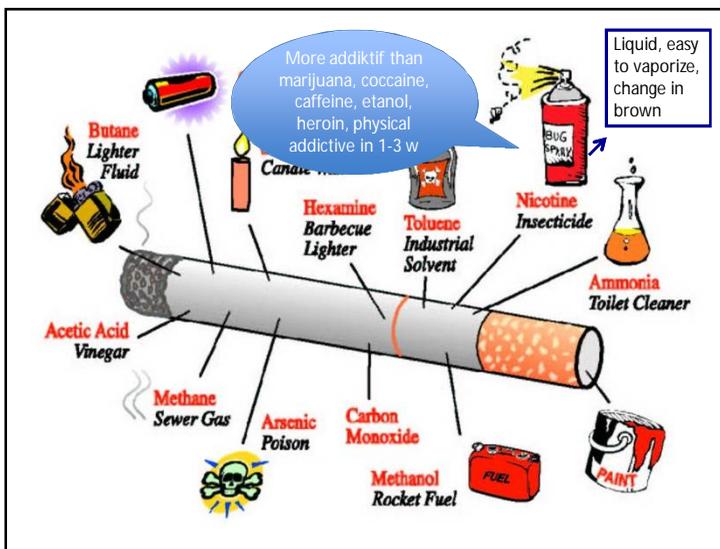
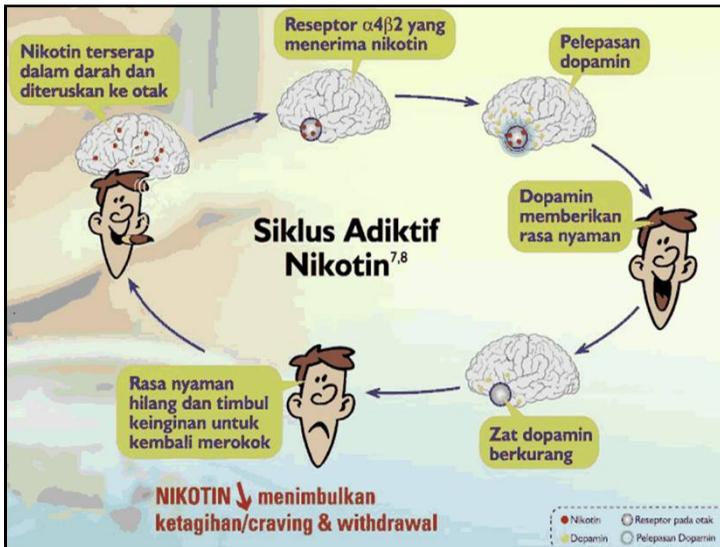




- Smokers were thinner, drank alcohol more often and were less educated than never smokers





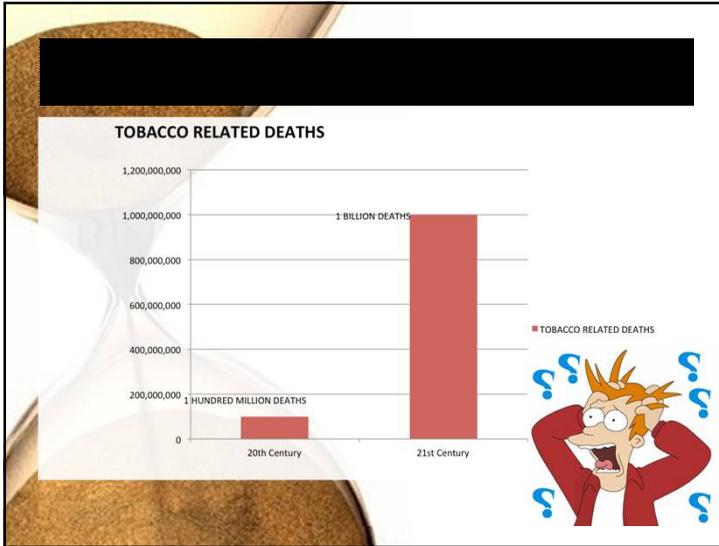
Rokok menjajah Indonesia

Biaya ekonomi dan sosial yang ditimbulkan akibat konsumsi tembakau terus meningkat

Angka kerugian akibat rokok setiap tahun mencapai 200 juta dolar Amerika, sedangkan angka kematian akibat penyakit yang diakibatkan merokok terus meningkat.

Di Indonesia, jumlah biaya konsumsi tembakau tahun 2005 yang meliputi biaya langsung di tingkat rumah tangga dan biaya tidak langsung karena hilangnya produktifitas akibat kematian dini, sakit dan kecacatan adalah US \$ 18,5 Milyar atau Rp 167,1 Triliun. Jumlah tersebut adalah sekitar 5 kali lipat lebih tinggi dari pemasukan cukai sebesar Rp 32,6 Triliun atau US\$ 3,62 Milyar tahun 2005 (1US\$ = Rp 8.500.-)





Paparan tentang Rokok di Forum Internasional

- 240 outlets surveyed



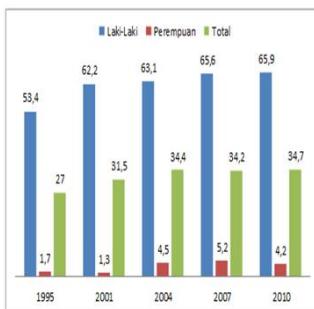
Ain St... Medical Students' Congress

Orang Indonesia!!!



FENOMENA ROKOK DI INDONESIA DALAM DATA DAN FAKTA

Prevalensi merokok melonjak!



- 1995: 27% penduduk dewasa 15+ merokok
- 2010: 35% penduduk dewasa merokok

- %Perokok Laki-laki dewasa:
1995: 53% (1 dari 2 laki-laki)
2010: 66% (2 dari 3 laki-laki)

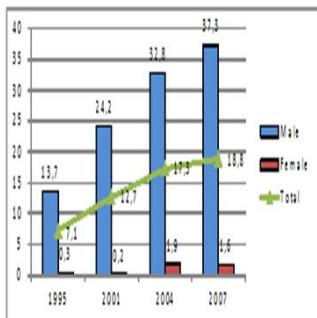
- % Perokok perempuan dewasa:
1995: 1.7%
2010: 4.2%

Naik lebih dari 2 X lipat

Sumber :

- Susenas 1995, 2001, dan 2004
- Riskesdas 2007 dan 2010

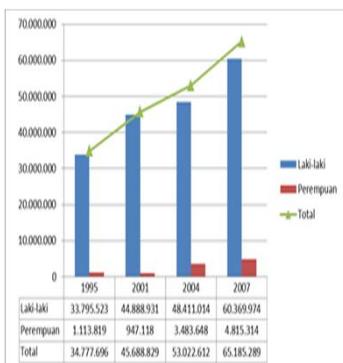
Tren Perokok Remaja (15-19 tahun) Mengkhawatirkan



- **Naik lebih dari 2X lipat**
1995: 7% remaja merokok
2010: 19% remaja merokok
- **Remaja Laki-laki: Naik >2x lipat**
1995: 14%
2010: 37%
- **Remaja Perempuan: Naik >5x lipat**
1995: 0.3%
2010: 1.6%

Sumber :
 • Susenas 1995, 2001, dan 2004
 • Riskesdas 2007 dan 2010

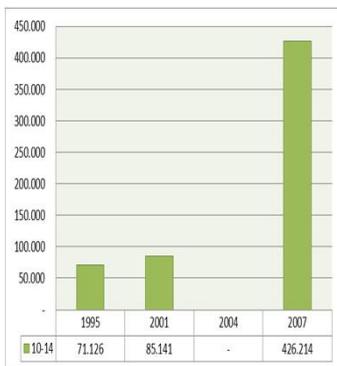
Jumlah Perokok Meroket



- 1995: 34.7 Juta perokok
- 2007: 65.2 Juta Perokok
Naik 88%, hampir 2 kali lipat
- **Laki-laki**
1995: 33.8 Juta perokok
2007: 60.4 Juta perokok
Naik 79%, hampir 2 kali lipat
- **Perempuan**
1995: 1.1 Juta perokok
2010: 4.8 Juta perokok
Naik lebih dari 4 kali lipat

Sumber :
 • Susenas 1995, 2001, dan 2004 dan Riskesdas 2007
 • Proyeksi Penduduk Bappenas

Jumlah Perokok Anak (10-14 tahun) Meningkat



- 1995: 71.126 Perokok anak
- 2007: 426.214 Perokok anak

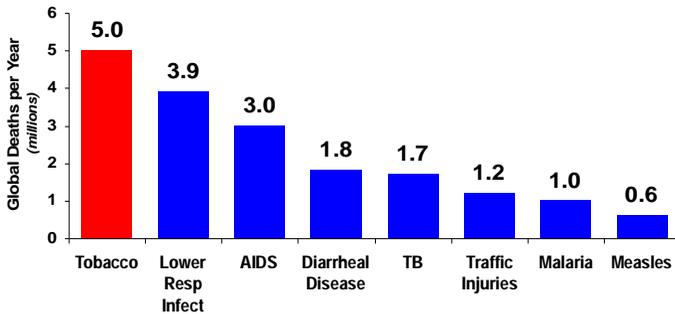
Jumlah perokok anak diperkirakan naik 6X lipat selama 12 tahun

Rumah Tangga Termiskin Terperangkap Konsumsi Rokok (2009)

Kelompok Pendapatan	RT Tanpa Pengeluaran Rokok	RT yang memiliki pengeluaran untuk Rokok	Total
Termiskin Q1	42,9%	57,1%	100%
Q2	28,3%	71,7%	100%
Q3	26,3%	73,7%	100%
Q4	27,5%	72,5%	100%
Terkaya Q5	34,3%	65,7%	100%
	31,6%	68,4%	100%

- 68% (7 dari 10) rumah tangga di Indonesia memiliki pengeluaran untuk membeli rokok
- 57% (6 dari 10) rumah tangga termiskin memiliki pengeluaran untuk membeli rokok

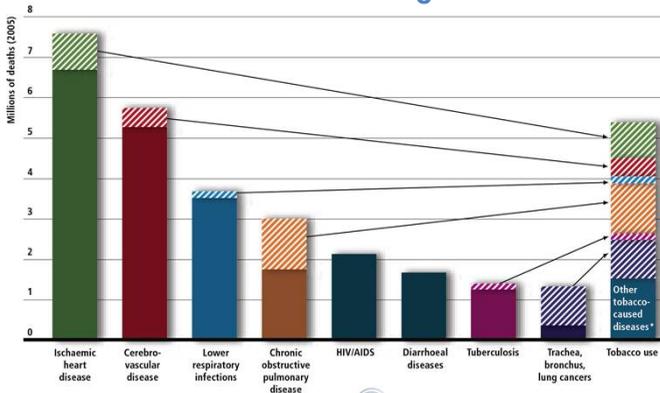
Tobacco Is Now the World's Leading Single Agent of Death



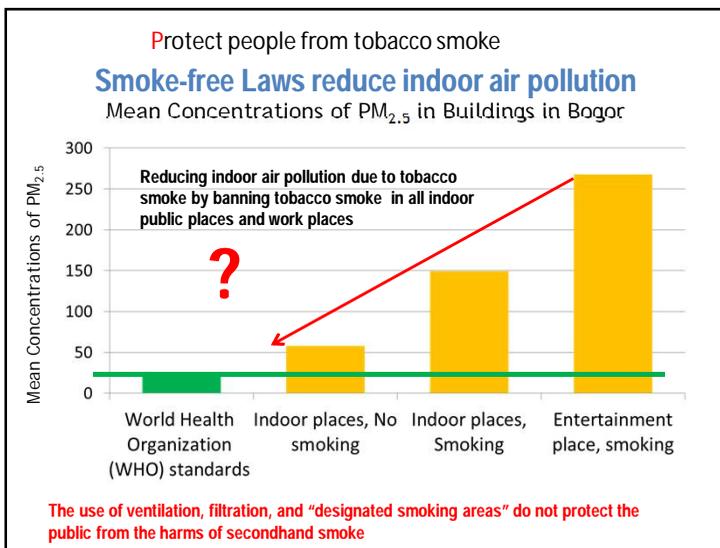
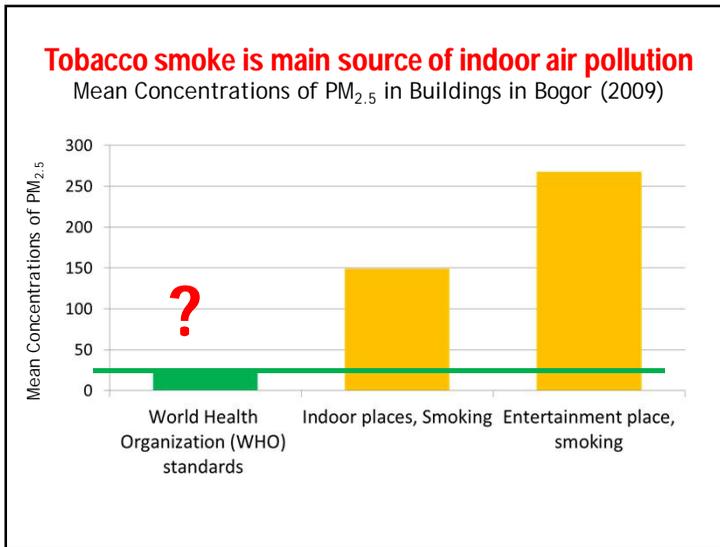
Unless urgent action is taken, tobacco will soon kill twice as many people and could kill 1 billion people this century



Tobacco Is a Risk Factor for 6 of the World's 8 Leading Causes of Death



Hatched areas indicate proportions of deaths related to tobacco use.

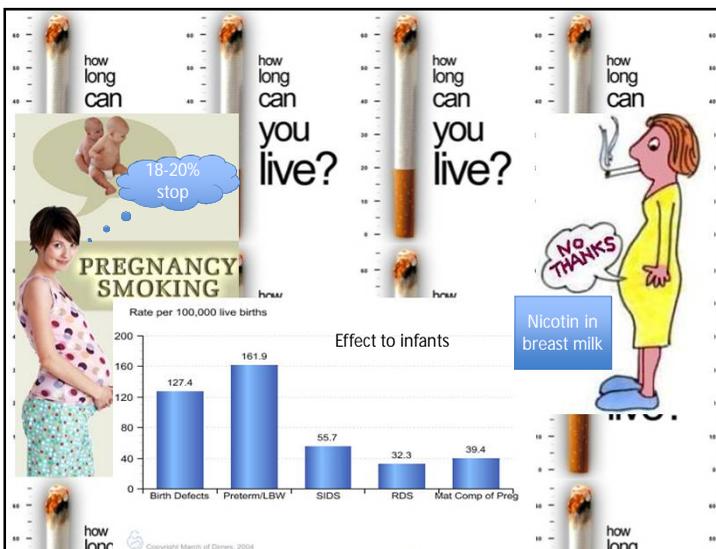


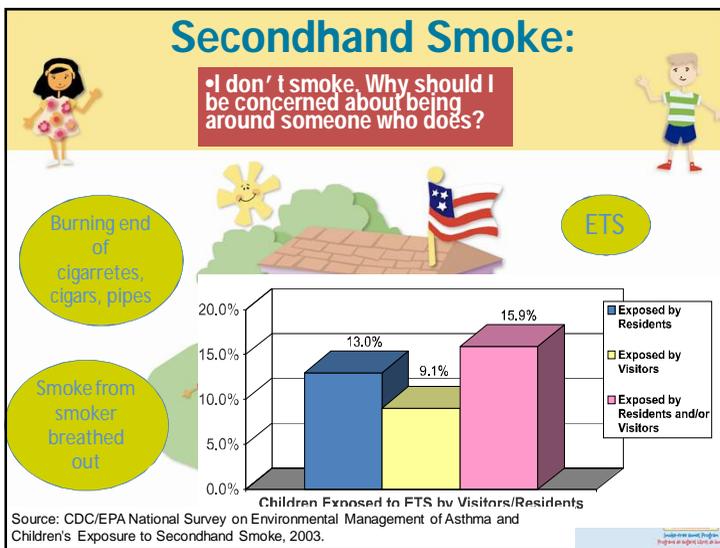
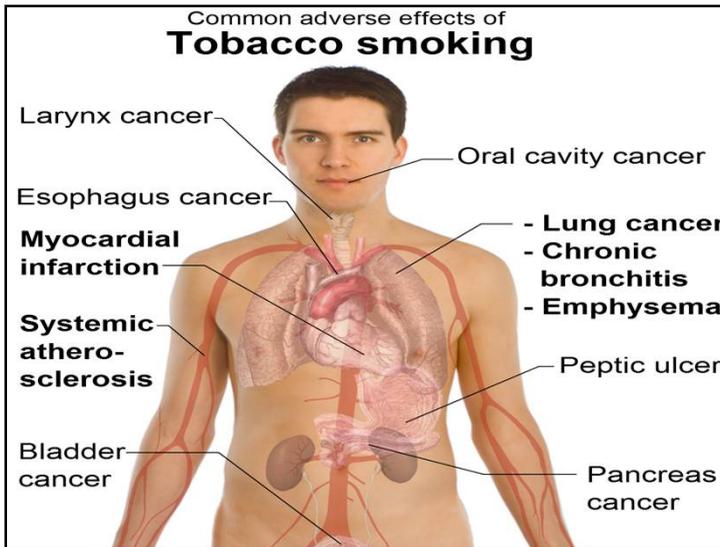
Hazard ratios* by disease for current vs. never smokers, United States 1997-2006, ages 25-79, by gender

Disease	Women		Men	
	Never/ current smoker	RR (99%CI)	Never/ current smoker	RR (99%CI)
Lung cancer	61/267	17.8 (11.4-27.8)	44/348	14.6 (9.1-23.4)
All cancer	605/525	3.2 (2.6-3.9)	324/665	3.8 (3.1-4.8)
Vascular	784/476	3.2 (2.7-3.9)	500/643	2.6 (2.1-3.2)
Respiratory	119/206	8.5 (6.1-11.8)	45/188	9.0 (5.6-14.4)
All diseases	2190/1579	3.0 (2.7-3.3)	1283/2030	2.8 (2.4-3.1)

* Cox- proportional HR adjusted for age, education, alcohol, and adiposity (BMI)

Source: Jha et al, NEJM, Jan 24, 2013





Secondhand Smoke Exposure

•Is secondhand smoke toxic?

- You breathe in more than 4,000 chemicals when you are around someone who is smoking.
- The chemicals found in secondhand smoke hurt your health, and many are known to cause cancer.

•Secondhand smoke contains poisons.



Tobacco 101: Module 4

23

More



- If you get secondhand-smoke for 1-7 hours a week you risk 24% of getting a heart disease.
- Chewing tobacco or water pipes also effects you too.



Electronic Nicotine Delivery Systems

- Designed to deliver nicotine to the lungs
- First marketed in 2004
- Battery powered
- Deliver a vaporized propylene glycol /nicotine mixture into respiratory system
- Contain tobacco-derived substances, but tobacco is not necessary for operation
- Often offered in flavors that are attractive to adolescents



Anatomy of e-cigarette



Product	Description	Some Brands
Disposable e-cigarette 	Cigarette-shaped device consisting of a battery and a cartridge containing an atomizer to heat a solution (with or without nicotine). Not rechargeable or refillable and is intended to be discarded after product stops producing aerosol. Sometimes called an e-hookah.	NJOY OneJoy, Aer Disposable, Flavorvapes
Rechargeable e-cigarette 	Cigarette-shaped device consisting of a battery that connects to an atomizer used to heat a solution typically containing nicotine. Often contains an element that regulates puff duration and /or how many puffs may be taken consecutively.	Blu, GreenSmoke, EonSmoke
Pen-style, medium-sized rechargeable e-cigarette 	Larger than a cigarette, often with a higher capacity battery, may contain a prefilled cartridge or a refillable cartridge (often called a clearomizer). These devices often come with a manual switch allowing to regulate length and frequency of puffs.	Vapor King Storm, Totally Wicked Tornado
Tank-style, large-sized rechargeable e-cigarette 	Much larger than a cigarette with a higher capacity battery and typically contains a large, refillable cartridge. Often contains manual switches and a battery casing for customizing battery capacity. Can be easily modified.	Volcano Lavatube

Figure 1. Examples of different electronic cigarette (e-cigarette) products. Reproduced from Grana et al.¹



Cartridges

Nicotine amounts by strength:

Extra Strong:	24 mg
Full Flavored:	16 mg
Light:	12 mg
Ultra Light:	8 mg
Zero-nicotine:	0 mg



Recent Findings on Toxicity

- ∅ At least 10 toxicants can be identified and quantified in electronic cigarettes¹, including **known carcinogens** and **diethylene glycol**, an ingredient used in antifreeze.
- ∅ In Turkey, **propylene glycol** (which is potentially toxic) was found in all ENDS samples, **tobacco specific N-nitrosamines** (powerful carcinogens) in a majority of samples²
- ∅ E-cigarettes release **toxins** into the air, including acetic acid, acetone, isoprene, formaldehyde and acetaldehyde, averaging around **20%** of what the conventional cigarette produces³
- ∅ All e-cigarettes that the FDA has detained and examined meet the definition of a **combination drug-device** product under the Federal Food, Drug, and Cosmetic Act¹.

1. U.S. FDA <http://www.fda.gov/newsevents/newsroom/pressannouncements/ucm173222.html>, Republic of Korea

2. FAME Laboratory, Institute of Human Performance and Rehabilitation, Center for Research and Technology, Thessaly, Trikala, Greece

3. Indoor Air, Germany

Additional Concerns

NJOY™

ALL THE PLEASURES OF SMOKING.
WITHOUT ALL THE PROBLEMS.



- There are **no published studies** demonstrating the efficacy and safety of ENDS
- There is **no data** to confirm ENDS have cigarette mimicking sensory characteristics when heated and delivered to the lung
- The precise nature and the quantity of constituents in the emissions of ENDS are **unknown**
- There is a potential for **nicotine poisoning** from sale of nicotine refill vials

Tobacco Industry Involvement

- Philip Morris International has **three prototypes** that more resemble a traditional cigarette that heats and does not burn.
- Lorillard Inc. acquired a maker of electronic cigarettes for \$135 million
- R.J. Reynolds has begun production on a new electronic cigarette
- By the acquisition of e-cigarettes, **major cigarette manufacturers** are signaling that they believe this is the next frontier for their companies
- **Without regulation, tobacco companies will use their unparalleled knowledge and resources to produce and market e-cigarettes**

