

# **Diabetes – unaufhaltbarer Anstieg, wie lange ?**

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**Lingenau, 29. April 2017**



# Def. Übergewicht und „Fettsucht“ (WHO)

## Definition

## BMI

## Risiko von Folge-KH

**normalgewichtig**

**18,5-25**

**niedrig**

**übergewichtig**

**25-30**

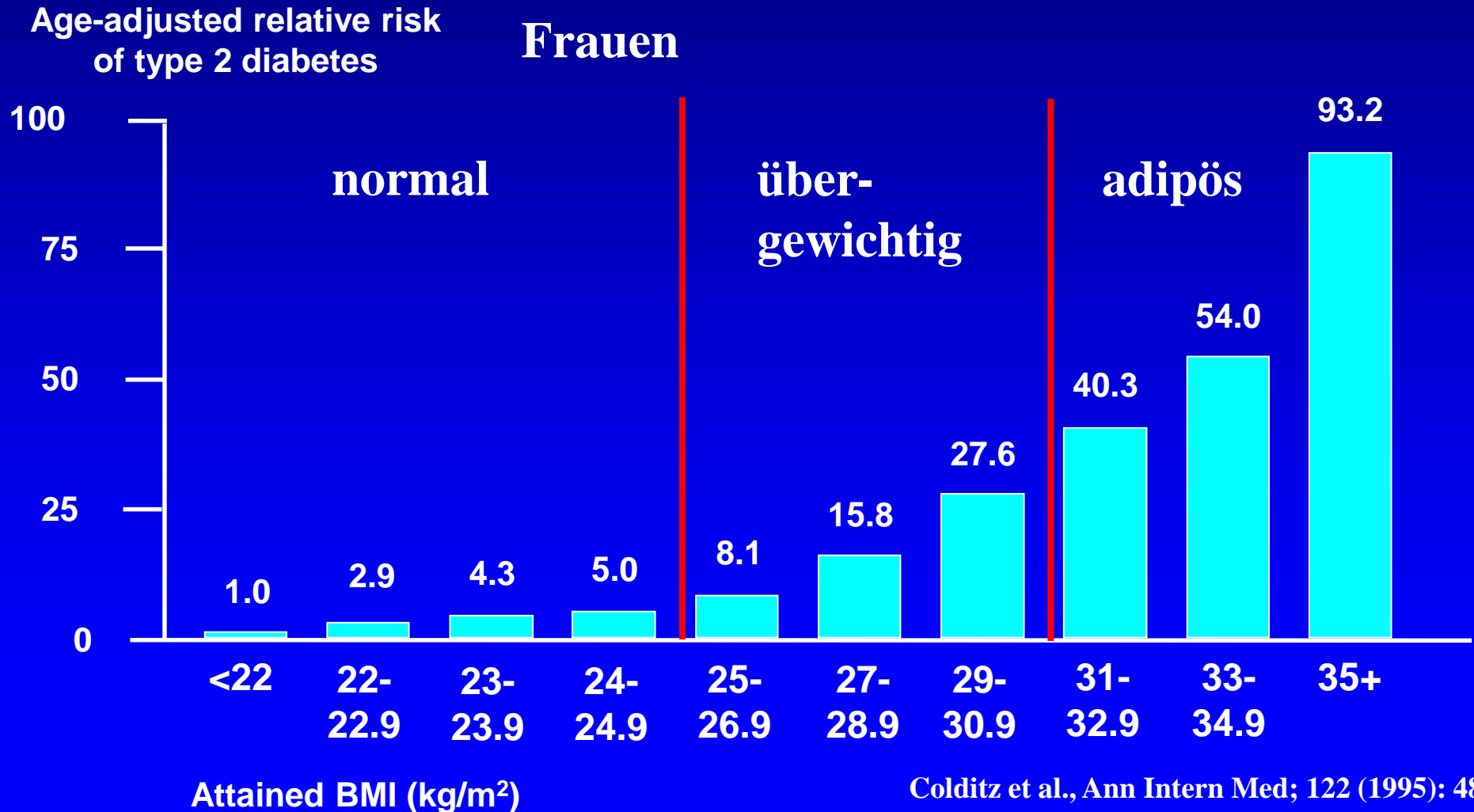
**mässig erhöht**

**adipös  
(=fettleibig)**

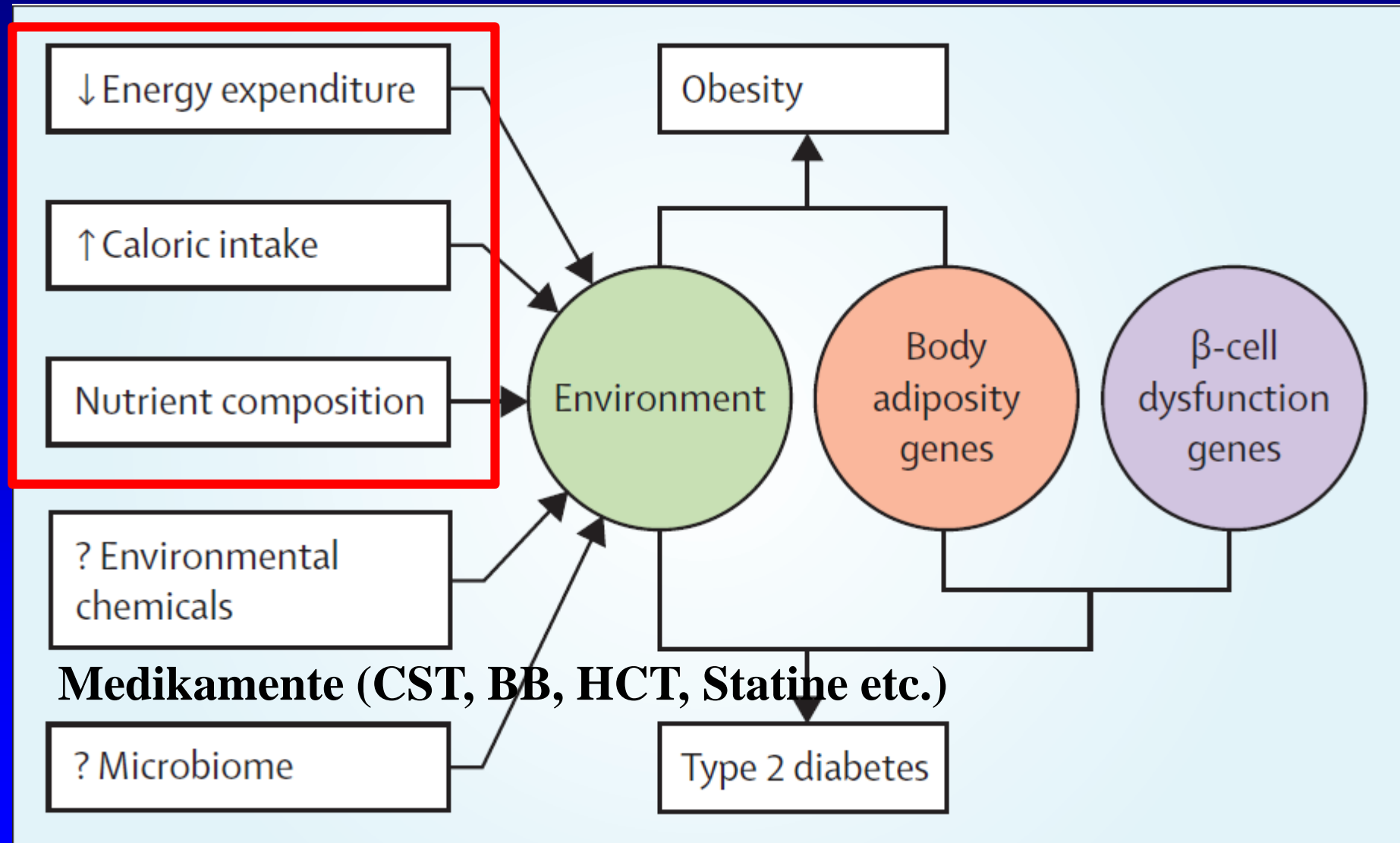
**>30**

**stark erhöht**

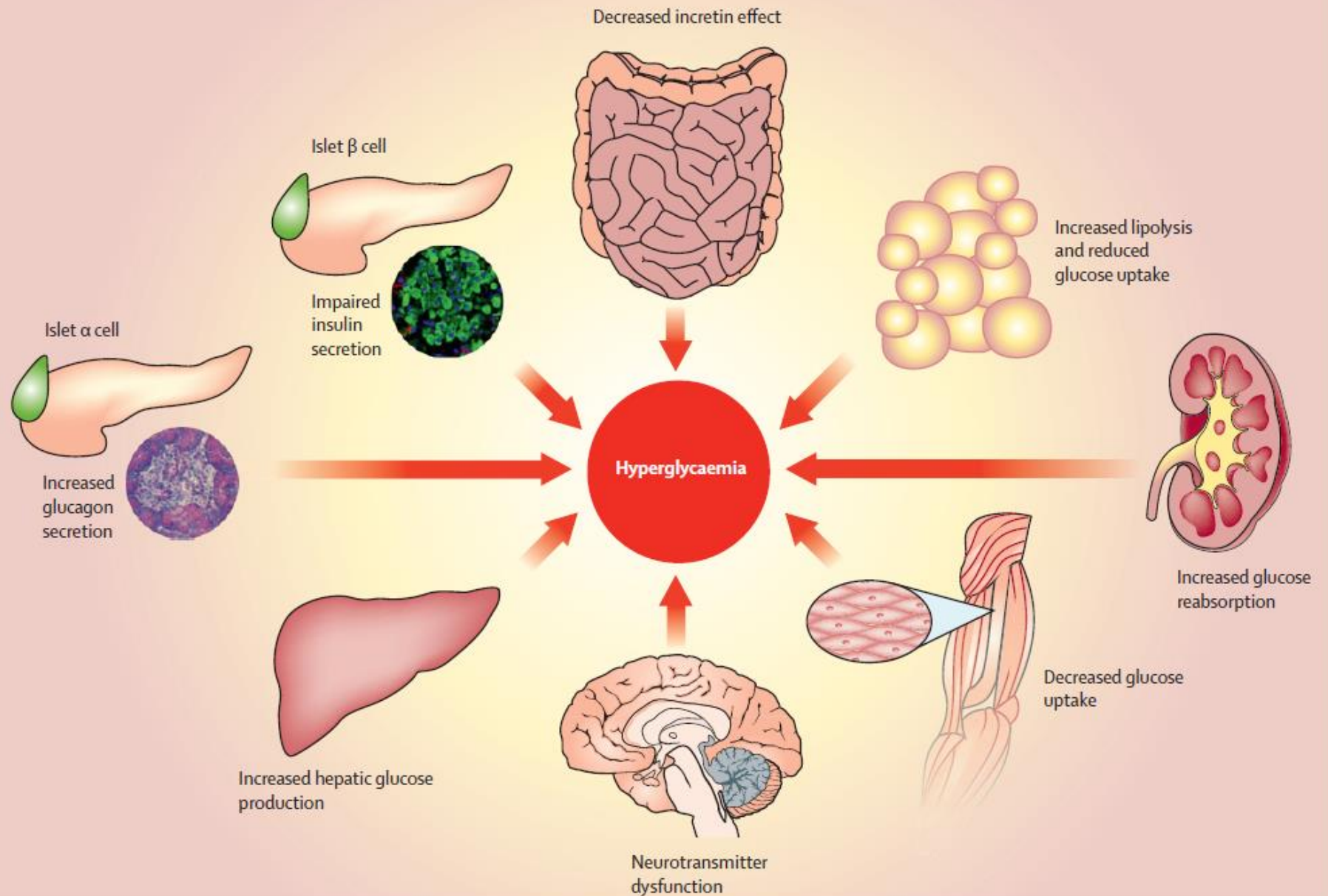
# Adipositas = RF für DM 2



# Pathogenese Metabol. Syndrom/DM Typ 2



# The ominous Octet



# NCD-RisC: BMI (2016)

## Trends in adult body-mass index in 200 countries from 1975 to 2014: a pooled analysis of 1698 population-based measurement studies with 19·2 million participants



NCD Risk Factor Collaboration (NCD-RisC)\*



### Summary

**Background** Underweight and severe and morbid obesity are associated with highly elevated risks of adverse health outcomes. We estimated trends in mean body-mass index (BMI), which characterises its population distribution, and in the prevalences of a complete set of BMI categories for adults in all countries.

**Methods** We analysed, with use of a consistent protocol, population-based studies that had measured height and weight in adults aged 18 years and older. We applied a Bayesian hierarchical model to these data to estimate trends from 1975 to 2014 in mean BMI and in the prevalences of BMI categories ( $<18\cdot5$  kg/m<sup>2</sup> [underweight],  $18\cdot5$  kg/m<sup>2</sup> to  $<20$  kg/m<sup>2</sup>,  $20$  kg/m<sup>2</sup> to  $<25$  kg/m<sup>2</sup>,  $25$  kg/m<sup>2</sup> to  $<30$  kg/m<sup>2</sup>,  $30$  kg/m<sup>2</sup> to  $<35$  kg/m<sup>2</sup>,  $35$  kg/m<sup>2</sup> to  $<40$  kg/m<sup>2</sup>,  $\geq 40$  kg/m<sup>2</sup> [morbid obesity]), by sex in 200 countries and territories, organised in 21 regions. We calculated the posterior probability of meeting the target of halting by 2025 the rise in obesity at its 2010 levels, if post-2000 trends continue.

**Findings** We used 1698 population-based data sources, with more than 19·2 million adult participants (9·9 million men and 9·3 million women) in 186 of 200 countries for which estimates were made. Global age-standardised mean BMI increased from  $21\cdot7$  kg/m<sup>2</sup> (95% credible interval  $21\cdot3$ – $22\cdot1$ ) in 1975 to  $24\cdot3$  kg/m<sup>2</sup> ( $24\cdot0$ – $24\cdot4$ ) in 2014 in men, and

*Lancet* 2016; 387: 1377–96

This online publication has been corrected. The corrected version first appeared at [thelancet.com](http://thelancet.com) on May 12, 2016

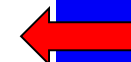
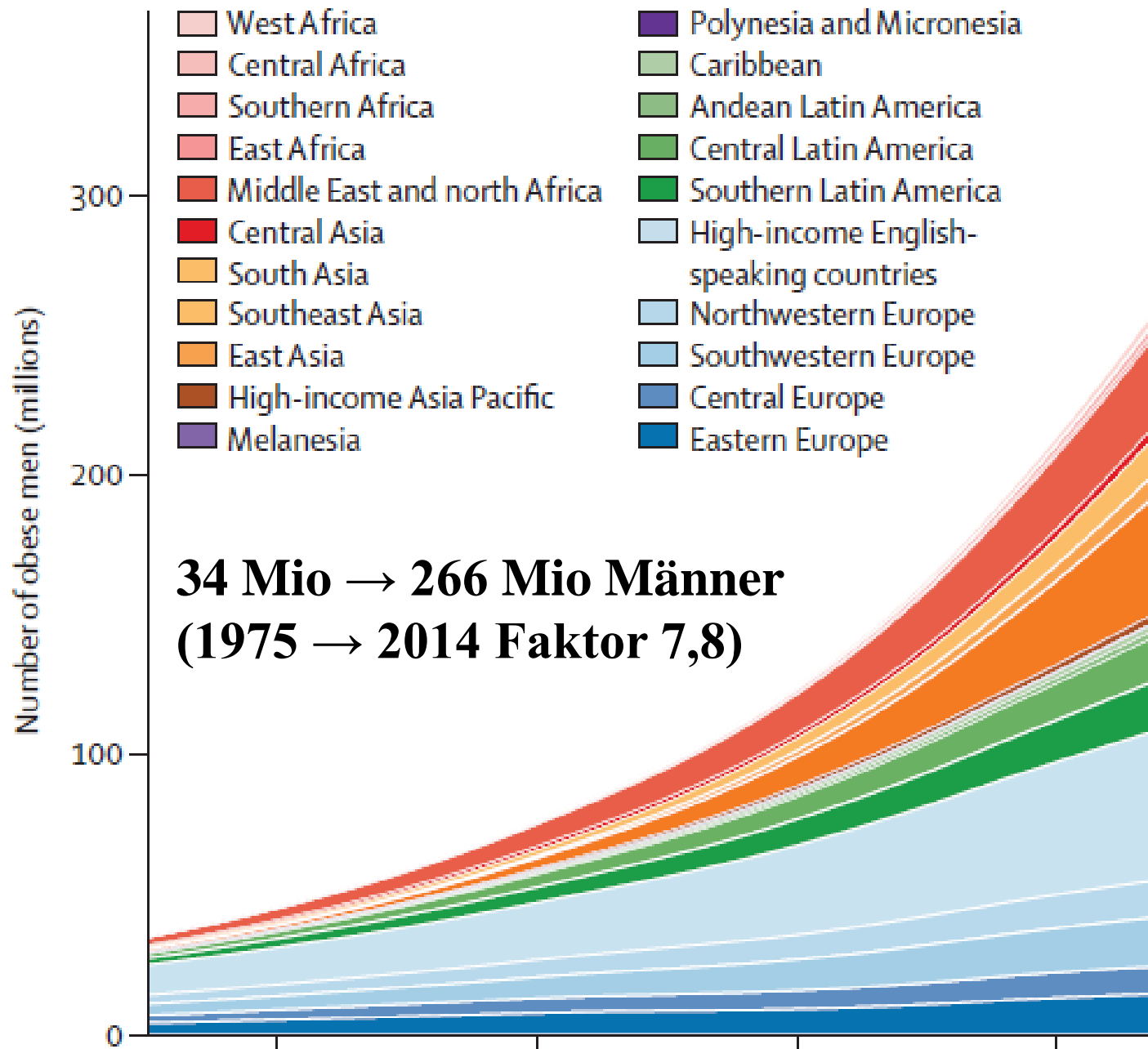
See [Comment](#) page 1349

\*NCD Risk Factor Collaboration members are listed at the end of the paper

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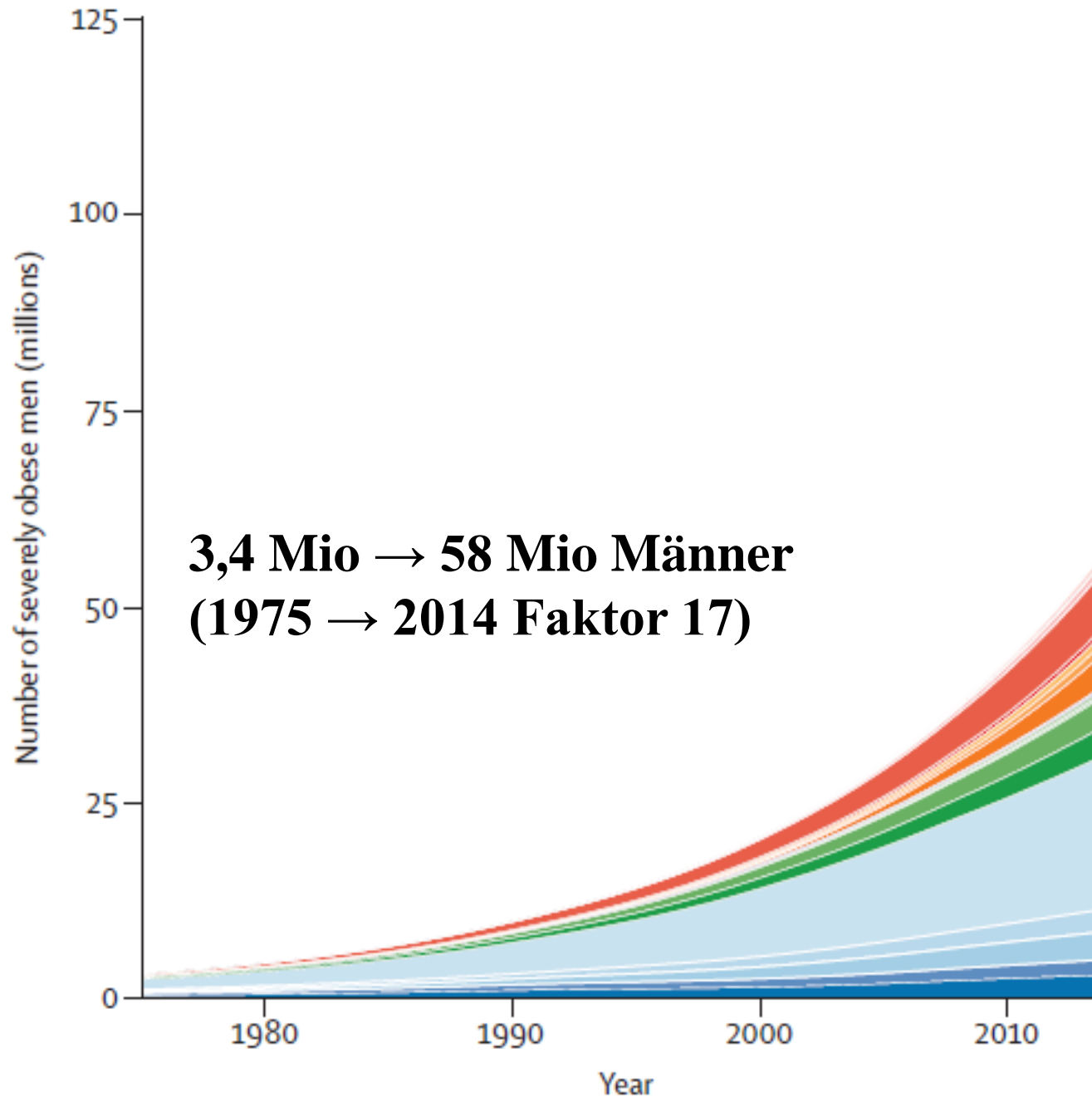


## Obese men





### Severely obese men



## Obesity In women

1975

Rank	Country	Millions of obese women (% of global obesity)
1	Russia	12.0 (17.0)
2	USA	10.5 (14.8)
3	Ukraine	3.7 (5.3)
4	Germany	3.1 (4.3)
5	Italy	2.4 (3.4)
6	UK	2.1 (3.0)
7	Poland	2.1 (3.0)
8	France	2.1 (2.9)
9	Brazil	1.9 (2.6)
10	China	1.7 (2.5)
11	Mexico	1.7 (2.4)
12	Egypt	1.5 (2.1)

14	Turkey	1.3 (1.8)
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**Lancet 2016;  
387:1377**

18	Iran	0.9 (1.3)
19	India	0.8 (1.2)

2014

Rank	Country	Millions of obese women (% of global obesity)
1	China	46.4 (12.4)
2	USA	46.1 (12.3)
3	India	20.0 (5.3)
4	Russia	18.7 (5.0)
5	Brazil	18.0 (4.8)
6	Mexico	13.9 (3.7)
7	Egypt	10.2 (2.7)
8	Turkey	9.9 (2.6)
9	Germany	8.5 (2.3)
10	Iran	8.0 (2.1)
11	UK	7.7 (2.1)

14	Italy	6.7 (1.8)
15	France	6.3 (1.7)

18	Ukraine	5.0 (1.3)
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21	Poland	4.3 (1.1)
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# NCD-RisC: Diabetes (2016)

## Worldwide trends in diabetes since 1980: a pooled analysis of 751 population-based studies with 4·4 million participants



NCD Risk Factor Collaboration (NCD-RisC)\*



### Summary

**Background** One of the global targets for non-communicable diseases is to halt, by 2025, the rise in the age-standardised adult prevalence of diabetes at its 2010 levels. We aimed to estimate changes in worldwide trends in diabetes, how likely it is for countries to achieve the global target, and how changes in prevalence, together with population growth and ageing, are affecting the number of people with diabetes.

**Methods** We pooled data from population-based studies that had collected data on diabetes through measurement of its biomarkers. We used a Bayesian hierarchical model to estimate trends in diabetes prevalence—defined as fasting plasma glucose of 7·0 mmol/L or higher, or history of diagnosis with diabetes, or use of insulin or oral hypoglycaemic drugs—in 200 countries and territories in 21 regions, by sex and from 1980 to 2014. We also calculated the posterior probability of meeting the global diabetes target if post-2000 trends continue.

**Findings** We used data from 751 studies including 4 372 000 adults from 146 countries. Global age-standardised diabetes prevalence increased from 4·3% (95% credible interval 2·4–7·0) in 1980 to 9·0% (7·2–11·1) in 2014 in men, and from 5·0% (2·9–7·9) to 7·9% (6·4–9·7) in women. The number of adults with diabetes in the world increased from 108 million in 1980 to 422 million in 2014 (28% due to the rise in prevalence, 40% due to population growth and

*Lancet* 2016; 387: 1513–30

Published Online

April 6, 2016

[http://dx.doi.org/10.1016/S0140-6736\(16\)00618-8](http://dx.doi.org/10.1016/S0140-6736(16)00618-8)

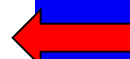
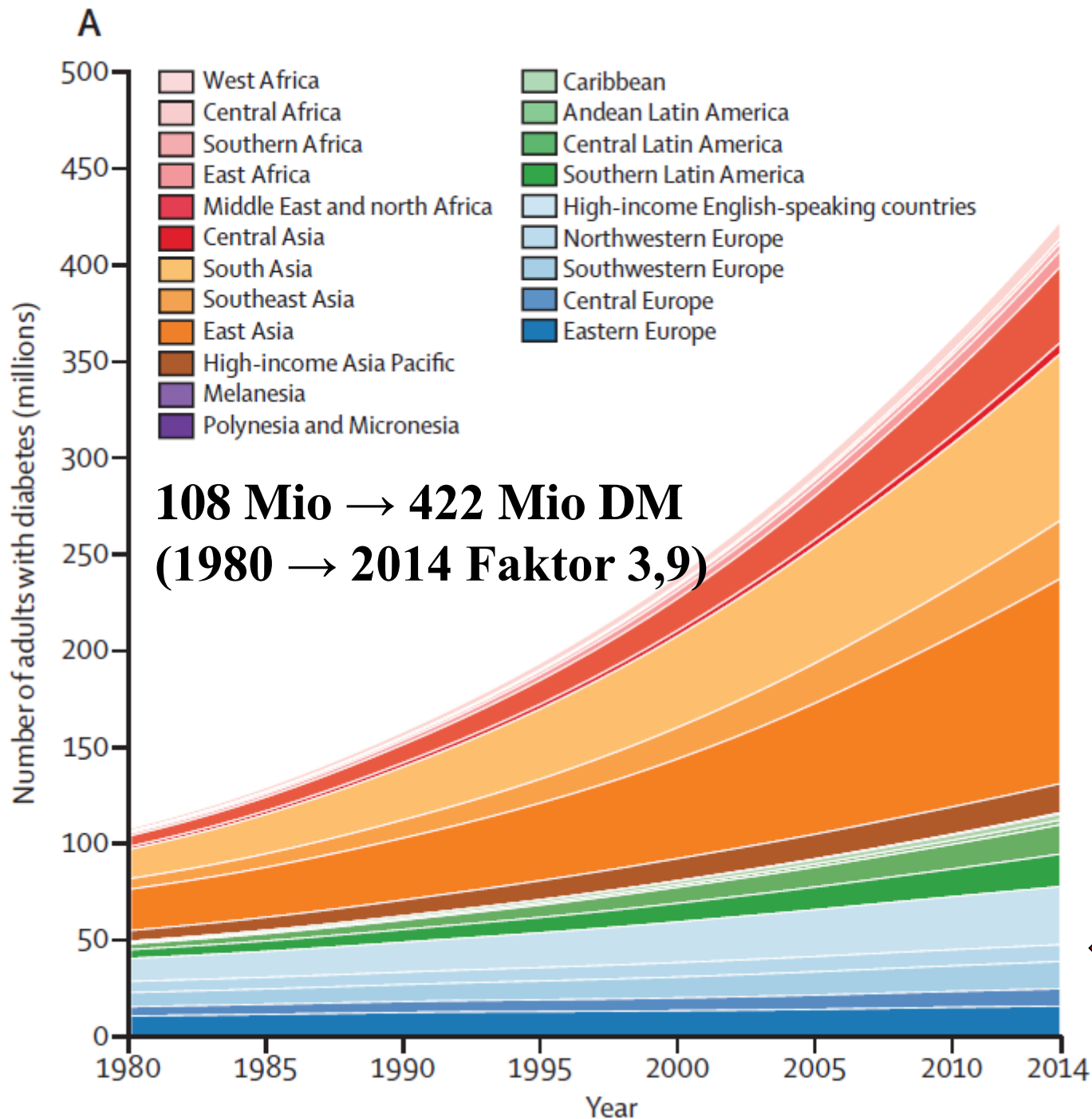
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[http://dx.doi.org/10.1016/S0140-6736\(16\)00618-8](http://dx.doi.org/10.1016/S0140-6736(16)00618-8)

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Lancet 2016;  
387:1513

B

- Change due to change in prevalence
- Change due to interaction between change in prevalence and change in population size and age structure
- Change due to change in population size and age structure
- Number of adults with diabetes in 1980

prevalence

interaction

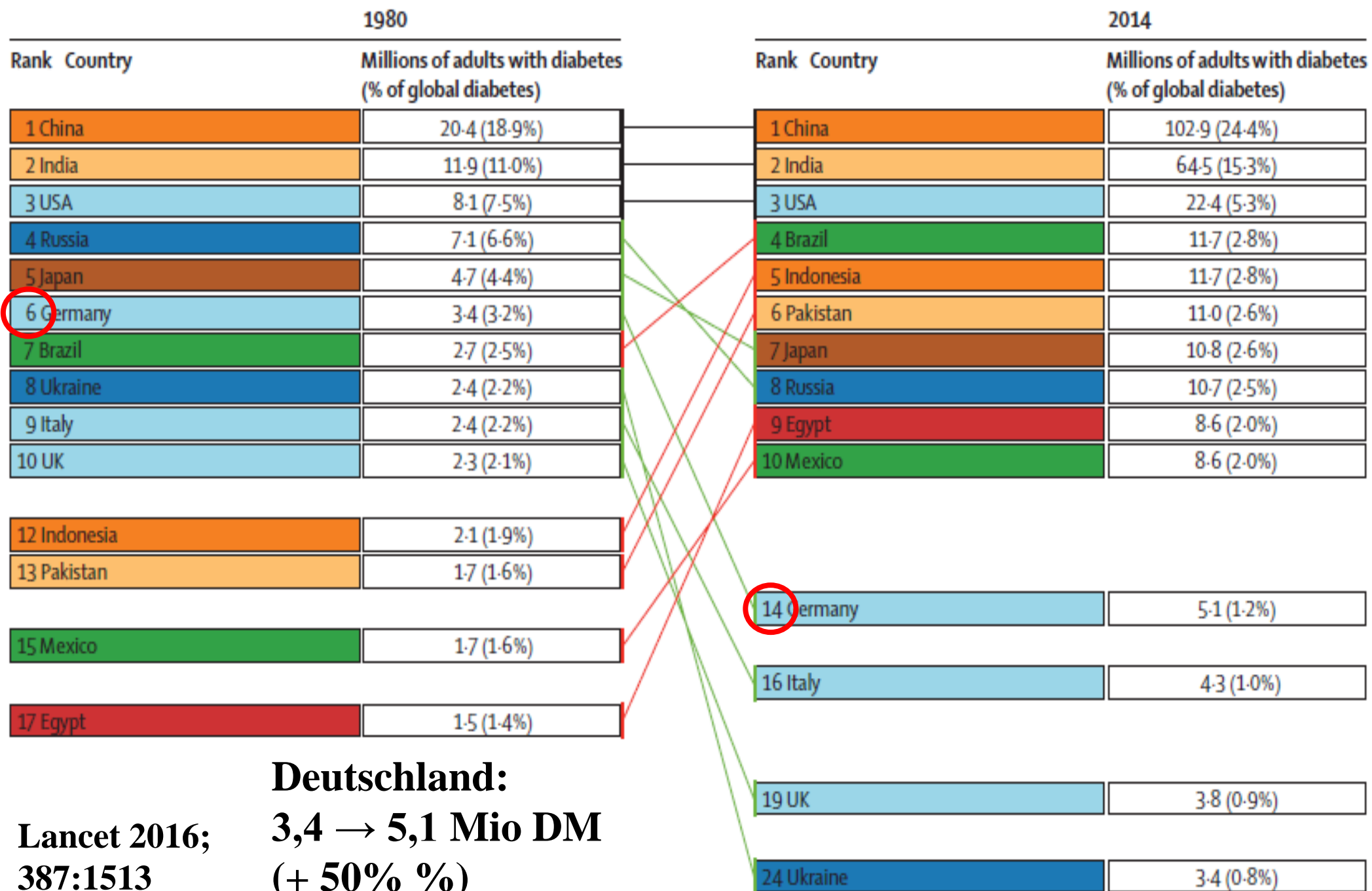
aging

1980 1985 1990 1995 2000 2005 2010 2014  
Year

400 Mio

100 Mio

Lancet 2016;  
387:1513



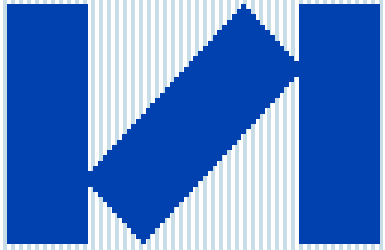
# Fazit #1: Stärken von NCD-RisC

- ❑ sehr langer Beobachtungszeitraum (seit 1975)
- ❑ enorme Grösse (19 bzw. 4 Mio Teilnehmer)
- ❑ weltweite Daten-erhebung
- ❑ enorme Bedeutung für Volksgesundheit („Massen-erkrankungen“)



# **Fazit #2: Lebensstil ist bedeutsam**

- ❑ körperliche Aktivität**
- ❑ gesunde Ernährung**
- ❑ Vermeiden von Übergewicht**
- ❑ Nicht-Rauchen**
- ❑ frühzeitiges multimodales Management von metabolischem Syndrom und Typ 2 Diabetes**



Interne  
Bregenz

**DANKE !**