

# Lifestyle Medicine in medical curricula.

## Why do we need it?

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**"What conflict of interest?!**  
**I work here in my spare time."**

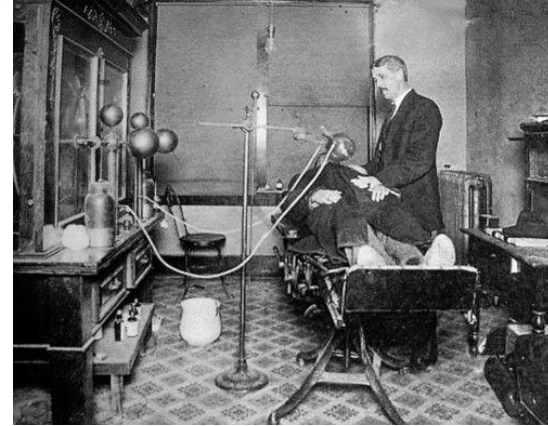
# THE MAIN MESSAGE

# LEADING CAUSES OF DEATH IN THE US

1900  
2.3  
2.6



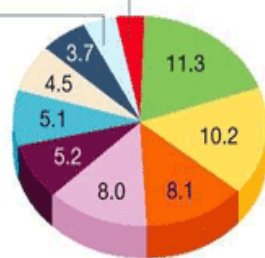
- Tuberculosis
- Pneumonia
- Diarrhoea
- Heart disease
- Liver disease
- Injuries
- Stroke
- Cancer
- Bronchitis
- Diphtheria



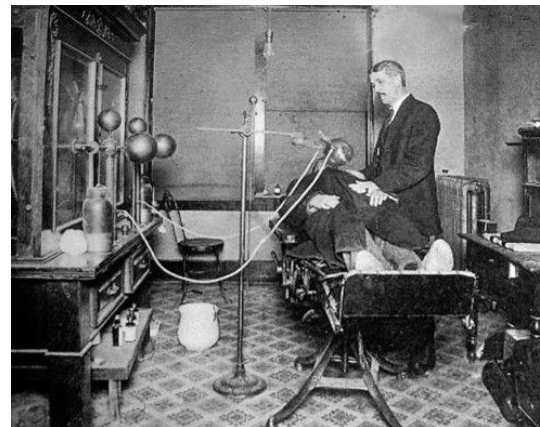
# LEADING CAUSES OF DEATH IN THE US

1900

2.3  
2.6

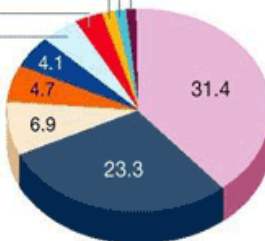


Tuberculosis  
Pneumonia  
Diarrhoea  
Heart disease  
Liver disease  
Injuries  
Stroke  
Cancer  
Bronchitis  
Diphtheria



1997

1.1  
1.1  
1.3  
2.7  
3.7



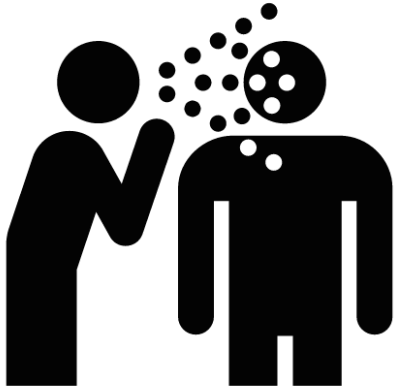
Heart disease  
Cancer  
Stroke  
Chronic lung disease  
Unintentional injuries  
Pneumonia / influenza  
Diabetes  
Suicide  
Chronic kidney disease  
Chronic liver disease





**THE WORLD HAS CHANGED**

## THEN: SIMPLE UNIFACTORIAL DISEASE



# NOW: COMPLEX SYSTEMS DISEASES



**Cardiovascular  
Diseases**



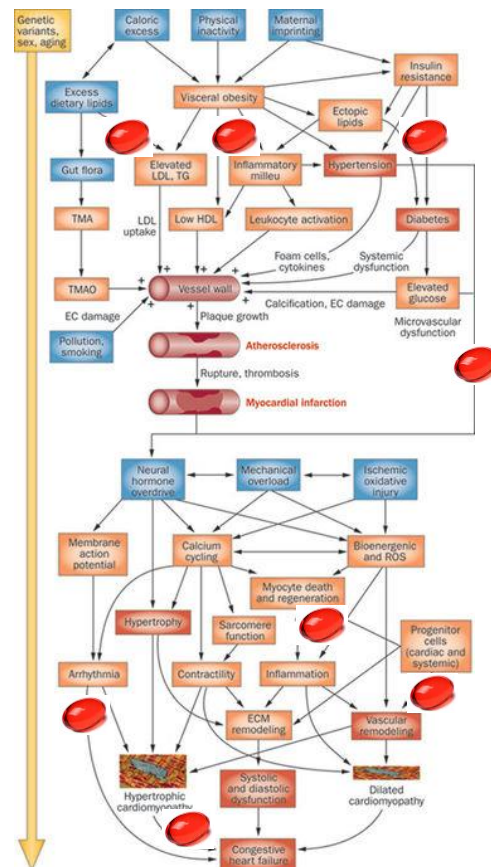
**Cancers**



**Diabetes**



**Chronic lung  
Diseases**

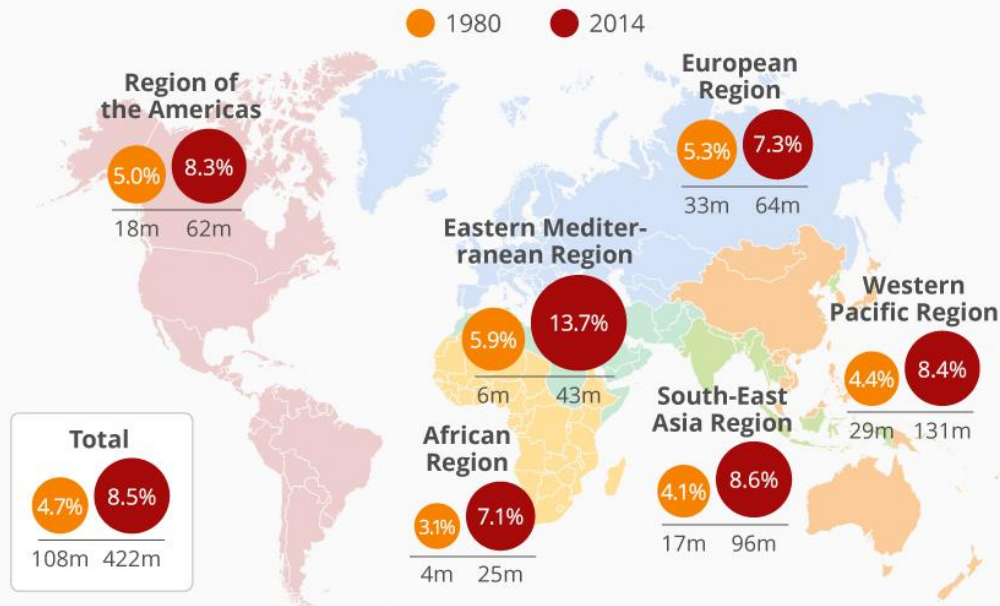




# EXPLODING DIABETES EPIDEMIC

## The Unrelenting March Of Diabetes

% prevalence and number of adults with diabetes by WHO region in 1980 and 2014\*



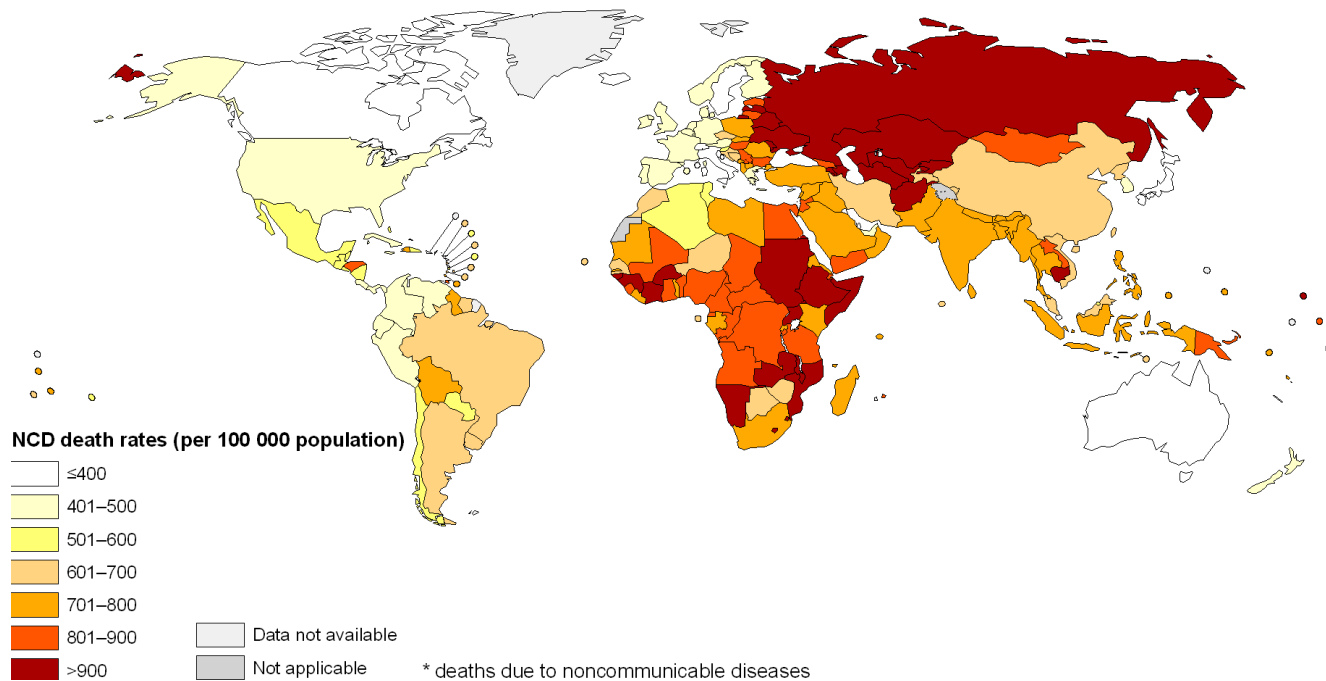
@StatistaCharts

\* Millions of people and % of total regional population

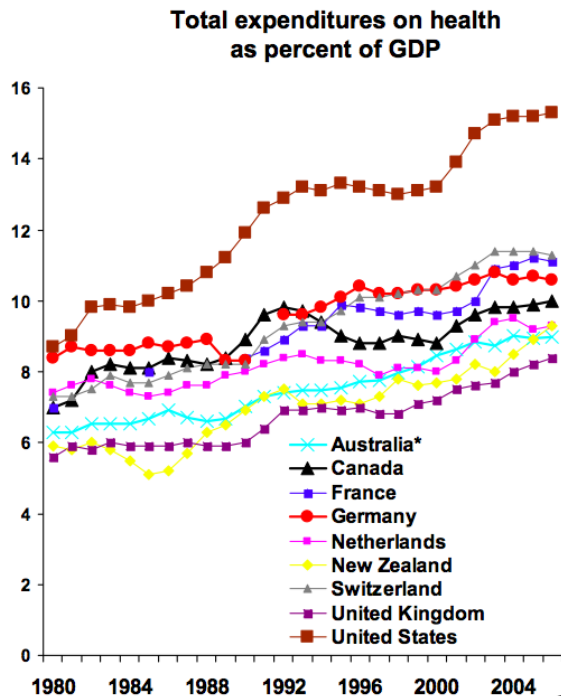
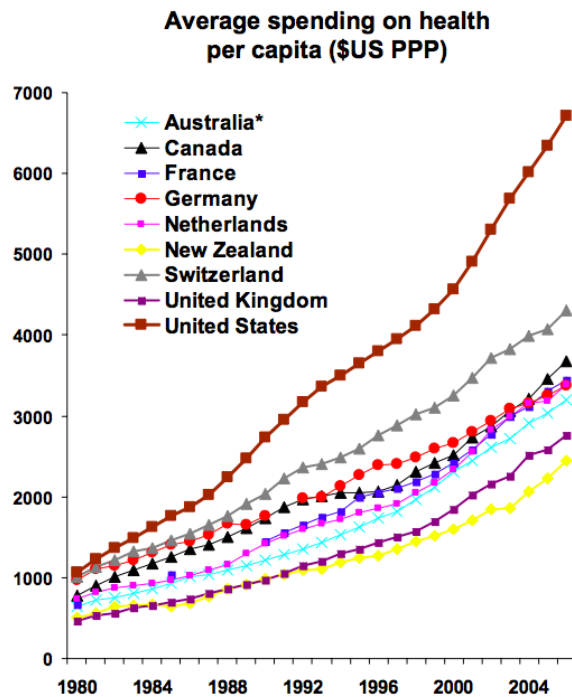
Source: World Health Organization

statista

# GLOBAL NCD DEATH RATE



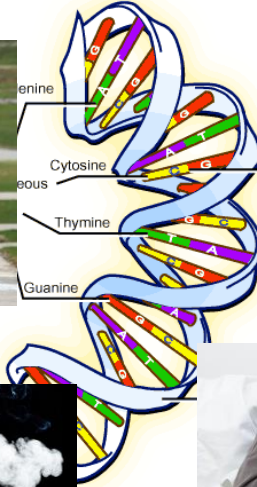
# COSTS OF GLOBAL HEALTH CARE



# ETIOLOGY



# ETIOLOGY OF NCD

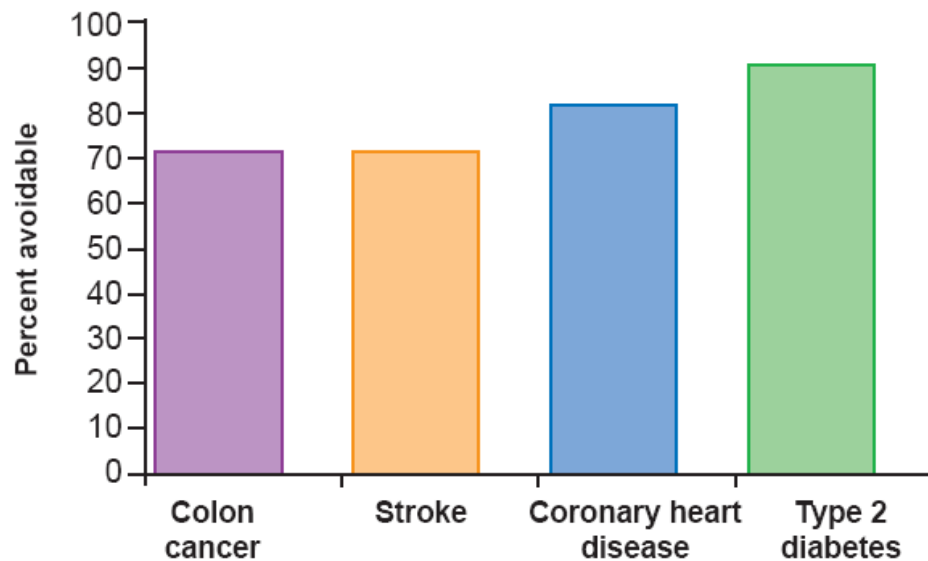




# ENVIRONMENT IS KEY

Population grouping	Region	Percentage prevalence
Europeans	Britain	2
	Germany	2
	Australia (1981)	2
	Australia (2002)	8
	United States	8
Native Americans	Chile Mapuche	1
	US Hispanic	17
	US Pima	50
Pacific Islanders	Nauru (1952)	0
	Nauru (2002)	41
New Guineans	Rural	0
	Urban	37
Aboriginal Australians	Traditional	0
	Westernized	23
Middle East	Yemen, traditional	4
	Yemenite Jews in Israel	13
	Lebanon, westernized	14
Black Africans	Rural Tanzania	1
	Urban South Africa	8
	United States	13
Chinese	Rural China	0
	Urban Singapore	9
	Urban Taiwan	12
	Urban Mauritius	13
Asian Indians	Rural India	0
	Urban Tanzania	11
	Urban India	12
	Urban Singapore	17
	Urban Mauritius	17
	Urban Fiji	22

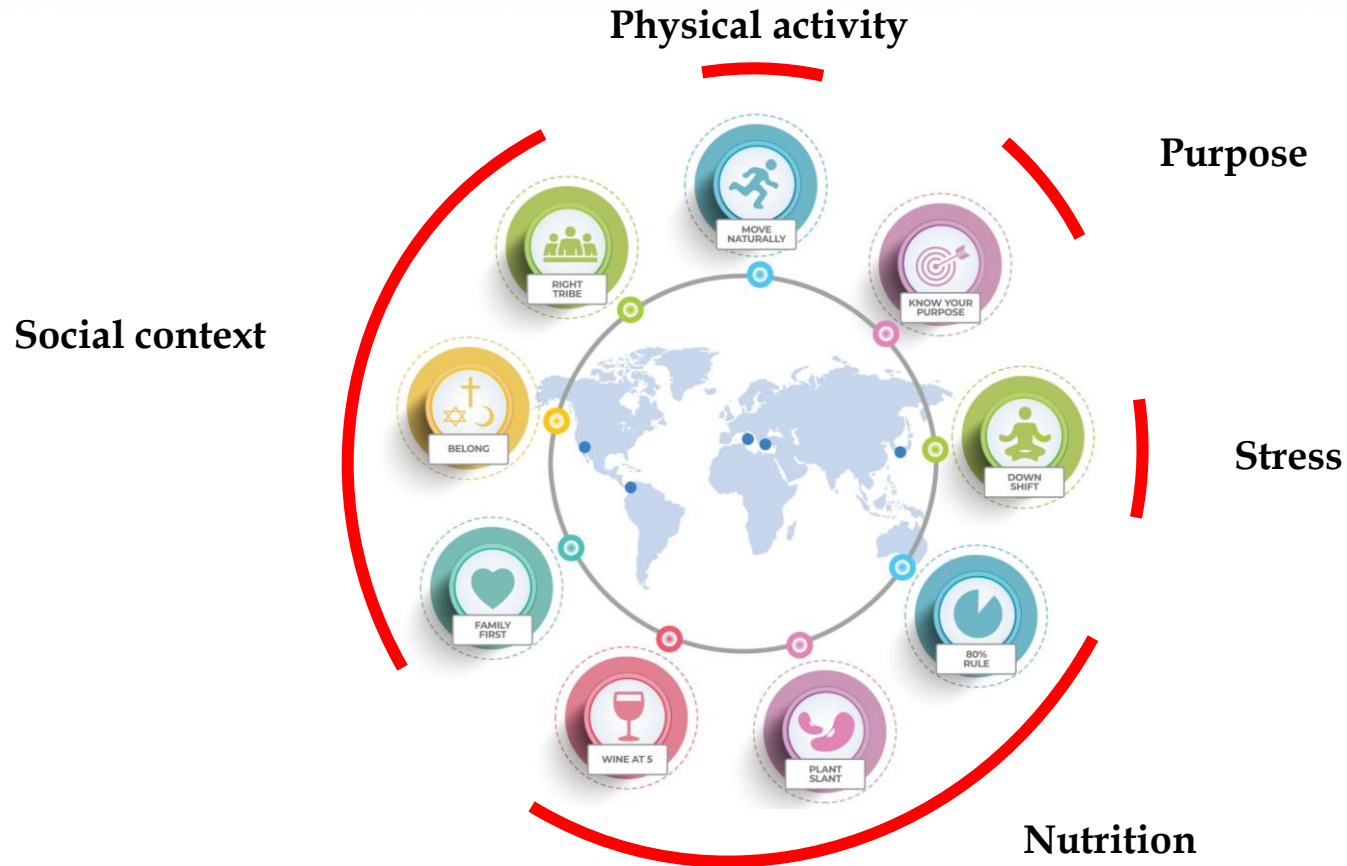
# NCD IS AVOIDABLE



# DIET IS KEY....

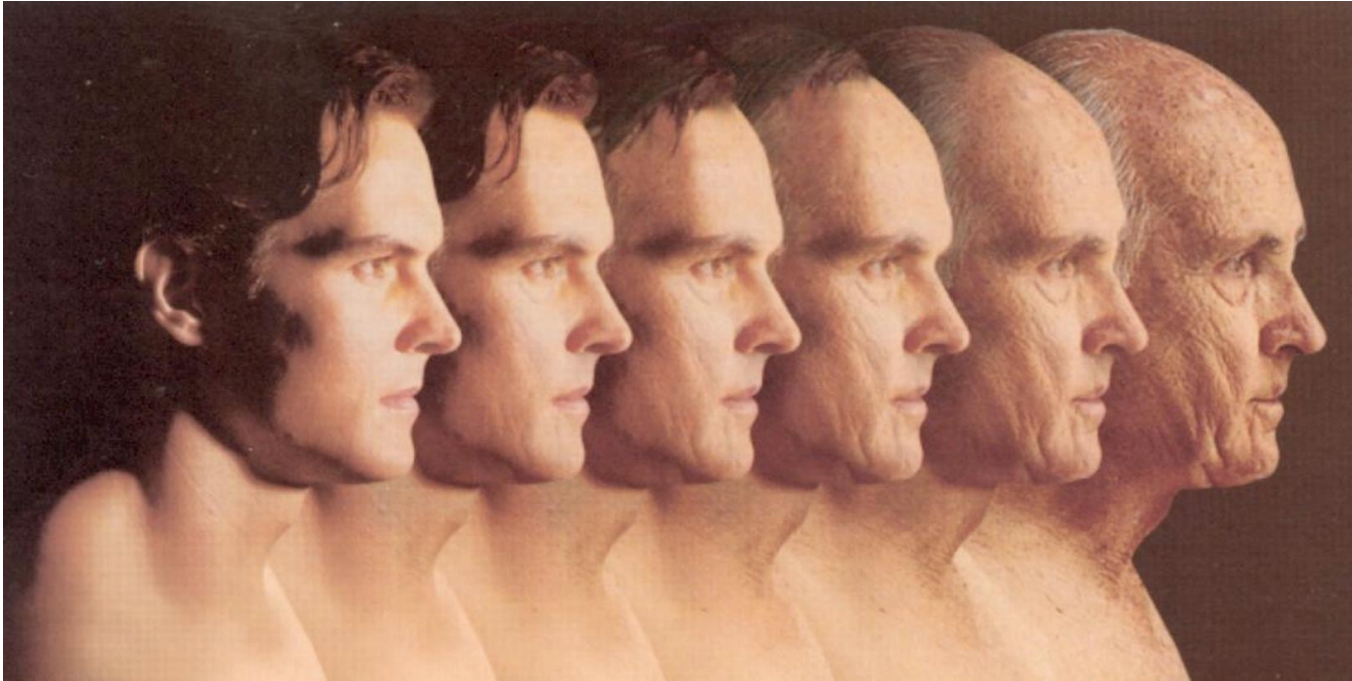


# BUT THERE IS MORE TO IT





# MISPERCEPTION 1



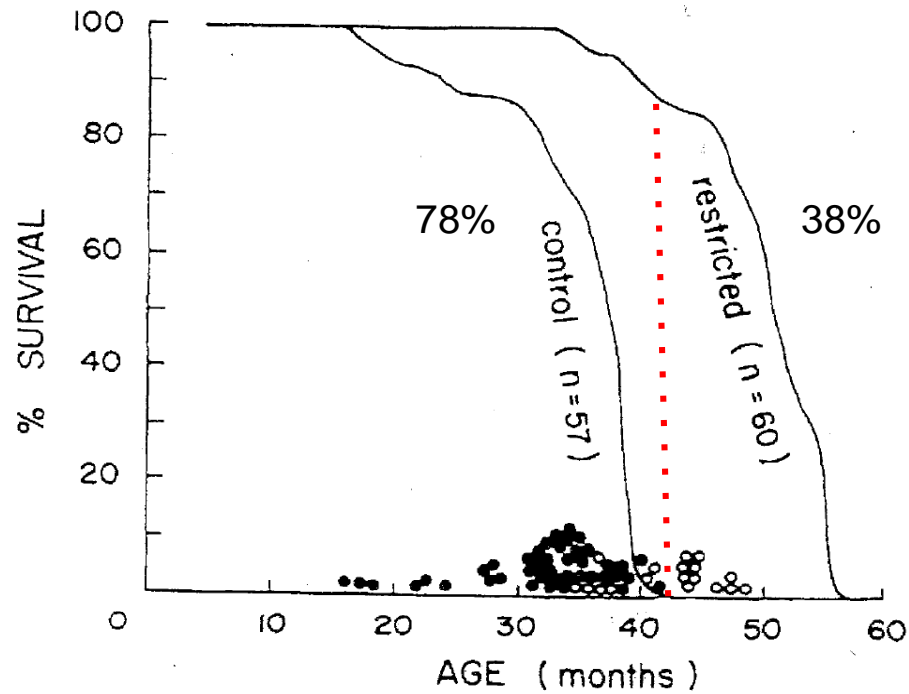
Cell damage



# MISPERCEPTION 1/2



## MISPERCEPTION 2



# CASE HISTORY





# WIM & SAÏDA





# LIFESTYLE MEDICINE: WHAT IS IT?



NUTRITION



EXERCISE



TOBACCO  
& ALCOHOL



STRESS  
MANAGEMENT



SLEEP



HEALTHY  
RELATIONSHIPS

## WHY DOCTORS?



**Inform**

**Inspire**

**Check**

# SPECIALIZED HEALTH COACH



**DEPRESSION**

**DIABETES**

**CARDIOVASCULAR DISEASE**

**INFLAMMATORY BOWEL DISEASE**

**COPD**

**CANCER**

# MEDICAL EDUCATION

## *WHAT DO WE NEED?*

# KNOWLEDGE OF LINKS BETWEEN LIFESTYLE AND DISEASE



NUTRITION



EXERCISE



TOBACCO  
& ALCOHOL



STRESS  
MANAGEMENT



SLEEP



HEALTHY  
RELATIONSHIPS



# HOLISTIC APPROACH

environment

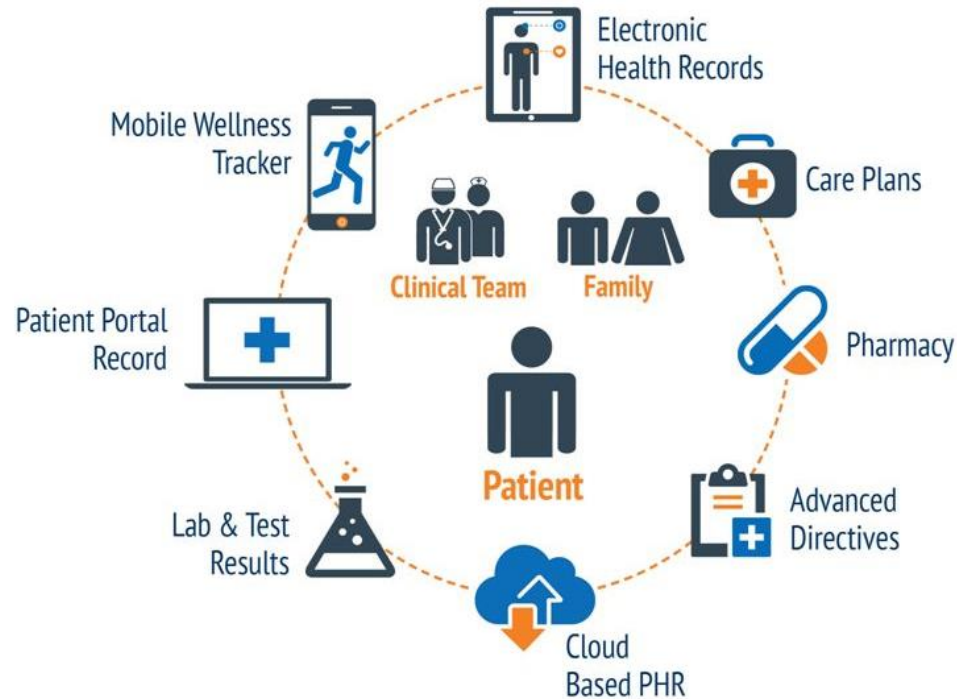
biology

behavior

spirituality



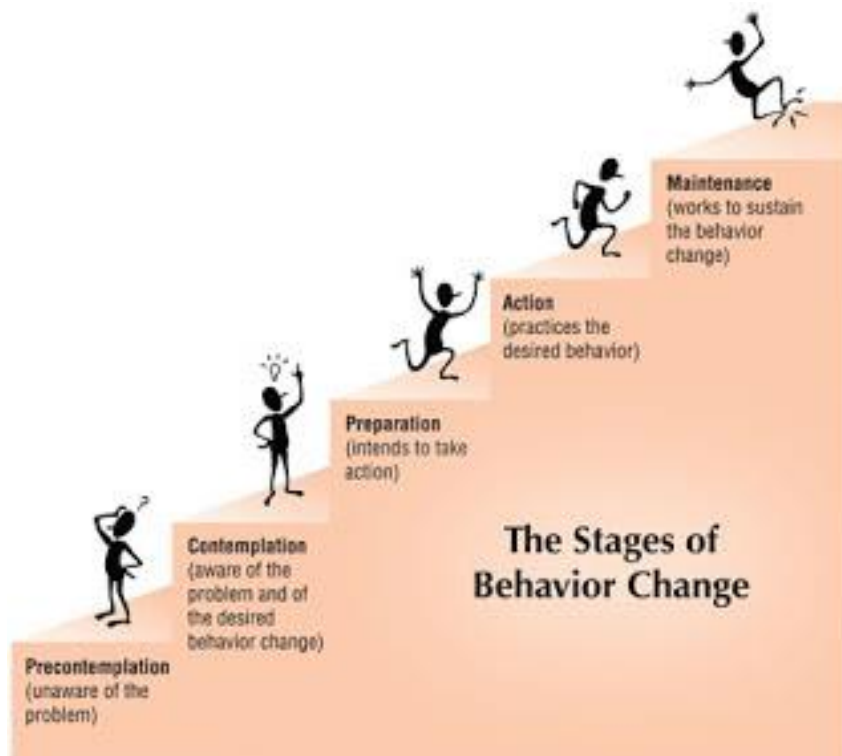
# PATIENT EMPOWERMENT



# COMMUNICATION SKILLS



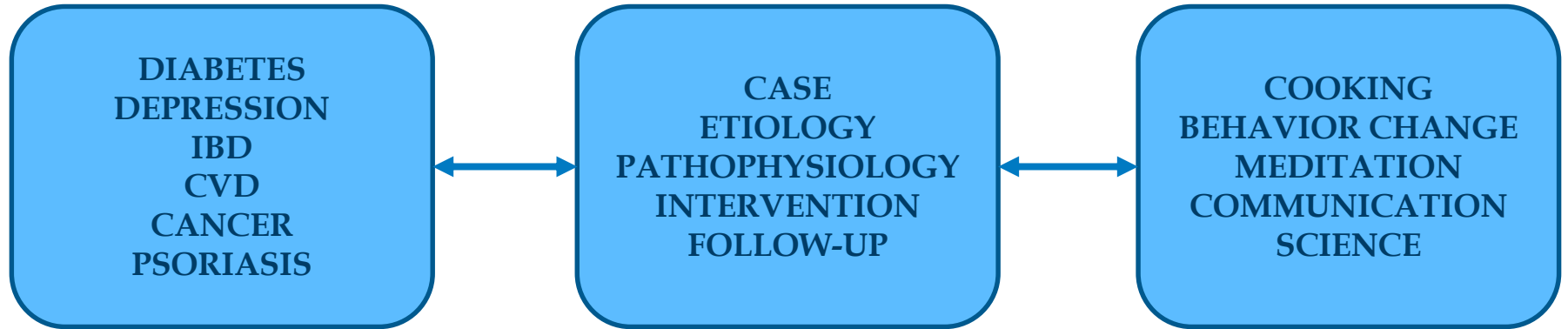
# BEHAVIOR CHANGE



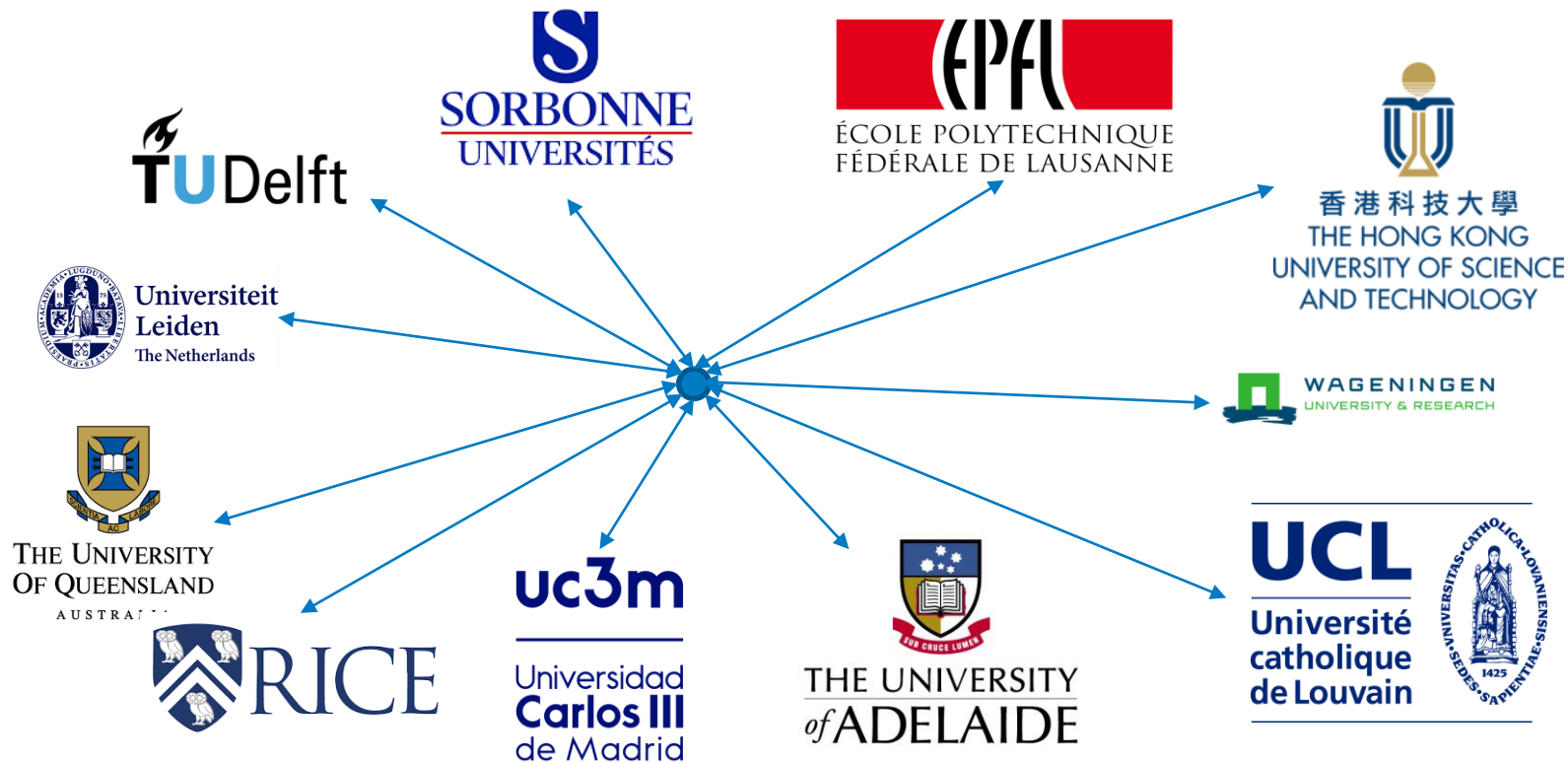




- **International, clinically oriented master course in lifestyle medicine**
- **Primary target group: medical master students**
- **Online**
- **Short video's, related text, references**
- **Assignments, scientific and practical**
- **Parallel course for patients (empowerment!)**



# VIRTUAL EXCHANGE





- **The disease burden has changed, medicine should change as well**
- **Our way of life is at the root of many non communicable diseases**
- **Lifestyle medicine tackles the roots of the etiology**
- **Patient empowerment is key**
- **Modern doctors are advisors, no more no less**