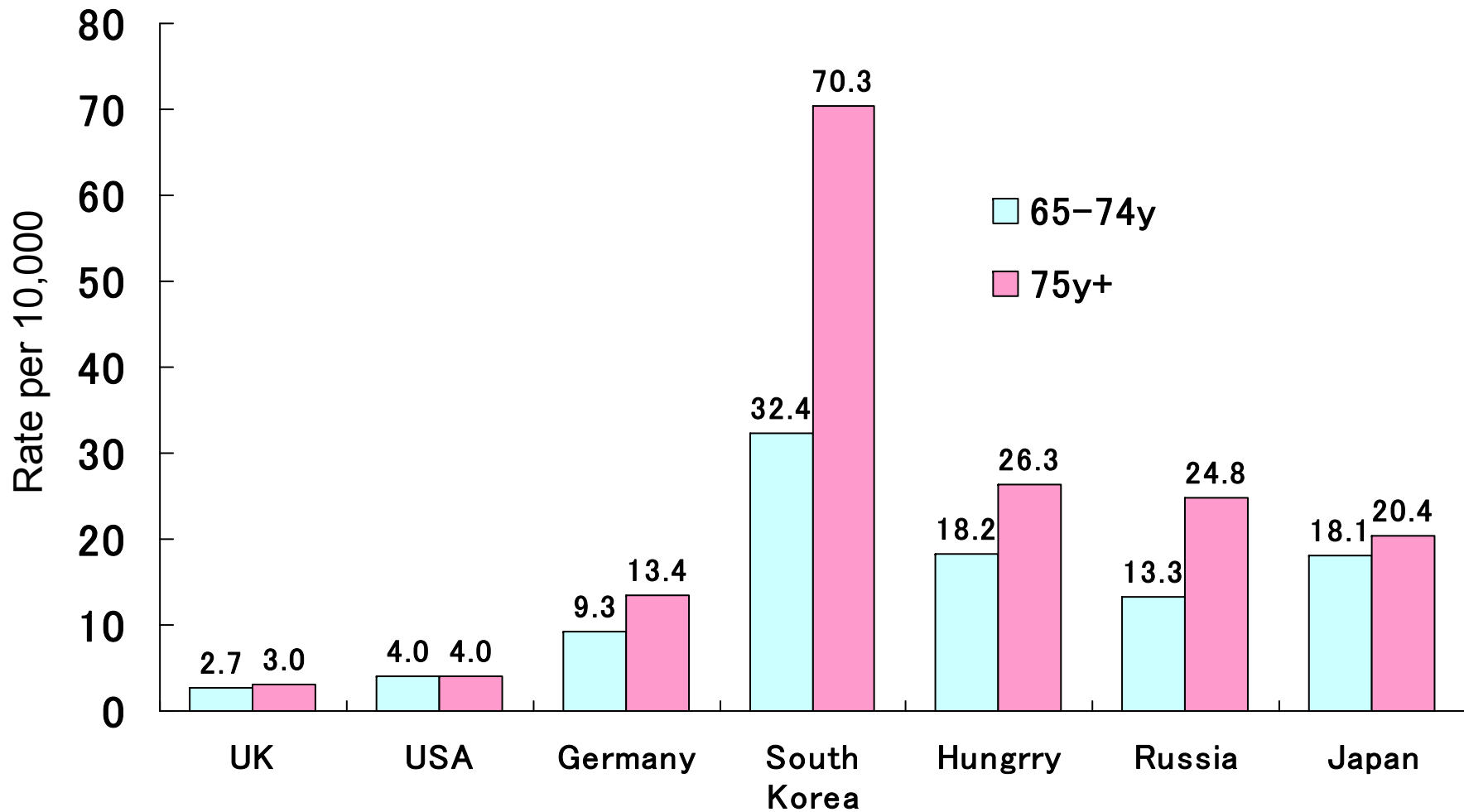
## Cross-cultural Comparison of Labor Force Rates in the Aged 65years and Over

(OECD, Labour Force Survey ,2007)



## Cross-cultural Comparison of the Attitude in Youth toward the Support of Aged Parents

(Source: The Youth Affairs Administration, Management and Coordination Agency, Japan, 1994)



## Cross-cultural Comparison of Suicide Rates in Older Women

(WHO Database)

# Conclusion

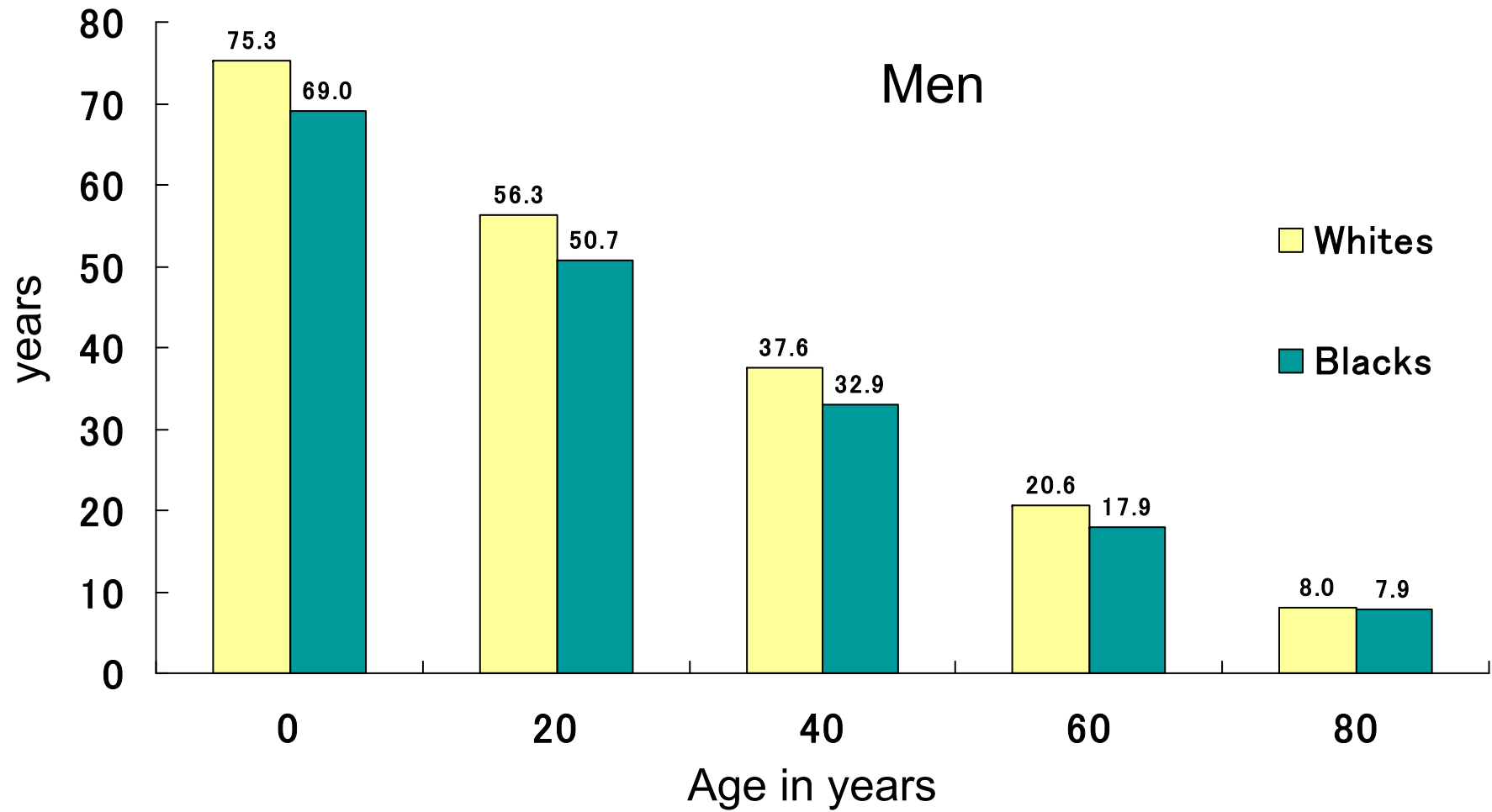
1. Japanese longevity is still located top-ranked in the world.
2. Functional capacity has been enhanced year by year, which has been brought about by the improvement of lifestyles.
3. Activities of social contribution is useful for both physical and mental health.
4. Japanese elders are confronted by ill mental status as represented by high suicide rate.



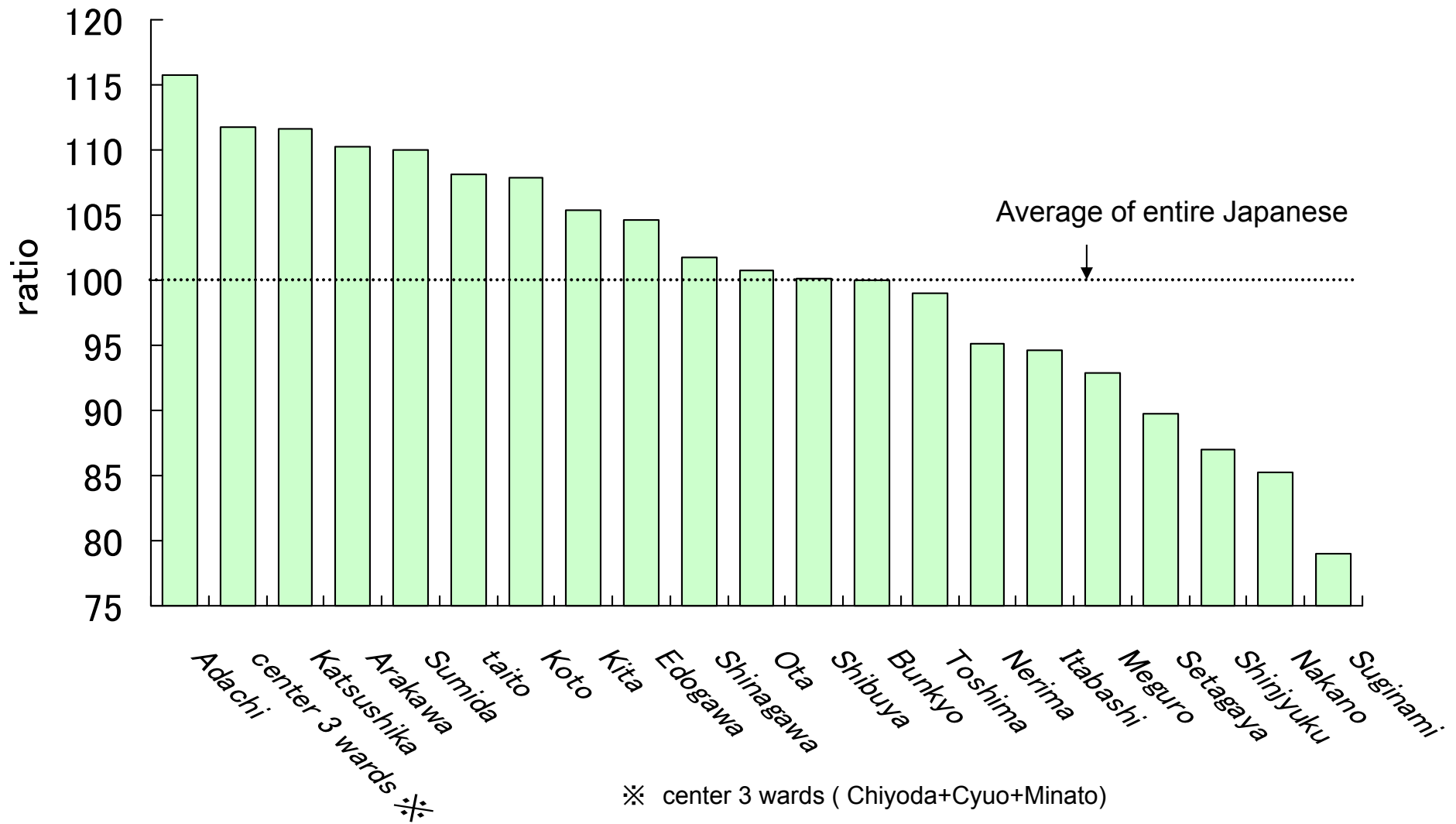


# Relevant Factors for Longevity in the World

1. Socio-economic status
2. Nutritional factors
3. Hygienic consolidation  
(incl. sewage systems, water services)
4. Health care systems
5. Others



Life Expectancies at Given Ages between Whites and Blacks in the United States



# All-cause Mortality Ratios in Men Aged 70-79 Years according to Wards in Tokyo

Fujiwara.Y etal . 1999

1961

Medical Insurance : covers entire Japanese (all ages)



1983

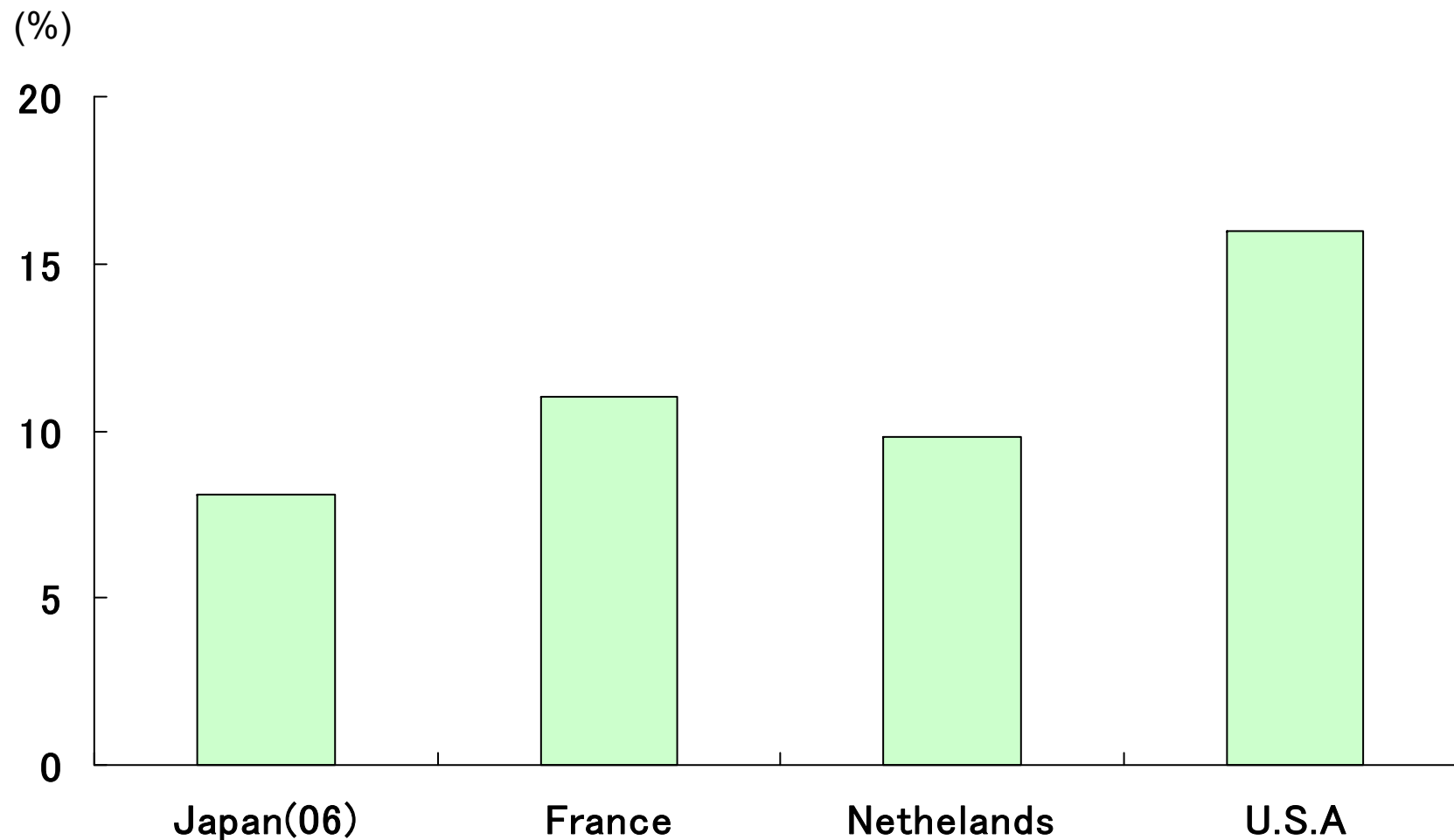
Health and Medical Service Law : mainly covers 40 years and over



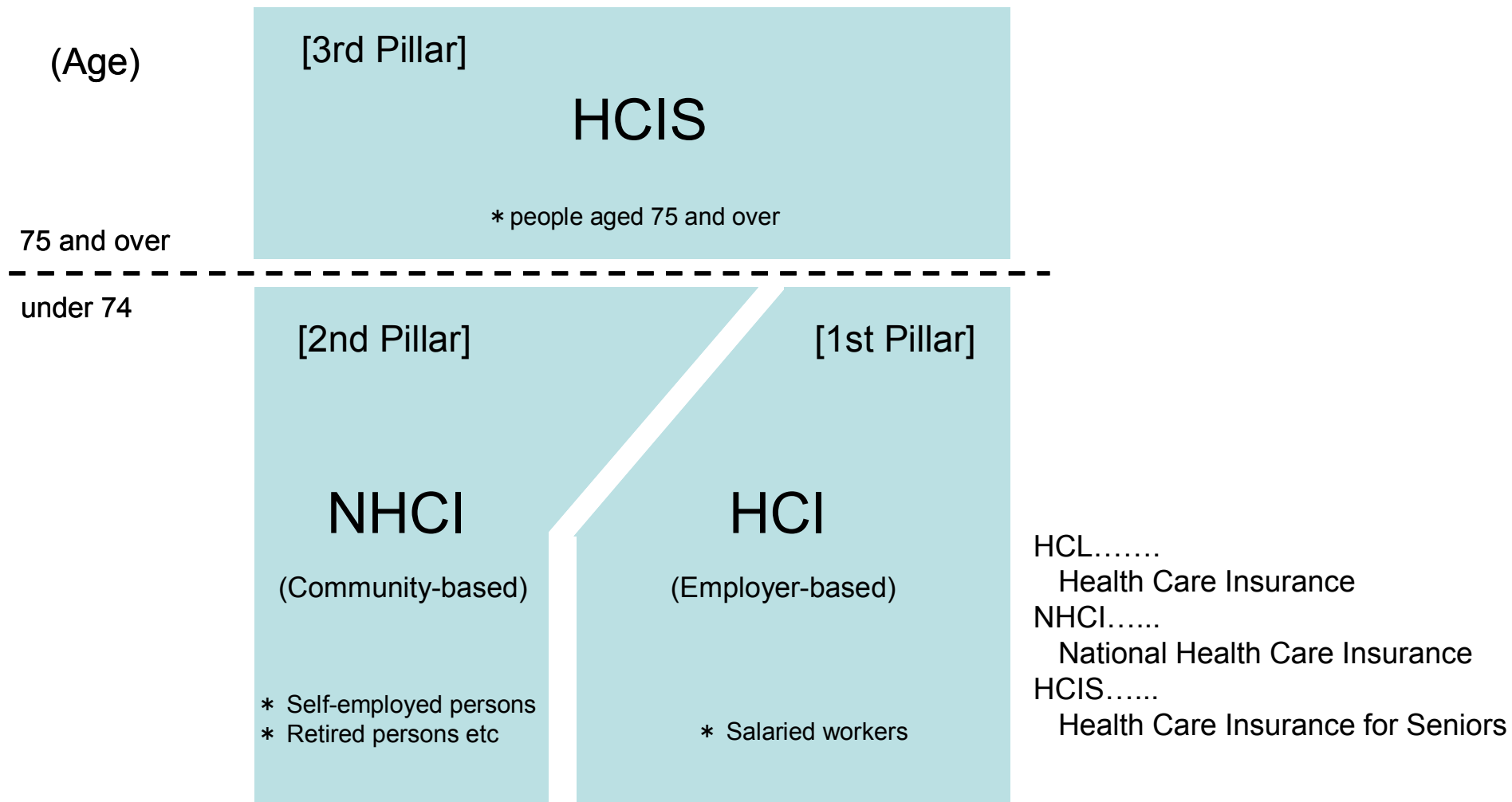
2000

Long Term Care Insurance : covers mainly 65 years and over

## Time-sequential Main Health Care Systems in Japan

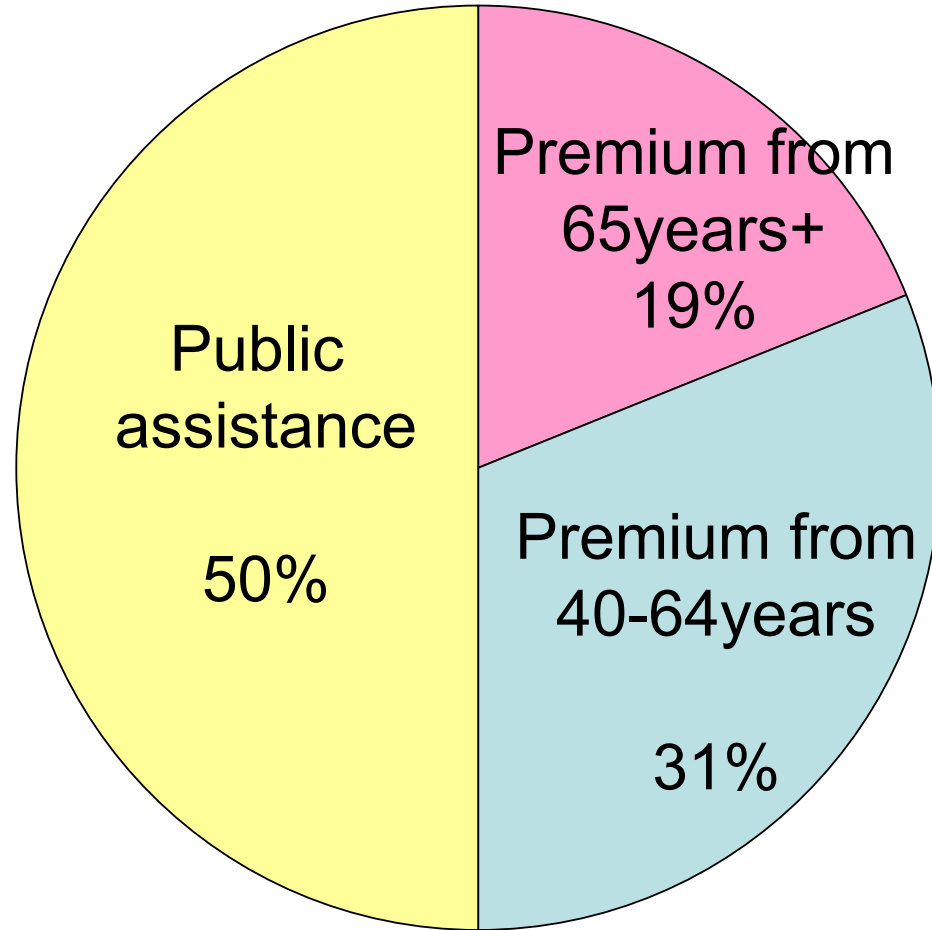


**Rates of Medical Expenditure  
to GDP (OECD, 2007)**



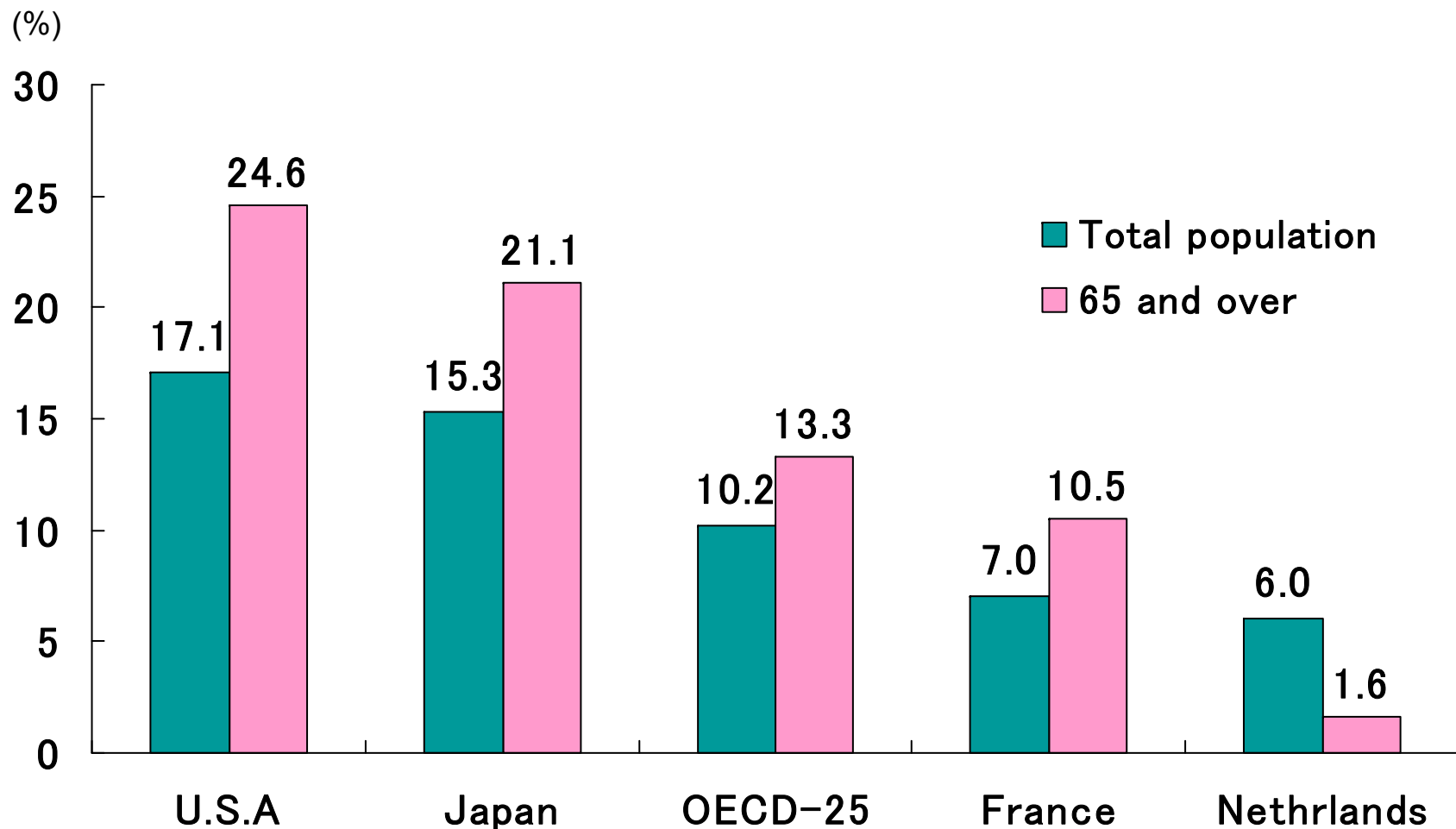
# The Medical Insurance System Currently Available in Japan

ILC-Japan: A Profile of Older Japanese 2009



Total budget : 8,000,000 US dollars per fiscal year

## Resources of the Budget for Long-Term Care Insurance



## Poverty Rates in Total Populations and 65+ (2000) . poverty : <50% of average

Derived from Foster, M. and M. Mira d'Ercole (2005), "Income Distribution and Poverty in OECD Countries in the Second Half of the 1990s", Social, Employment and migration Working Paper, No.22, OECD, Paris.