

Cohort differences in functional status

the role of lifestyle and chronic disease

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Several studies show a decline in functional limitations in older persons

Potential causes include:

- better treatment of diseases
- earlier diagnosis of diseases
- higher use of walking aids
- diseases become less debilitating

However, deteriorating lifestyle may slow down this decline





The aims of this study were:

- 1) To investigate 10-year cohort differences in functional limitations of Dutch persons aged 55-64 years
- 2) To investigate the role of lifestyle and chronic disease





- LASA Study -

Population-based sample

N = 3107

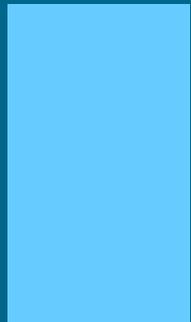
Men and women

Aged 55 – 85 years

Baseline 1992/93



COHORT I

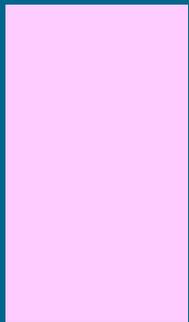


1992-93

Age 55-65 years

N=966 (834)

COHORT II



2002-03

Age 55-65 years

N=1002 (894)



Functional limitations

1. Subjective (self-report based on questions):

- Climbing 15 steps
- Cut own toenails
- Use transportation

Limitation: 'I cannot', 'only with help',
'can do with difficulty'

2. Objective (performance tests):

- 2 x 3 m walking
- repeated chair stands (5x)

Total mobility score [0 - 8]

Lifestyle variables

- Smoking status
- Alcohol consumption
- Physical activity (LAPAQ, Stel et al. 2004)
- Body mass index

Chronic diseases

- Lung disease
- Heart disease
- Peripheral vascular disease
- Diabetes mellitus
- Stroke
- Osteoarthritis
- Rheumatoid arthritis
- Cancer (non-skin)



Characteristics

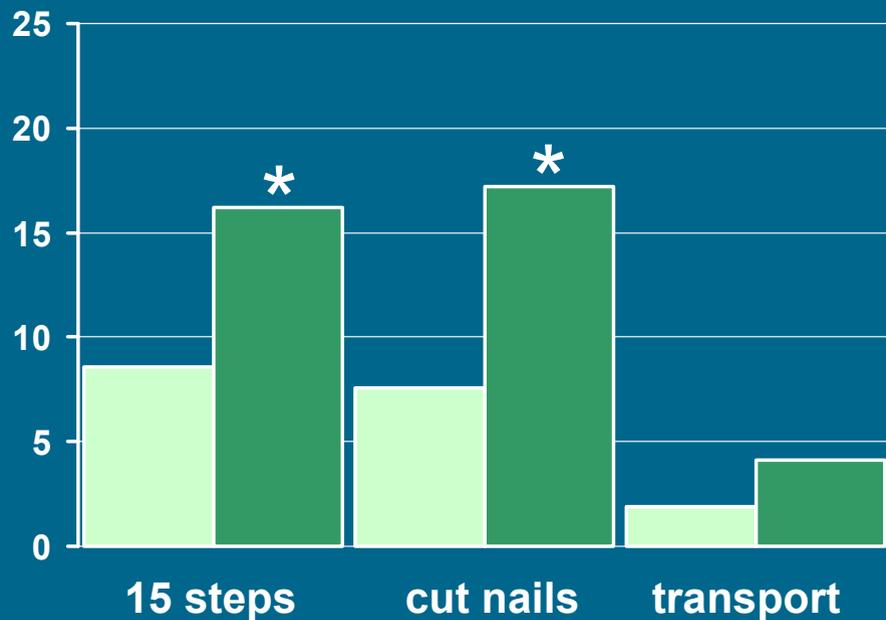
	MEN		WOMEN	
	1992–1993	2002–2003	1992–1993	2002–2003
N	396	424	438	470
Age (years)	59.7 (2.9)	59.4 (2.9)	59.7 (2.8)	59.4 (3.0)
Education (%)				
Low	20.7	7.1	38.8	8.3
Medium	58.1	78.3	52.7	85.3
High	21.2	14.6 *	8.5	6.4 *
Region (%)				
West	40.9	44.1	41.1	40.2
North-east	34.3	31.8	36.1	36.2
South	24.8	24.1	22.8	23.6

* $p < 0.05$ between cohort I en II

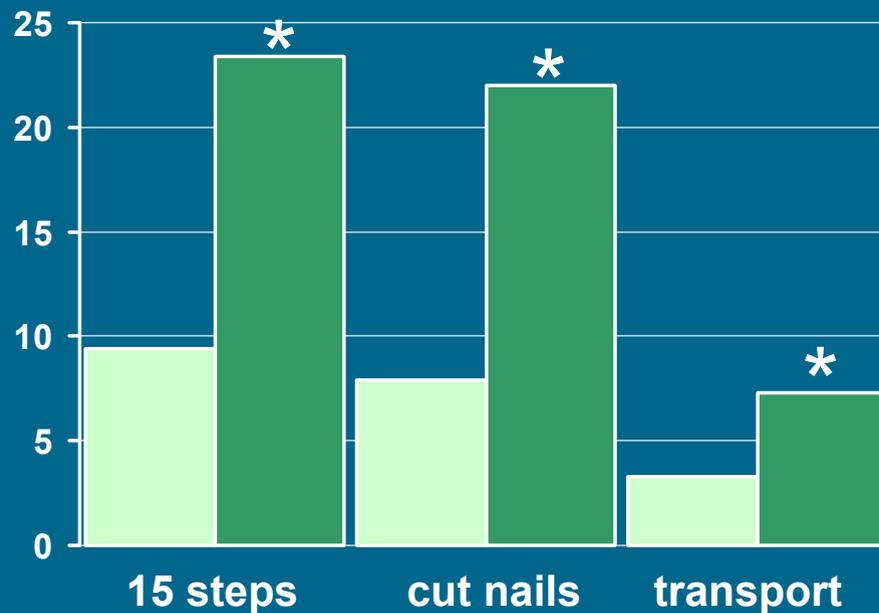


Self-reported limitations

Men



Women



1992-93 2002-03

Adjusted for age, education and region

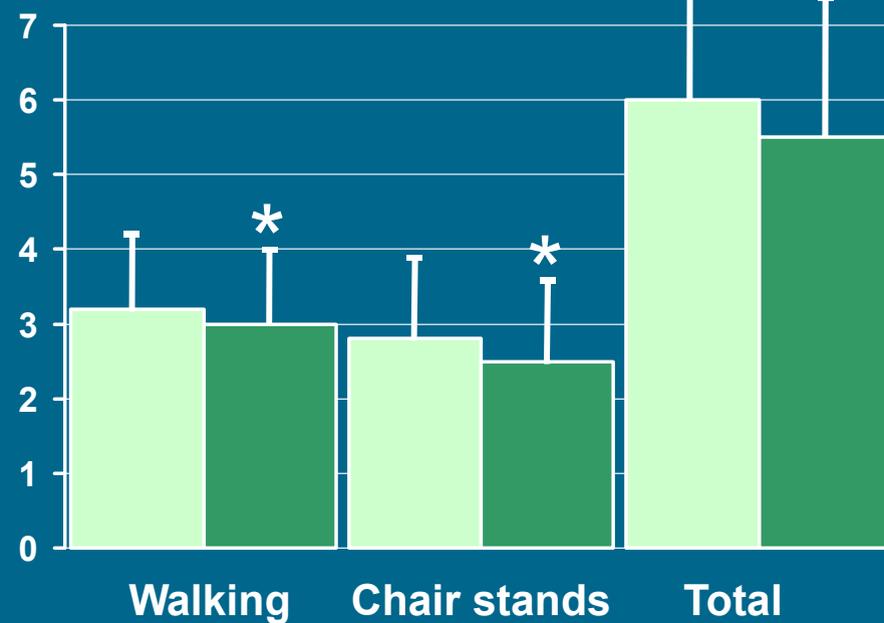


Score performance tests

Men



Women



1992-93 2002-03

Adjusted for age, education and region



	MEN		WOMEN	
	1992-93	2002-03	1992-93	2002-03
Physical activity (min/d)	148 (120)	128 (106)	247 (133)	202 (105)
Alcohol (glasses/wk)	11 (13)	13 (13)	4 (6)	7 (8)
BMI \geq 30 kg/m ²	9.9	17.9	21.0	26.8
Current smoker	36.6	33.9	24.0	26.1
Former smoker	55.1	50.4	32.2	43.0

All cohort differences p<0.05



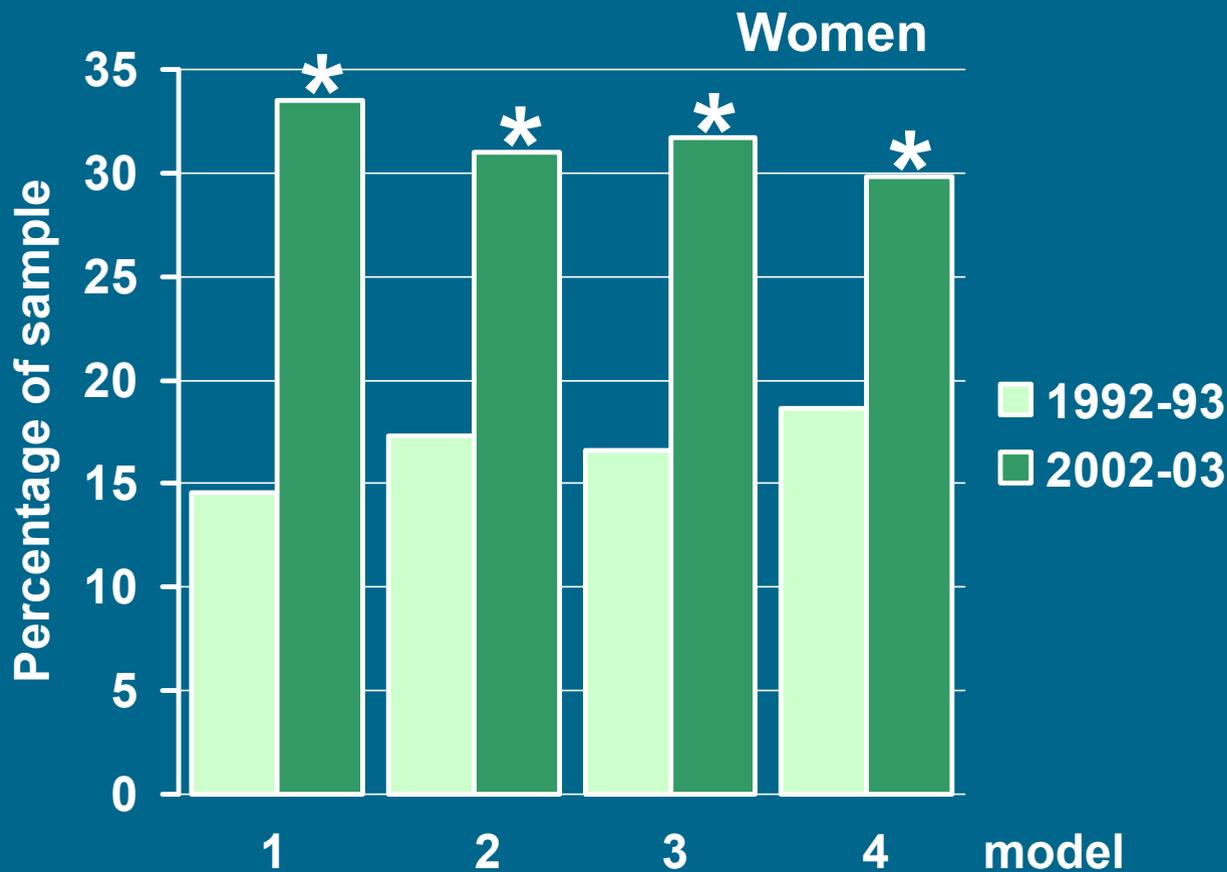
Chronic diseases

	MEN		WOMEN	
	1992-93	2002-03	1992-93	2002-03
Lung disease	7.6	9.4	7.1	10.4
Heart disease	18.4	15.1	7.3	8.5
Peripheral vasc disease	5.6	6.1	6.2	4.3
Diabetes mellitus	3.3	8.0	3.4	6.4
Stroke	2.3	2.6	1.4	3.4
Osteoarthritis	19.4	24.1	33.9	37.7
Rheumatoid arthritis	4.8	7.6	7.6	11.9
Cancer (non-skin)	2.3	3.1	7.3	9.2

$p < 0.05$ between cohort I en II



Self-reported limitations



Model 1: Adjusted for age, education and region

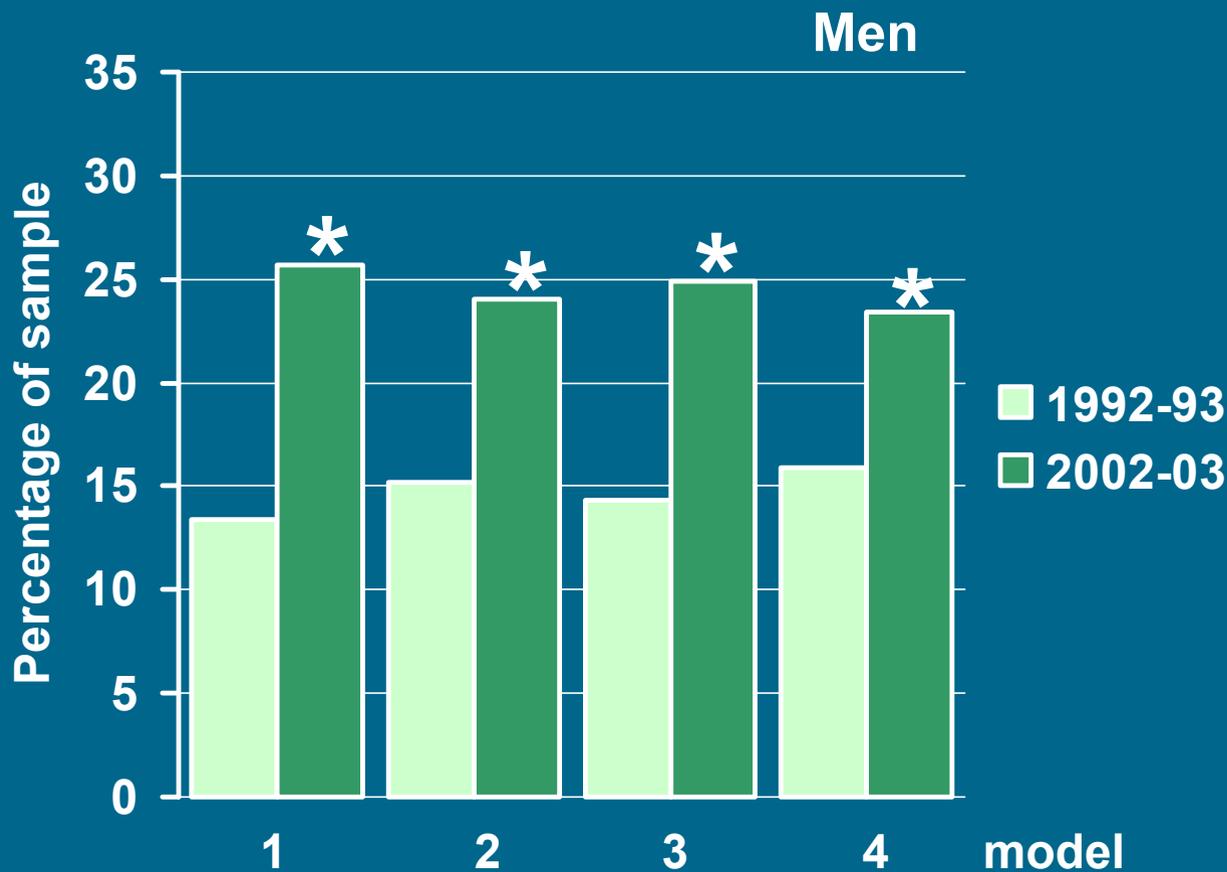
Model 2: Model 1 + chronic disease

Model 3: Model 1 + lifestyle

Model 4: Model 1 + chronic disease + lifestyle



Self-reported limitations



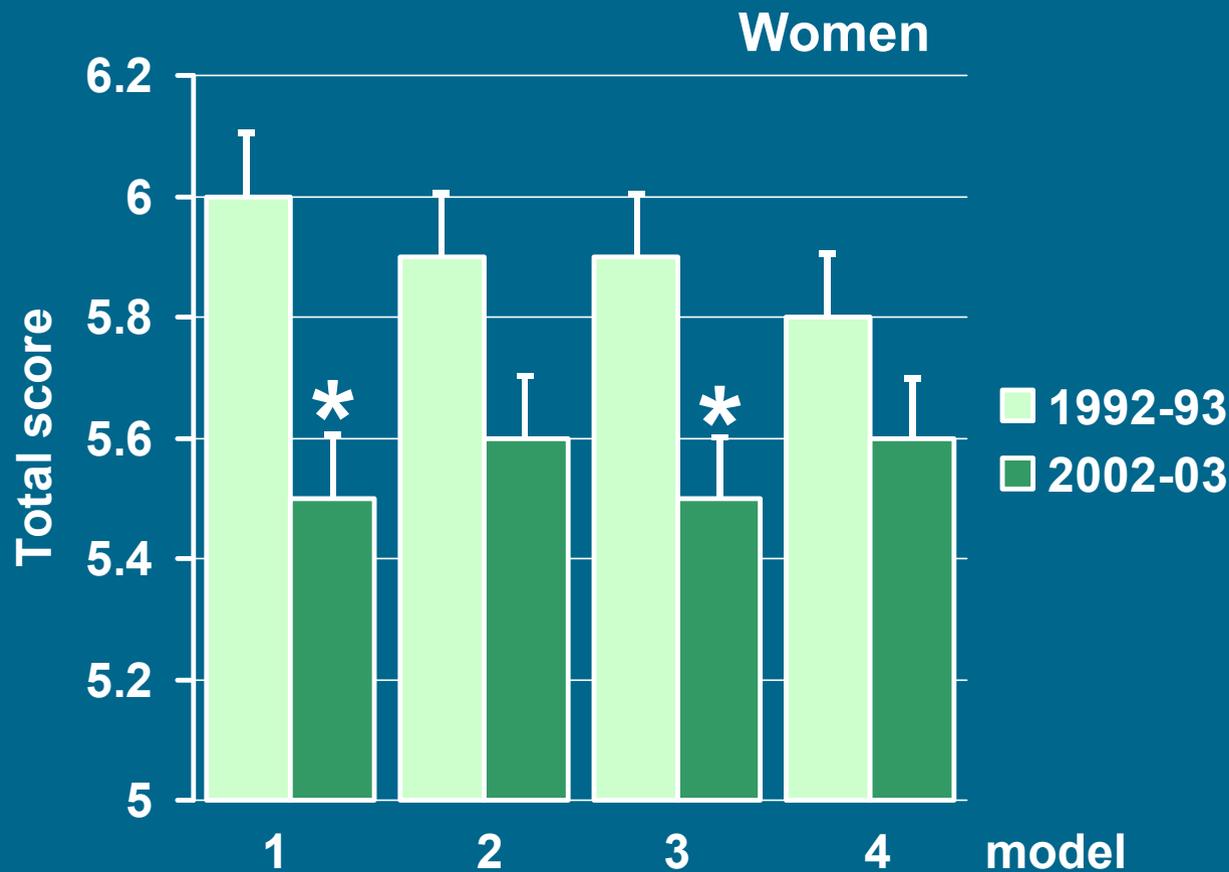
Model 1: Adjusted for age, education and region

Model 2: Model 1 + chronic disease

Model 3: Model 1 + lifestyle

Model 4: Model 1 + chronic disease + lifestyle

Score performance tests



Model 1: Adjusted for age, education and region

Model 2: Model 1 + chronic disease

Model 3: Model 1 + lifestyle

Model 4: Model 1 + chronic disease + lifestyle



In 2002-03, Dutch persons aged 55-64 years:

1. Report more functional limitations and have a poorer performance (women)
2. Have more chronic diseases (diabetes, in women rheumatoid arthritis and stroke) and a more unhealthy lifestyle

compared to Dutch persons of similar age in 1992-93



3. 25-30% of the observed differences in self-reported functional limitations could be explained by differences in chronic diseases and 15-20% due to differences in lifestyle

Together they explained about 40%.

4. In women, the differences in performance were no longer statistically significant after adjustment for lifestyle and chronic disease



Strengths and limitations

Strengths

- Nationally representative sample
- Same methodology both cohorts
- Both subjective and objective information

Limitations

- Potential role of other diseases
- No information on disease severity
- Self-reported information on lifestyle (excl. BMI) and disease



Conclusion

- The prevalence of functional limitations increased between 1992/93 and 2002/03
- About 40% of this increase could be explained by a deterioration of lifestyle and higher prevalence of lifestyle-related chronic diseases



Thank you for your attention

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