

Males															
#	Study	Sample Size	Average Age	Light			Medium			Heavy			Former		
				RR	95% CI	Weight	RR	95% CI	Weight	RR	95% CI	Weight	RR	95% CI	Weight
1	Hammer 1998	21936	60	1.30	(1.04, 1.63)	0.03	1.96	(1.57, 2.45)	0.03	2.62	(2.1, 3.28)	0.03	0.98	(0.78, 1.23)	0.03
2	Prescott 1998	13423	48	1.90	(1.7, 2.2)	0.10	2.40	(2.1, 2.7)	0.08	2.60	(2.3, 3.0)	0.09	1.30	(1.06, 1.59)	0.04
3	Jacobs 1999	12763	50	1.30	(1.17, 1.43)	0.16	1.80	(1.65, 1.93)	0.20	1.94	(1.87, 2.27)	0.16	1.10	(0.78, 1.65)	0.01
4	Qua 2000	1496	50	1.15	(0.93, 1.42)	0.04	1.76	(1.48, 2.09)	0.04	1.98	(1.65, 2.37)	0.05	1.09	(0.82, 1.44)	0.02
5	Lam 2001	7760	59	1.51	(1.23, 1.86)	0.04	2.01	(1.63, 2.47)	0.03	3.31	(2.69, 4.07)	0.04			0.00
6	Bronnum-Hansen 2004	8345	30	1.38	(1.25, 1.53)	0.16	1.85	(1.67, 2.05)	0.12	2.55	(2.08, 3.14)	0.04	1.19	(1.08, 1.31)	0.16
7	Dall 2004	24321	36	1.79	(1.62, 1.98)	0.16	2.17	(1.96, 2.40)	0.12	2.61	(2.36, 2.88)	0.15	1.31	(1.19, 1.45)	0.15
8	Horawa 2004	19495	52	1.30	(1.22, 1.38)	0.04	1.71	(1.64, 2.03)	0.04	1.80	(1.51, 2.14)	0.05	1.38	(1.12, 1.70)	0.03
9	Ueshima 2004	3972	51	1.14	(0.91, 1.44)	0.03	1.30	(1.01, 1.71)	0.02	1.55	(1.17, 2.04)	0.02	1.17	(0.90, 1.52)	0.02
10	Vollet 2006	26034	43	2.24	(1.99, 2.53)	0.11	2.60	(2.35, 2.87)	0.13	3.04	(2.71, 3.40)	0.12	1.31	(1.18, 1.46)	0.13
11	Ekborg-Aronsson 2007	13888	46	1.43	(1.23, 1.67)	0.07	2.02	(1.83, 2.23)	0.13	2.31	(2.10, 2.54)	0.17	1.05	(0.95, 1.17)	0.14
12	CHS	2462	65+	1.24	(0.78, 1.96)	0.01	2.13	(1.65, 2.73)	0.02	2.84	(2.02, 3.99)	0.01	1.25	(1.09, 1.44)	0.08
13	HRS	10993	50+	1.55	(1.25, 1.93)	0.03	2.23	(1.82, 2.74)	0.03	2.25	(1.96, 2.58)	0.08	1.24	(1.12, 1.37)	0.15
14	NHANES III	1939	50+	1.43	(0.98, 2.09)	0.01	1.83	(1.37, 2.43)	0.02	2.77	(1.90, 4.04)	0.01	1.18	(0.97, 1.44)	0.04
Weighted average				1.47			2.02			2.38			1.21		

Females															
#	Study	Sample Size	Average Age	Light			Medium			Heavy			Former		
				RR	95% CI	Weight	RR	95% CI	Weight	RR	95% CI	Weight	RR	95% CI	Weight
1	Hammer 1998	21936	60	1.47	(1.18, 1.84)	0.05	2.60	(2.08, 3.25)	0.05	3.74	(2.99, 4.68)	0.09	1.85	(1.48, 2.31)	0.04
2	Prescott 1998	17386	48	2.20	(2.0, 2.5)	0.22	2.70	(2.4, 3.1)	0.15	3.60	(2.9, 4.5)	0.10	1.20	(0.98, 1.47)	0.05
3	Al-Jabiriy 2001	3542	62	1.43	(0.96, 2.14)	0.02	1.64	(1.24, 2.17)	0.03	2.19	(1.32, 3.65)	0.02	1.31	(1.11, 1.55)	0.07
4	Lam 2001	7864	59	1.47	(1.19, 1.83)	0.06	1.84	(1.49, 2.27)	0.05	2.63	(2.14, 3.24)	0.11			0.00
5	Bronnum-Hansen 2004	8345	30	1.36	(1.23, 1.50)	0.27	1.84	(1.66, 2.03)	0.24	2.59	(2.04, 3.05)	0.12	1.18	(1.07, 1.30)	0.22
6	Horawa 2004	17107	51	1.47	(1.04, 2.08)	0.02	1.44	(1.06, 1.94)	0.03	1.35	(0.81, 2.26)	0.02	1.10	(0.56, 2.16)	0.00
7	Ueshima 2004	4957	50	1.31	(0.99, 1.74)	0.03	1.31	(0.99, 1.74)	0.03	1.32	(0.54, 3.22)	0.01	1.21	(0.76, 1.92)	0.01
8	Vollet 2006	24895	43	1.80	(1.59, 2.04)	0.17	2.03	(1.82, 2.26)	0.20	2.62	(2.20, 3.12)	0.15	1.25	(1.11, 1.42)	0.14
9	Ekborg-Aronsson 2007	1499	49	1.74	(1.36, 2.18)	0.05	2.44	(2.07, 2.87)	0.09	2.42	(2.00, 2.92)	0.13	1.26	(1.04, 1.52)	0.06
10	CHS	3323	65+	1.78	(1.25, 2.58)	0.02	1.75	(1.4, 2.19)	0.05	4.05	(2.61, 6.27)	0.02	1.20	(1.03, 1.4)	0.09
11	HRS	13447	50+	1.60	(1.28, 1.99)	0.06	1.90	(1.56, 2.33)	0.06	2.27	(1.95, 2.64)	0.20	1.20	(1.09, 1.31)	0.25
12	NHANES III	7259	50+	1.33	(0.96, 1.96)	0.02	1.57	(1.18, 2.08)	0.03	3.17	(2.10, 4.78)	0.03	1.16	(0.97, 1.37)	0.07
Weighted average				1.40			2.02			2.46			1.23		

ROKOK DAN RISIKO KEN



FAKTA 2: KORBAN ROKOK

- Three million deaths annually because of smoking – means one death after every 8 seconds.
- Ten million deaths annually expected by 2020 - means one death after every three seconds.
- Developed countries have reduced smoking by 10% while developing countries have increased by 60% after 1970.



ROKOK PADA PELAJAR (Study of smoking in RMC students(2001))

- Total No. of students; **182**
 - Male: **68**
 - Females: **114**
- Smokers:
 - Males: **18%**
 - Females: **7%**



JENIS ROKOK

- Cigarette - Most common and most harmful
- Sheesha
- Bidi
- Tobacco chewing
- Hookah(Hubble bubble)
- Cigar
- Kreteks(clove cigarettes)
- Snuff – Moist & Dry
- E-cigarette

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EFEK ROKOK PADA REMAJA

Usually the adolescents (mostly of 10-15 yrs) indulge in smoking as a result of

- curiosity,
- adventurism,
- rebelliousness and adulthood,
- a manly and masculine act that will lead them to happiness, fitness, wealth, power and sexual success.
- Attractive advertisements influence the immature and unstable minds.

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KOMPOSISI KANDUNGAN ROKOK

- About 4000 toxic substances are present in tobacco
- Most important and dangerous constituents:
 - Nicotine
 - Carbon Monoxide
 - Tar

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ROKOK DAN KESEHATAN

- An important causative/risk factor for various diseases.
- About 25 diseases caused/aggravated by smoking. e.g.
 - Lung cancer: 80-90% deaths due to smoking. Incidence 10 times more than non-smokers.
 - Chronic bronchitis
 - Emphysema: 80- 95%
 - Ischaemic heart disease: 20-30% deaths . Risk is twice than non-smokers
 - Obstructive peripheral vascular disease

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ROKOK DAN KESEHATAN

- Cerebrovascular disease
- Cancer of tongue, oesophagus, larynx & pancreas, Gastro-duodenal ulcers
- Cancer of the cervix and endometrium
- Cancer of the urinary bladder
- Still births, abortions
- Neonatal deaths
- Fracture of hip, wrist and vertebrae

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MEROKOK DAN KEHAMILAN

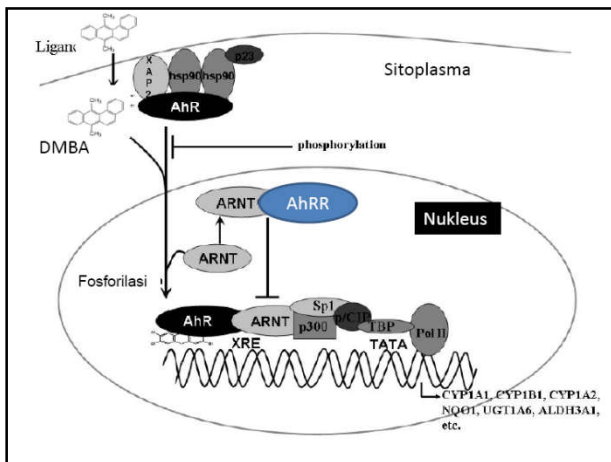
- Foetal retardation and growth retardation in the children.
- Children of smokers are more prone to become smokers later on.

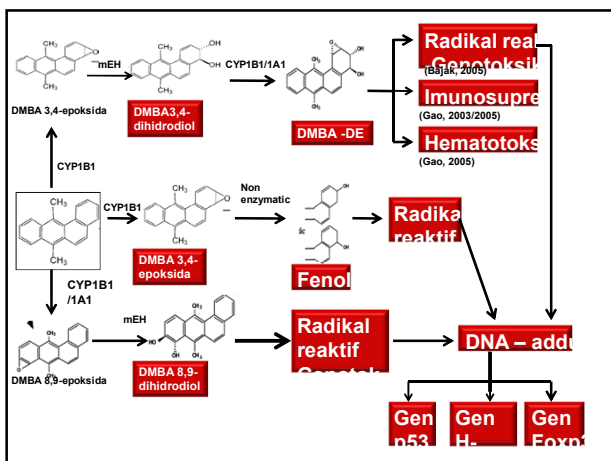
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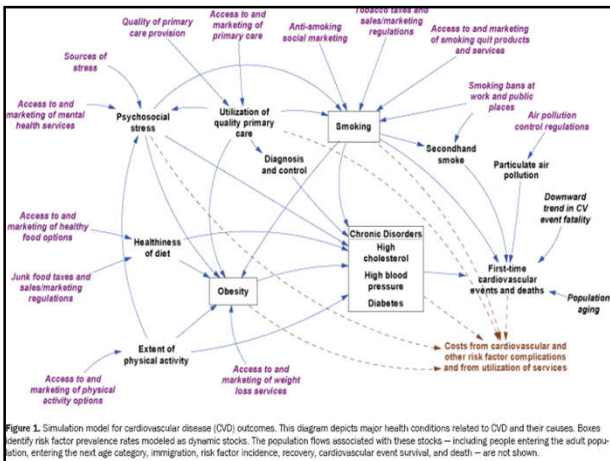
DAMPAK IBU PEROKOK

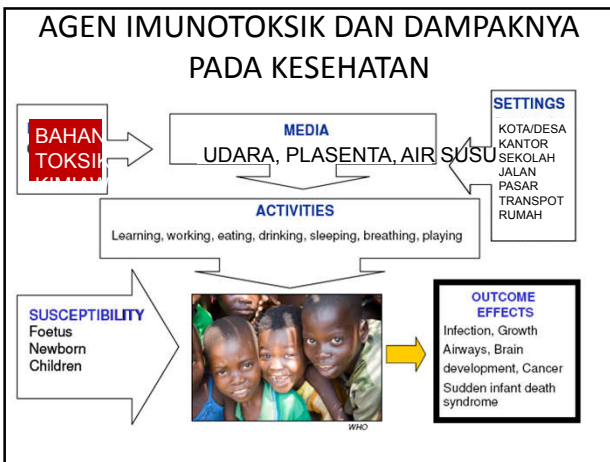
Exposure to second-hand tobacco smoke	Pooled odds ratio	95% confidence interval
Prenatal maternal smoking (unadjusted)	2.77	2.45 - 3.13
Prenatal maternal smoking (adjusted)	2.08	1.83 - 2.38
Postnatal maternal smoking (after controlling for prenatal smoking)	1.94	1.55 - 2.43


MATERNAL SMOKING – SUDDEN INFANT DEATH SYNDROME











Occupational Hazards & Smoking

Effect of smoking in the presence of pollutants like asbestos, cotton, radioactive environment is either multiplicative or additive.

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ROKOK DAN DAMPAK SEKITAR

- **Children**
 - Sudden infant death
 - Respiratory distress
 - Otitis media
- **Adults**
 - Leads to discomfort, distress to asthmatics
 - Nicotine is detected in blood and urine of passive smokers.
 - Passive smoking by adults may lead to Ca-cervix, CA lung, and coronary heart disease.

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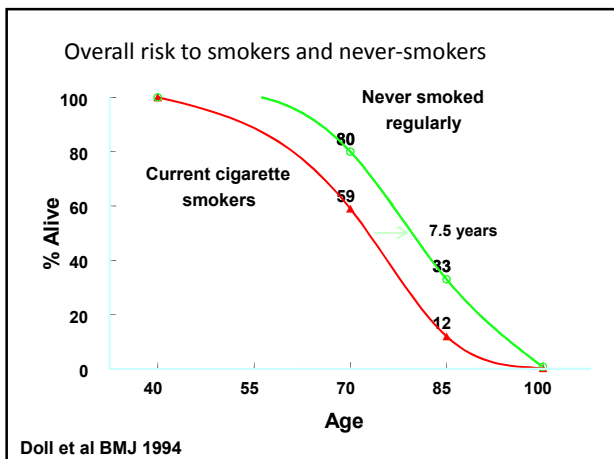
DAMPAK ORTU PEROKOK

- ↑ 94% sudden infant death syndrome
- ↑ 60% acute respiratory illnesses
- ↑ 24 – 40% chronic respiratory symptoms
- ↑ 21% asthma and exacerbation of asthma symptoms
- ↓ growth in lung functioning
- ↑ 50% recurrent otitis media (repeated ear infection)
- ↑ 60-100 % cleft palate
- ↑ neuro-behavioral deficits
- ↑ neurodevelopmental deficits
- ↑ childhood cancer

Respiratory symptoms	Number of studies	Odds ratio	95% confidence interval
Wheezing	41	1.24	1.17 - 1.31
Cough	34	1.40	1.27 - 1.53
Phlegm	7	1.35	1.13 - 1.62
Breathlessness	6	1.31	1.08 - 1.59

Health risks of smoking

- **Principal fatal diseases caused by smoking are cancer, COPD and CVD**
- **In addition, smoking is an important cause of morbidity**
- **Risks are dose and duration dependent**
- **On average, cigarette smokers lose 7.5 years of life**



- ### Health benefits of smoking cessation
- Increased longevity
 - Stabilisation of lung cancer risk (but not absolute decline)
 - Heart disease risk declines towards non-smoker level over 10 years
 - Accelerated decline in lung function reduced
 - Improved reproductive health
 - Improved recovery from surgery

- ### Effects of quitting
- 20 mins: blood pressure and pulse rate return to normal
blood nicotine & CO halved, oxygen back to normal
 - 8 hours: CO eliminated; lungs start to clear mucus etc.
 - 24 hours: nicotine eliminated; senses of taste & smell much improved.
 - 48 hours: breathing easier; bronchial tubes begin to relax; energy levels increase
 - 72 hours:
- Source: Health Education Authority

Effects of quitting

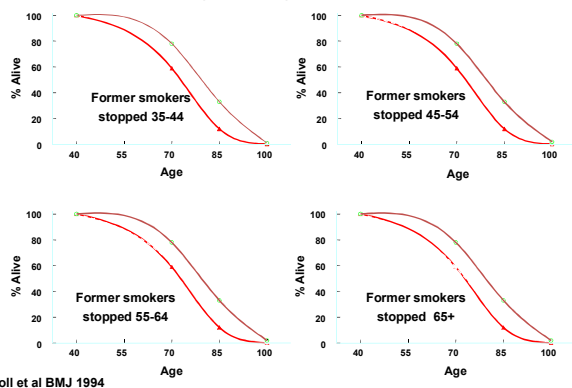
- 2-12 weeks: circulation improves.
- 3-9 months: lung function increased by <10%; coughs, wheezing decrease
- 5 years: risk of heart attack halved. :
- 10 years: risk of lung cancer halved compared to continued smoking; risk of heart attack equal to never-smoker's.

Source: Health Education Authority

Effects of cessation on total mortality

- One half of all cigarette smokers will be killed by smoking (BMJ 1994;309:901-11)
- Those who stop smoking before 35 years of age avoid almost all of the excess risk
- Between the ages of 35 and 69, 41% of smokers will die compared with 20% of non-smokers
- For every five smokers that quit before middle age, one avoids premature death

Effects on survival after ages 45, 55, 65 & 75 of stopping smoking in previous decade

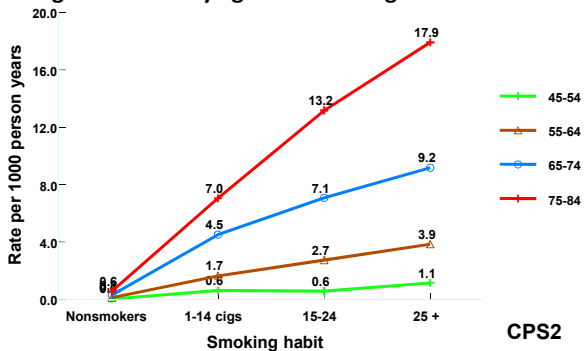


Doll et al BMJ 1994

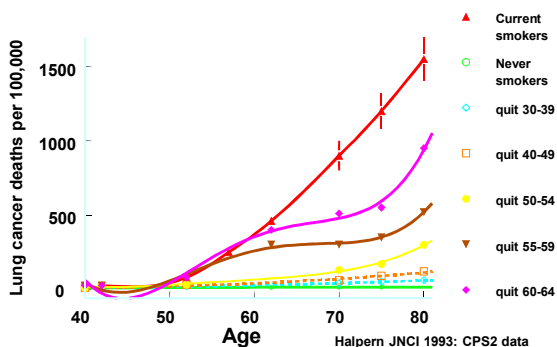
Effects of cessation on cancer

- At age 60, 1 in 17 men or 1 in 24 women that stop smoking may avoid lung cancer (BMJ 2000;321:323-9)
- At age 50, 1 in 10 men or 1 in 14 women that stop smoking avoid lung cancer
- At age 40, 1 in 8 men; at age 30, 1 in 7 men that stop smoking avoid lung cancer
- Former smokers reduce their incidence of laryngeal, oral cavity & oesophagus, pancreatic, colorectal, and urinary tract cancer

Lung cancer risk by age and smoking habit



Lung cancer risk by age of quitting



Smoking cessation and CHD

“Healthy” smokers

- Mortality risk may take up to 10 years after cessation to reach that of non-smoker;
- Acute myocardial infarction (heart attack) risk declines in only 3-4 years

Smokers with CHD

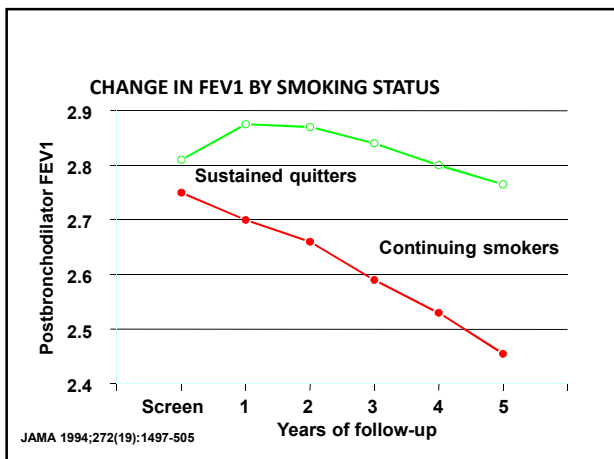
- Cessation halves risk during 1-13 years of follow-up (Eur Heart J 1999;20:1773)
- One of every five smokers that quits avoids CHD event during 10 years

Blood pressure, stroke, renal function

- Blood pressure increased (independently of body weight) after cessation in several long-term studies
- 24-hour BP monitoring showed daytime lowering of BP after 1 week of cessation (Hypertension 1999;33:586)
- Former smokers have decreased carotid artery stenosis compared to current smokers
- Cessation reduces risk of stroke to non-smoker level after 5 years
- Drug treatment of hypertension is less effective in smokers
- Former smokers have less renal function abnormalities than continuing smokers

Pulmonary function

- Lung health study (JAMA 1994;272:1497)
 - Randomised
 - Slower decline in pulmonary function in intervention group
 - Fewer respiratory symptoms



Effects of cessation on reproductive health

- Women who stop before pregnancy: no adverse effects of smoking on infants
- Stopping between the 1st prenatal care visit and week 32 prevents deficits in infant birth weight, head circumference and brain:body weight ratio but does not completely prevent deficits in crown-heel length or increased ponderal index (Am J Epidemiol 2000;152:219)
- Former smokers have the same prevalence of erectile dysfunction (impotence) as non-smokers

Postoperative complications

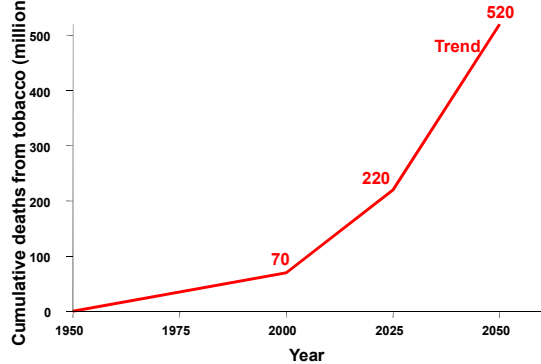
- Danish study (Lancet 2002;359:114)
 - Randomised
 - Cessation 6-8 weeks before surgery
 - Fewer wound-related complications, reduced cardiovascular complications and secondary surgery
 - Overall complication rate was 18% in the smoking intervention group and 52% in controls
 - Shorter hospital stay

Other benefits of cessation

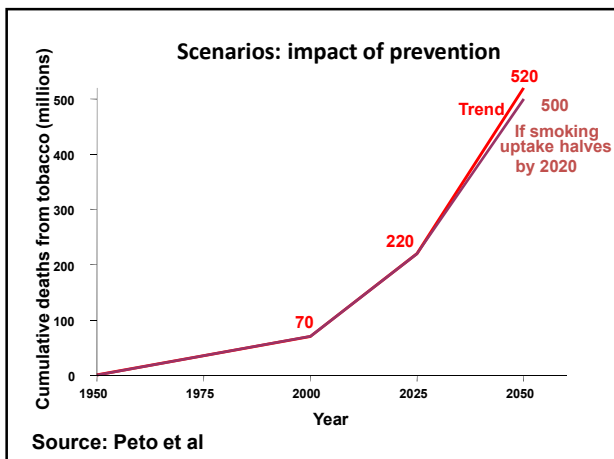
- Risk of bone loss, hip fracture and periodontal disease minimised by cessation
- Rheumatoid arthritis risk reduced
- Cataract risk reduced
- Aortic aneurysm
- Peripheral arterial disease
- Others

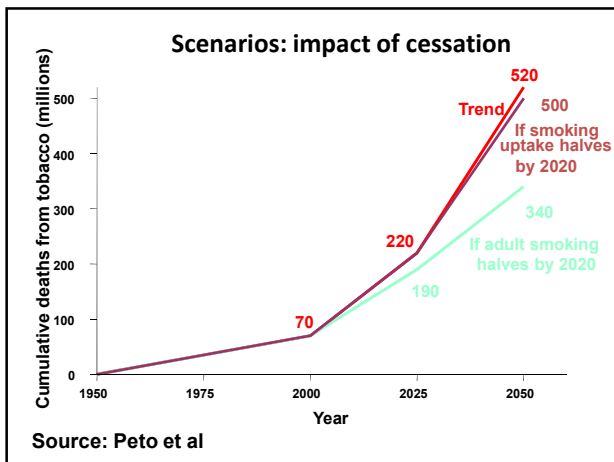
The central role of smoking cessation in limiting global smoking-attributable mortality over the next 50 years

Scenarios for future deaths from tobacco



Source: Peto et al







Treatment

- **Drugs**
 - Nicotine replacement therapy
 - Patches
 - Gums
 - Nasal sprays
 - Inhalers
 - E-cigarettes
 - Hypnotics
- **Group therapy**

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Treatment

Real Treatment is by

- Motivation
- Commitment
- Determination and
- Effort and support in the struggle to quit smoking.

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Preventive measures

- Recommendations of WHO Framework Convention on Tobacco Control (FCTC) should be implemented.
- Govt.'s responsibility for implementation of recommendations and legislation.
- Ascertain the existence of smoking as health problem.
- Encourage not to start smoking.
- Encourage to stop smoking.
- Multi-sectoral approach.

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Preventive measures

- Anti-smoking health education to general public but special emphasis to focus on children and to the occupational groups.
- Highlighting the positive effects of *NOT* smoking and *QUITTING* smoking.
- Awareness for the rights of non-smokers.
- Legislative action

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Tobacco Free Initiative (TFI) of WHO
Bans on direct and indirect tobacco advertising
Tobacco tax and price increases
Smoke-free environments in all public and workplaces
Large clear graphic health messages on tobacco packaging

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