



The Dangers of Smoking and 2nd Hand Smoke in Children

EDUCATING CHILDREN ON EFFECTS OF SMOKING COMMITMENT

Majority of these teaching slides are courtesy of the
PHILIPPINE ACADEMY OF PEDIATRIC PULMONOLOGISTS
Task Force on Anti-Smoking





Healthy Human Lung

Emphysema Lung

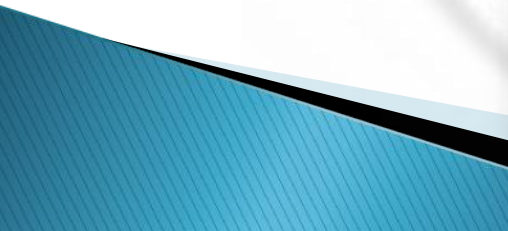


Smoker's lungs

Non-smoker's lungs



Smoking
causes fatal lung cancer





"Non-Smoker"



**"Eight Year Smoking History"
(1 pack per day)**

OUTLINE

- STATISTICS
- TOBACCO FACTS
- HEALTH RISKS
- SECOND HAND SMOKE
- THIRD HAND SMOKE
- ADOLESCENTS
- TIPS TO AVOID/QUIT SMOKING
- ENDS



DEFINITION OF TERMS

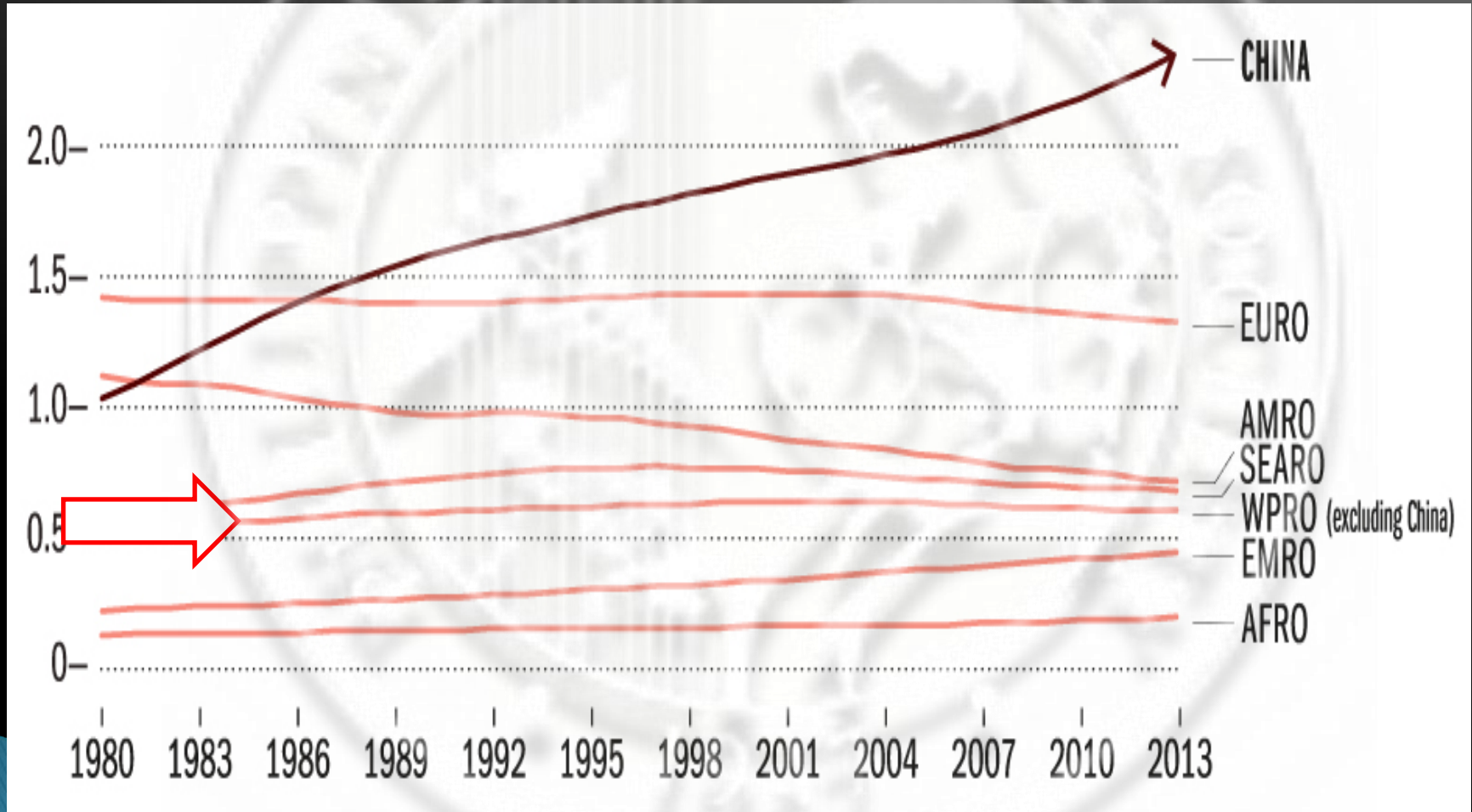
- ETS: Environmental Tobacco Smoke
- SHS: Second hand smoke
- THS: Third hand smoke



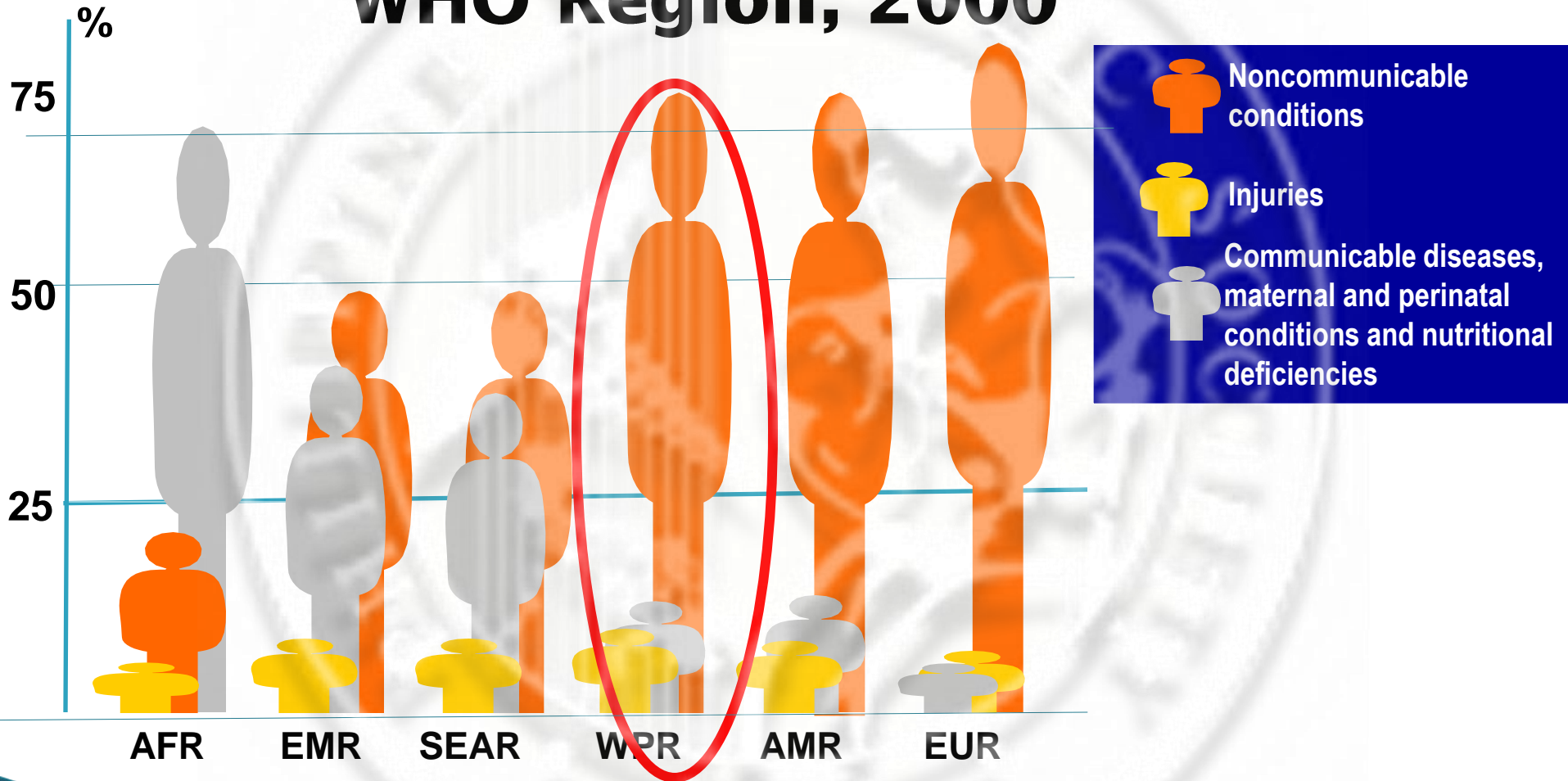
Global Tobacco Use and Exposure

- 1.1 billion people smoke worldwide
 - 80% live in low- and middle-income countries (LMIC)
- 48% of all men and 10% of all women: active smokers
- 80–100,000 youth become addicted each day
 - 1 in 3 will die from a tobacco related disease
- Worldwide: 2nd leading cause of preventable dse
- Estimated 5.4 million deaths/year due to tobacco use..
 - + >600,000 from 2nd hand smoke exposure
- 10 Filipinos die / hour due to tobacco-related diseases

Tobacco use / exposure is growing in countries already burdened by high rates of preventable deaths

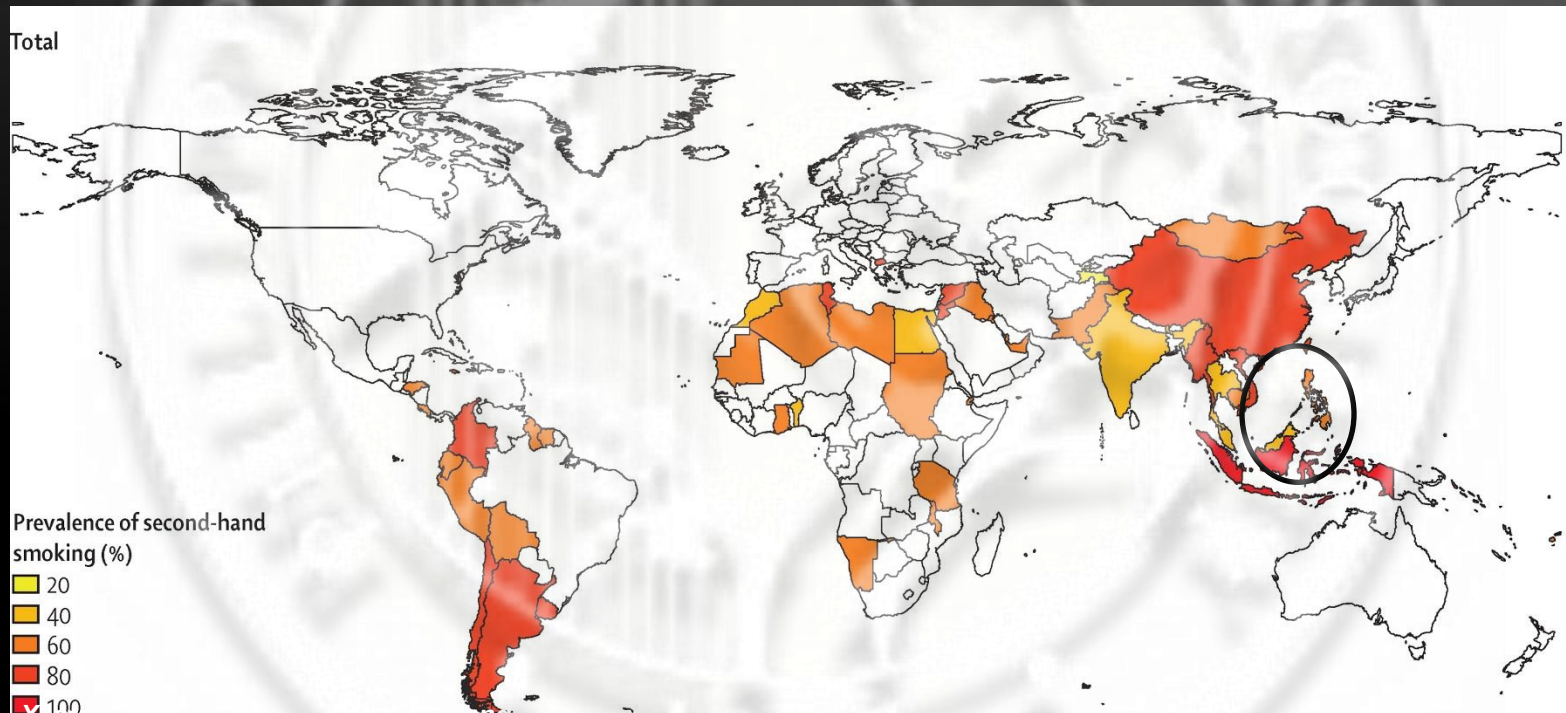


Deaths, by broad cause group and WHO Region, 2000



ADOLESCENT SHS EXPOSURE

- 56% of 12-15 year olds in low & middle income countries are exposed to SHS
- SHS exposure strongly associated with youth's own tobacco use



Xi et al, Tobacco use and second hand smoke exposure in young adolescents aged 12-15 years: data from 68 low-income and middle-income countries. *The Lancet Global Health*, Volume 4, Issue 11, Pages e795-e805 (November 2016)



**Tobacco use is a
PEDIATRIC DISEASE**

*80-90% of smokers initiate use
before the age of 18*

2015 Global Youth Tobacco Survey (Philippines)

(school based survey , ages 13-15 years old)

TOBACCO USE

- 16.0% of students, 22.2% of boys, and 10.4% of girls currently used any tobacco products.
- 14.5% of students, 20.5% of boys, and 9.1% of girls currently smoked tobacco.
- 12.0% of students, 17.6% of boys, and 7.0% of girls currently smoked cigarettes.
- 2.5% of students, 2.9% of boys, and 2.1% of girls currently used smokeless tobacco.

ELECTRONIC CIGARETTES

- 42.7% of students ever heard of electronic cigarettes or e-cigarettes.
- 11.7% of students ever tried or experimented with electronic cigarettes or e-cigarettes, even one or two puffs.

2015 Global Youth Tobacco Survey (Philippines) (school based survey , ages 13-15 years old)

SECONDHAND SMOKE

- 38.3% of students were exposed to tobacco smoke at home.
- 72.5% of students saw anyone smoking within school premises.

ACCESS & AVAILABILITY

- 79.4% of current cigarette smokers obtained cigarettes by buying them from a store, shop, street vendor, or kiosk.
- Among current cigarette smokers who tried to buy cigarettes, 47.5% were not prevented from buying them because of their age.

Tobacco Facts

- ❑ **In the U.S., smoking kills more than cocaine, heroine, alcohol, fire automobile accidents, homicides, suicides, & AIDS combined**
- ❑ **Most adult smokers started when they were preteens or teenagers**
- ❑ **Smoking habits in youth: determine lifetime cigarette consumption**
- ❑ **Passive smoking: major cause of morbidity in early childhood**

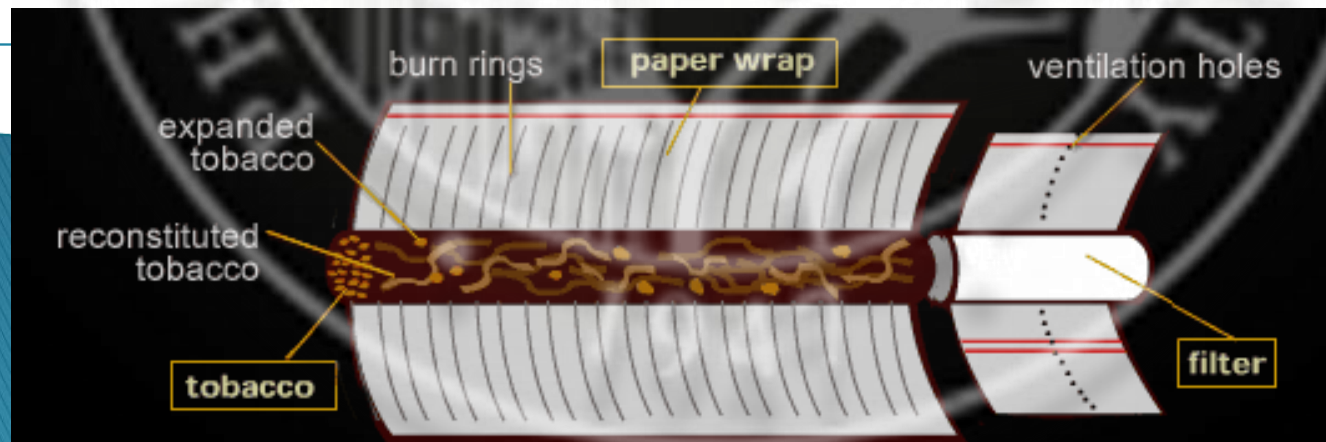
TOBACCO

- ❑ **A plant that has been smoked in many forms for at least 2,000 years...**



- Today's cigarette: different from early cigarettes
- Early cigarettes: no filters/vents, & fewer added chemicals
 - Filters & vents allow tobacco smoke to be inhaled deeper into the lungs

The Anatomy of a Cigarette



TOBACCO IS NOT SAFE!!!

**NOT CIGARETTES, NOT CIGARS,
NOT CHEWING TOBACCO NOR
PIPES....**

**THEY ARE ALL DANGEROUS
BECAUSE THEY ALL CONTAIN
CHEMICALS THAT KILL!!!**



WHAT'S IN A CIGARETTE?

- ❑ **Tar** gives cigarettes flavor = thick black substance used to pave roads & driveways
- ❑ **Formaldehyde** = used to preserve dead animals, like frogs dissected in biology classes
- ❑ **Cyanide** = main ingredient in rat poison
- ❑ **Lead** = found in some paint



WHAT'S IN A CIGARETTE?

- ❑ **Acetone** = ingredient in paint & nail polish remover
- ❑ **Ammonia** = component of household cleaner
- ❑ **Carbon monoxide** = common pollutant & the same chemical that escapes from the exhaust in cars
- ❑ **Hydrazine** = chemical used in jets & rocket fuel

What is Nicotine?

- present in tobacco leaves in large amounts
- highly toxic chemical, previously used as a bug killer
- nicotine-like receptors in the nervous system: nicotine dramatically stimulates neurons & ultimately blocks signals
- highly addictive: exposure to nicotine in low doses very quickly increases the number of receptors that exist in that cell or group of cells
- “People smoke for nicotine but they die from the tar”, Michael Russell, BMJ 1976

Receptor: an area of a cell or group of cells that responds specifically to a chemical, that then causes an action

Nicotine Effects: Good

- Decreases the appetite
 - (hence, fear of weight gain hinders willingness to stop smoking)
- Boosts mood
- May relieve minor depression
- Sense of well-being
- Stimulates memory & alertness
 - People who use tobacco often depend on it to help them accomplish certain tasks and perform well
-

Nicotine Effects: Bad

- Toxic Effects: nausea & vomiting, excessive salivation, abdominal pain, pallor, sweating, high BP, high heart rate, balance problems with walking, tremor, headache, dizziness, muscle twitching, seizures
- Death: case reports of suicide by nicotine
 - 1 child death in the US from e-juice
 - New regulations for child safe packaging

Nicotine Ugly: HIGHLY addictive

1. Heroin



The brain converts heroin into morphine, which binds to molecules on cells that affect how we perceive pain and reward – producing a surging sense of euphoria. But overdosing can kill, since it slows and can stop breathing.

Rank: 3 out of 3

2. Cocaine



In seconds, cocaine floods the brain with the feel-good chemical dopamine. The sensation of pleasure is so powerful that some lab animals choose cocaine over food until they starve. Cocaine appears to acutely affect the brain's key memory centers, which may help explain why it's so addictive.

Rank: 2.4 out of 3

3. Nicotine



The main addictive ingredient in tobacco, nicotine, is sucked up by the lungs and delivered to the brain, with drug levels peaking within 10 seconds. Because its effects vanish so quickly – including feelings of pleasure – scientists think smokers are more prone to repeated use. Some 85% of people who try to quit on their own relapse.

Rank: 2.2 out of 3

4. Barbiturates



Barbiturates, which are still prescribed temporarily for things like anxiety and insomnia, block some of the brain's chemical signalling, effectively muting several brain regions. At low doses, these drugs can induce a feeling of euphoria, but at higher doses they can suppress breathing and kill.

Rank: 2 out of 3

5. Alcohol

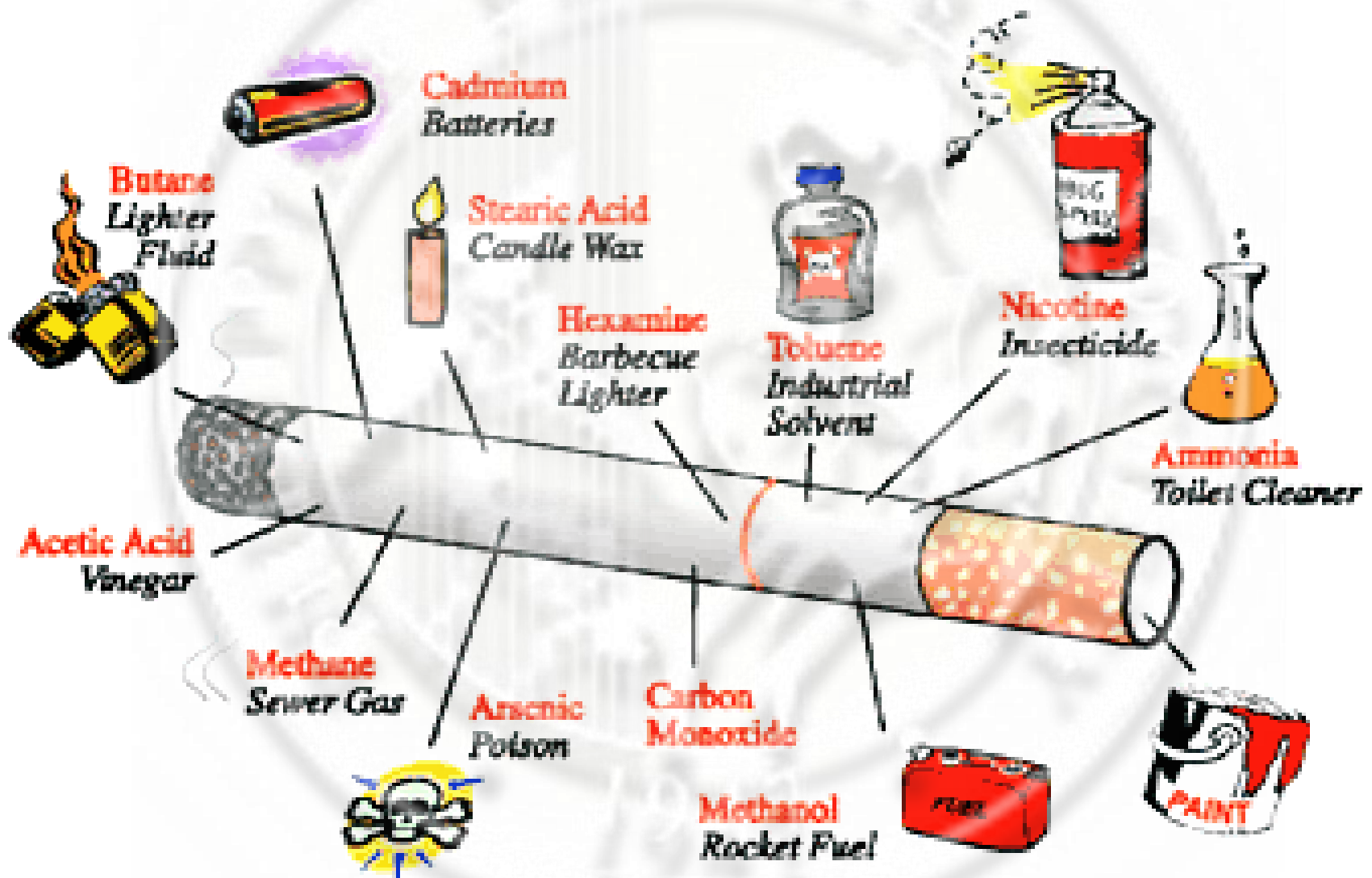


Alcohol interferes with messengers in the brain called "excitatory" messengers, slowing our thinking, breathing, and heart rate. At the same time, it boosts our "inhibitory" messengers, giving us feelings of pleasure.

Rank: 1.9 out of 3

**WITHDRAWAL:
Irritability,
frustration,
anger,
increased appetite,
tremors,
depression,
insomnia,
anxiety,
difficulty
concentrating**

What's in a cigarette?



US Surgeon General 2014 Update



DID YOU KNOW?

MORE THAN
7,000
CHEMICALS
ARE FOUND IN A
SINGLE PUFF
OF CIGARETTE
SMOKE

SAY NO TO DISEASES

These poisons can cause:

Serious diseases like:

And even cancers like:

Lung infections and bronchitis

Mouth and throat cancers

Heart attack at a young age

Lung cancer

Stomach ulcers

Stomach cancer

Difficulties having babies

Kidney cancer

Decay in the legs, and the legs may have to be cut off

Bladder cancer

So, say no to smoking NOW!

It is possible to say no and keep your friends. Here's how!

HEALTH RISKS OF SMOKING

Heart Disease

High Blood Pressure

**High Cholesterol
Level**

Cancer

COPD

Asthma

Allergic Rhinitis

Peptic Ulcer

Tooth Decay

Gum Disease



HEALTH RISKS OF SMOKING

- ✈️ ↓ **Athletic Performance**
- ❑ ↓ **Circulation in Fingers & Toes**
- ❑ **Discoloration of Fingernails & Toenails**
- ❑ **Bad breath & Wrinkles**



SECONDHAND SMOKING

passive smoke - mixture of 2 forms of smoke from burning tobacco products:

- ❑ **SIDESTREAM SMOKE** : smoke from the end of a lighted cigarette, pipe, or cigar
- ❑ **MAINSTREAM SMOKE** : smoke exhaled by a smoker



SHS is a group A Carcinogen
US Environmental Protection Agency(EPA),1992

SECONDHAND SMOKING

INVOLUNTARY / PASSIVE SMOKING :

- ❑ **Exposure of a nonsmoker to 2nd hand smoking by a smoker**
- ❑ **Nonsmokers: at risk of absorbing nicotine & other toxic chemicals just as smokers**
- ❑ **The > the exposure to 2nd hand smoke, the > the level of these harmful chemicals in your body**



SHS is a group A carcinogen with arsenic, asbestos, benzene, radon and vinyl chloride

Some children get to heaven earlier.

SECOND HAND SMOKE

- ❑ **kills about 3,000 non-smokers each year from lung cancer**
- ❑ **causes 300,000 lung infections in babies & young children each year**
- ❑ **causes babies to be at risk for Sudden Infant Death Syndrome**



SECOND HAND SMOKE

30x as many lung CA deaths as all the different kinds of pollution combined

Fills the air with many of the same poisons found in the air around toxic waste dumps



SECOND HAND SMOKE



**Wheezing,
coughing, colds,
earaches &
asthma attacks**

**ruins the smell &
taste of food**

**causes
reddening,
itching &
watering of eyes**

- ❑ **2nd hand smoke: causes premature death & disease in children & adults who do not smoke.**
- ❑ **Smoking by parents causes respiratory symptoms & slows lung growth in their children.**
- ❑ **Exposure of adults to 2nd hand smoke has immediate adverse effects on the cardiovascular system & causes coronary heart disease & lung cancer**
- ❑ **Increased risk of lymphoma, leukemia & brain tumor**

The 2006 US Surgeon General's Report.

* IPA online update ,March 2017

- ❑ **There is no risk-free level of exposure to secondhand smoke**
- ❑ **Eliminating smoking in indoor spaces fully protects nonsmokers from exposure to secondhand smoke**
- ❑ **Separating smokers from nonsmokers, cleaning the air, and ventilating buildings cannot eliminate exposures of nonsmokers to secondhand smoke**

The 2006 US Surgeon General's Report.

DANGER

**THIRD
HAND
SMOKE**

www.says-it.com/safety

Third Hand Smoke

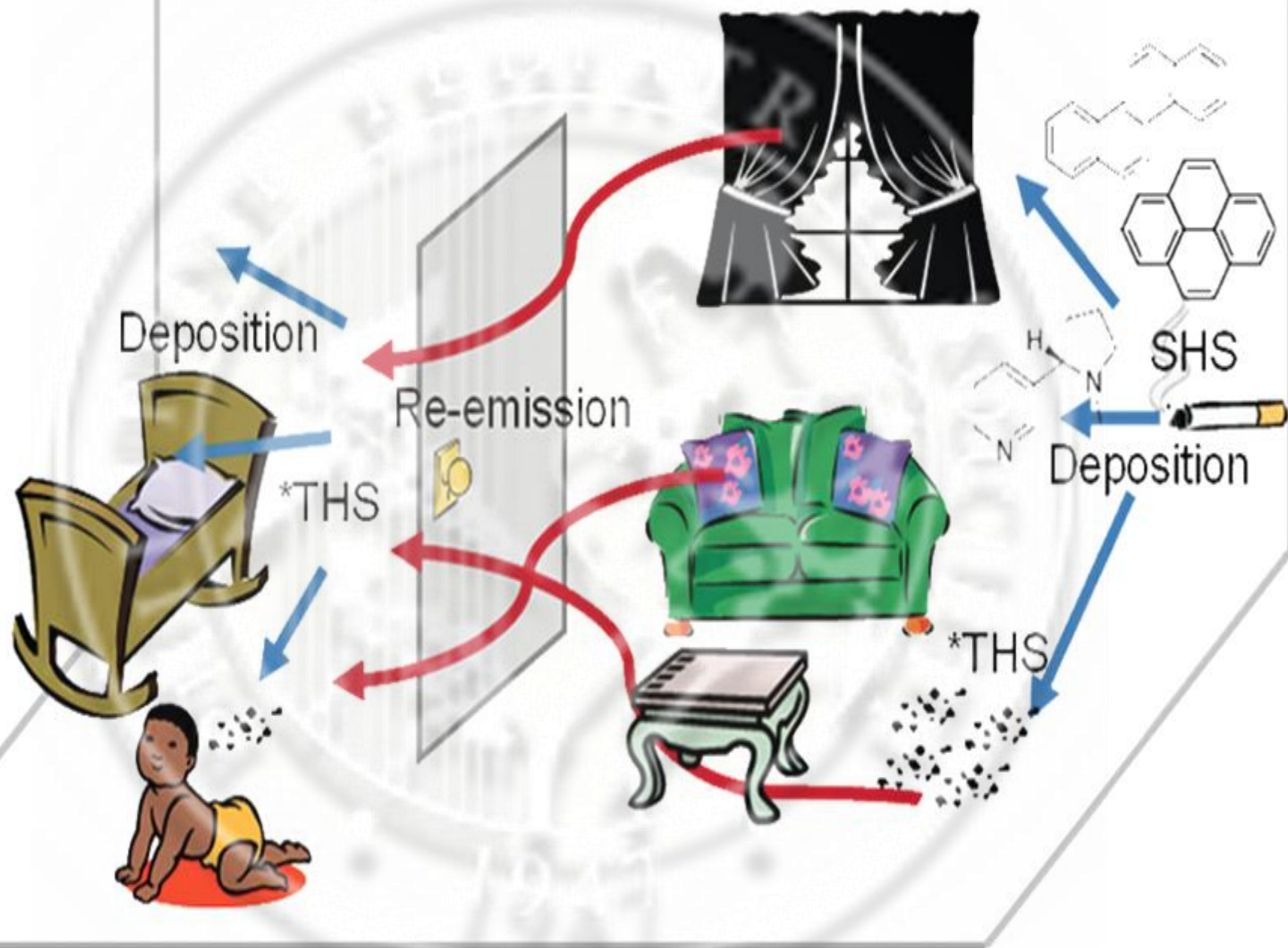
- Exposure occurs via:
 - inhalation** of gases and re-suspended particles
 - dermal absorption** from contact
 - ingestion** of dust

Third Hand Smoke

- Residual nicotine & other pollutants that stick to surfaces, clothing & objects
- Stays for several weeks to months
- Smoking Rooms = Toxic Rooms

Third Hand Smoke

- Cannot be eliminated with airing out of rooms, opening windows or using fans/air conditioners
- Say NO to Smoking Areas/Rooms



*Thirdhand Smoke

Children are most vulnerable...

Breathing Exposure

- Breathing volumes:
 - related to size: 5 ml/lb body weight:
 - infants = adults
- Breathing rates:
 - 30x/min for a 1 y/o
 - 24x/min for a 3 y/o
 - 16x/min for healthy adult
 -
- 1.5 to 1.8x greater exposure (pound for pound) to airborne pollutants

Children are most vulnerable...

Ingestion Exposure

- **Dust Ingestion: 10–16x higher dose in toddlers, pound for pound!**
 - *Infants eat 2x as much dust / day (100mg vs. 50mg)*
 - *Average 1-3 y/o (crawling/toddling/spend a lot of time on the ground): 22-32lbs.*
 - *Average adults: 5-8 times heavier*
- **Infants: 10x more vulnerable to exposures, due to their systems being less able to metabolize, detoxify and excrete pollutants**

MOST INFLUENTIAL TO YOU...

PEERS...



YOUR PARENTS...



PARENTS have more influence on their teens than they may have realized...

- Pediatrics Vol. 108, No.6 : 1256-1262.



**Kids and
Smoking**

- **Teenage smoking: pervasive problem in our society**
- **>4,000 teens will try their 1st cigarette today**
- **>2,000 kids become new regular, daily smokers**
- **pressure to experiment with tobacco: from friends & peers**
- **Smoking adults: models for children & teens**

✓ The chances are high that Filipino children aged 11 to 16 have already tried smoking cigarettes.

✓ The probability that a child has already lighted his 1st stick is even greater when members of his family are smoking, too.



- **Majority of the students: started smoking in their early teens.**
 - **1/3 (29.6%) aged 10 to 20 y/o admitted that they have tried smoking**
 - **18.8% current smokers, with 4.7% smoking at least 1 stick of cigarette / day.**
 - **Of the current smokers, 62.7% are in private schools**
- Youth Tobacco Survey, ACCP (Philippine Chapter)*



THE TRUTH BEHIND...

Tobacco companies
are among the richest
and most powerful in
the world !!!

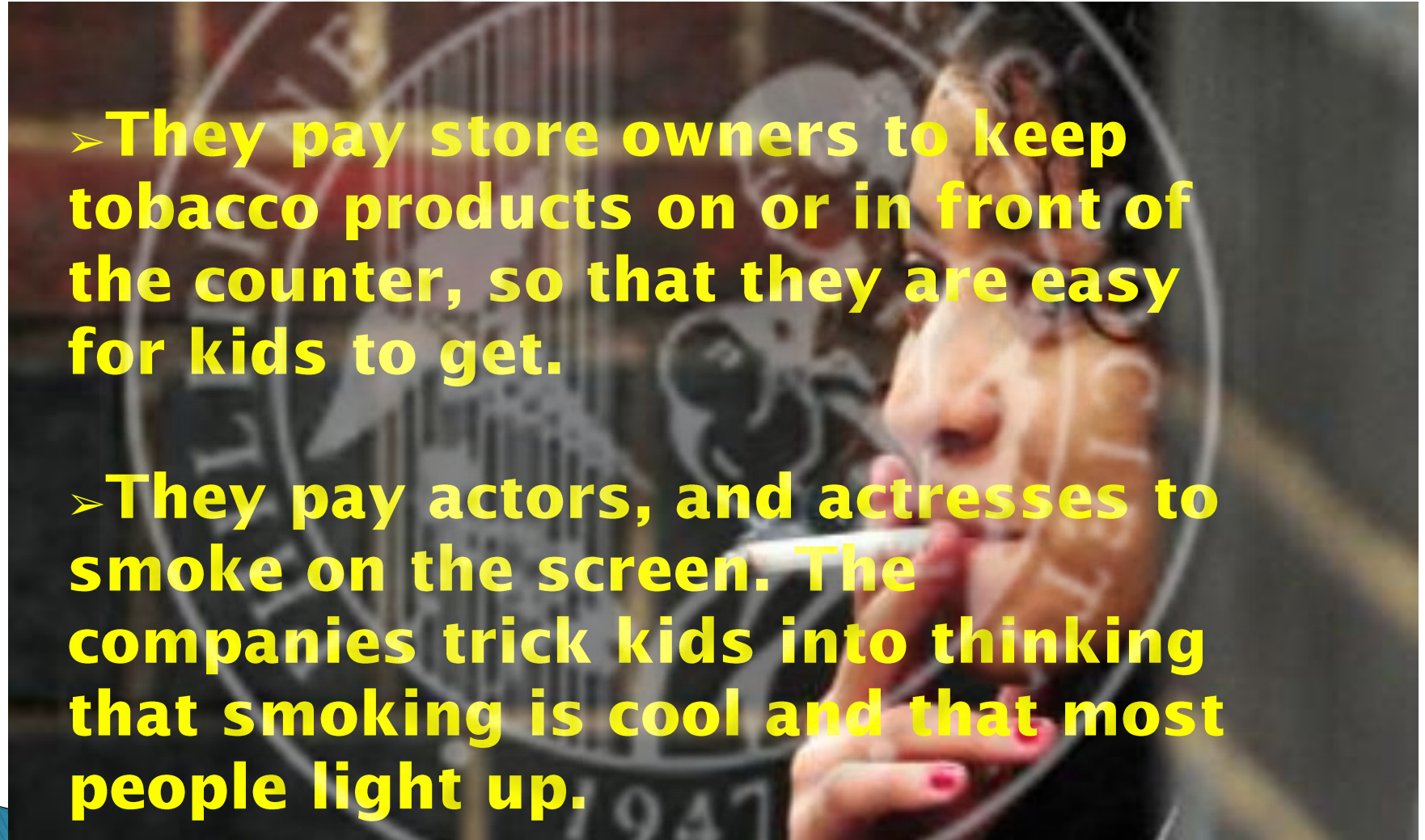


THE TRUTH... THEY WANT YOU!!!

- **About 90% of smokers start by the time they are 18. The companies know that if they don't get kids to light up while they are young, they most likely never will.**
- **Children are so important to the tobacco industry that they've done research on them using hidden cameras, interviews, and psychological tests to find ways to get them to smoke.**

HOW THEY GET KIDS TO PUFF...

- **They pay store owners to keep tobacco products on or in front of the counter, so that they are easy for kids to get.**
- **They pay actors, and actresses to smoke on the screen. The companies trick kids into thinking that smoking is cool and that most people light up.**



HOW THEY GET KIDS TO PUFF...

- 
- They provide kids with promotional items like lighters, hats, and shirts.
 - Their advertisements are directed to kids and can be found everywhere....in magazines, street corners, inside stores and on their windows.
 - They contribute large sums of money to our legislators.

Goal ...

“ Our ultimate goal should be to find a way to prevent YOU from ever picking up the habit... the dreaded SMOKING HABIT!!! ”

**Kids & Parents just
need to learn to
say..**

NOPE
ot I UFF veR

Smoking: Peer Pressure Scenario

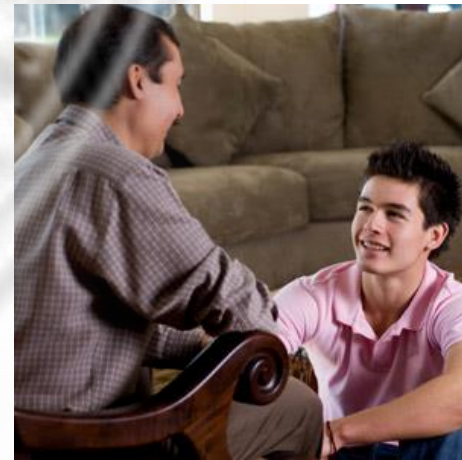


- **If a popular kid offers you a cigarette, you might think that you will become popular if you do what the other kid says.**
- **When a close friend starts smoking, you may worry that you will lose the friendship if you turn him down.**

How to say “NO”...

If a friend or peer tries to pressure you...

- **“ He may be trying to make you feel small, so that he can feel better about himself. You don't need his approval to feel good about yourself.”**
- **“ He may be afraid of anyone who is different from him. You can listen to what he has to say, but that doesn't mean you have to go with him.”**



How to say “NO”...

If a friend or peer tries to pressure you...

□ **“ Deep down, he may be insecure.”**

“ He could be making up rules so that he fits and you don't. Know that there are people who will appreciate you for who you are. Seek them out.”

“ He could be afraid of criticism, so he'll do the criticizing first. It's better to be alone than to be with someone who is rude to you all the time.”

Reason out...

"I KNOW SOMEONE WHO DIED FROM SMOKING AND I DON'T WANT TO DO IT..."

"I'M ALLERGIC TO THE SMELL OF SMOKE MAKES ME SICK AND I DON'T WANT TO START BECAUSE I'M TRYING TO GET MY PARENTS TO QUIT..."



REASON OUT ...

"I want to be fit."



Smokers have less stamina. Tell them you want to be fit to play games better.

"Smoking makes me smell bad."



Smokers have smelly clothes and bad breath. Say you want to smell good and make more friends.

REASON OUT...

"I want to live longer."



Every cigarette you smoke shortens your life by 5 1/2 minutes. Also, if you start smoking before the age of 20, you are more likely to die of lung cancer and heart attack.

"Smoking makes me sick."



Smokers have more coughs and colds. Say the smoke irritates your throat and makes you sick.

REASON OUT ...

"Smoking is not cool at all."



Famous film stars and top footballers don't smoke. So tell your friends that smoking just isn't cool - and never will be.

"My friends don't want me to smoke."



Most of your friends don't smoke anyway. They wouldn't want you to smoke either. It's not worth losing them just because of smoking.

REASON OUT ...

"Smoking means spending more money."



When you get hooked, you spend more and more money just to buy enough cigarettes. And with the new smoking law, you can be fined for buying cigarettes or smoking in public.

"Smoking is not green."



Cigarette smoke pollutes the air we breathe. Trees are cut down to make paper for cigarettes and cigarette boxes. Say you want to protect the environment by not smoking.

"I really have to go."



If they don't listen to you, you can just walk away. Don't be afraid. If you really stand by what you say, your friends will respect you.

ALWAYS SAY

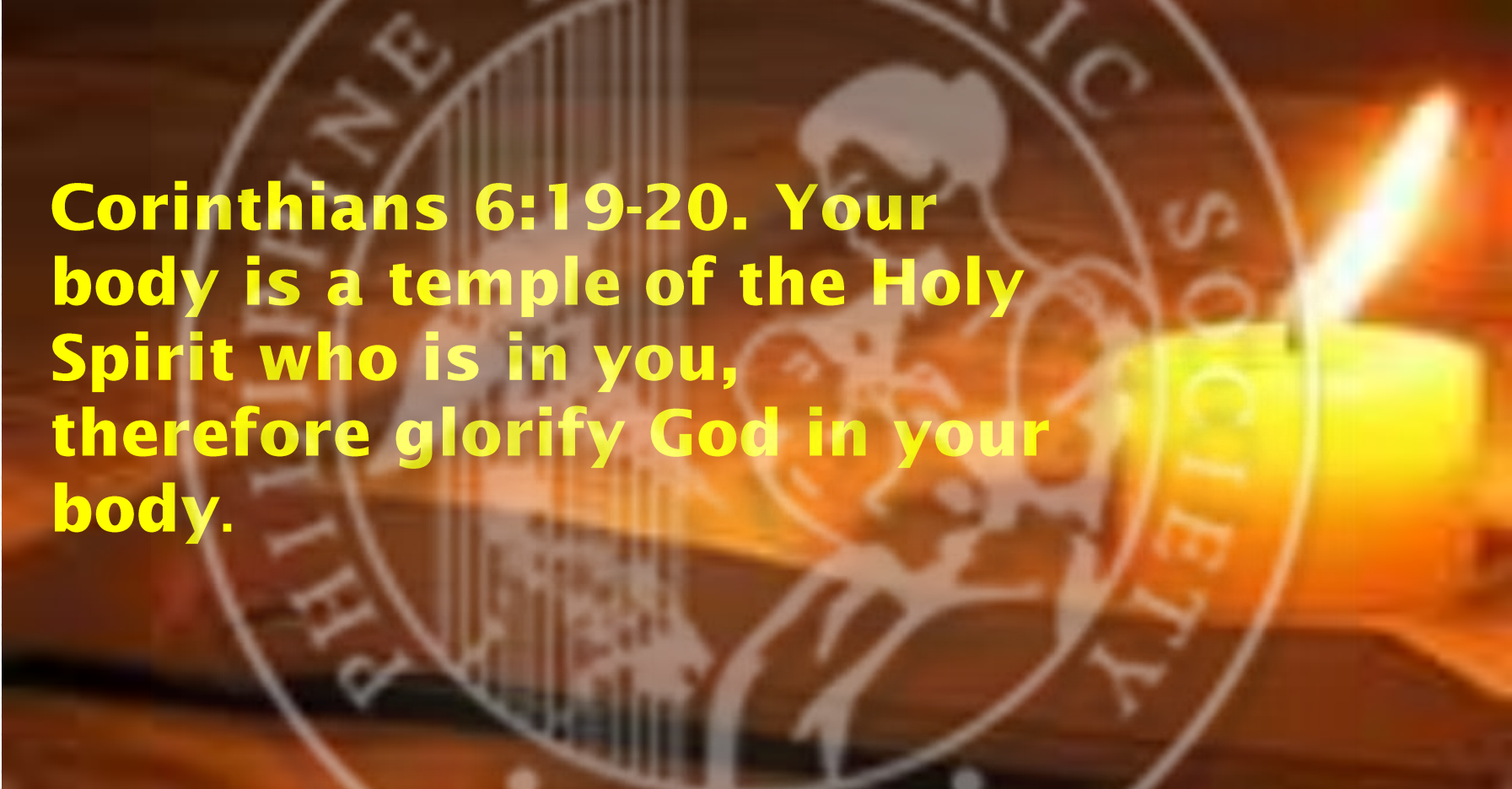
NO!




TO SMOKING

WHAT DOES THE BIBLE SAY...

Corinthians 6:19-20. Your body is a temple of the Holy Spirit who is in you, therefore glorify God in your body.



TIPS TO HELP SMOKERS TO QUIT...

- ❑ **Keep busy doing things that make it hard to smoke**
 - ❑ **Fight the urge by going to places where smoking isn't allowed and staying around people who don't smoke**
 - ❑ **Avoid situations that tempt you to smoke**
 - ❑ **Find a substitute to reach for instead of a cigarette**
- 

TIPS TO HELP SMOKERS TO QUIT...

- ❑ **Don't give up if you smoke a cigarette. Just resolve not to do it again**
 - ❑ **Remind yourself that you're likely to feel better if you stop smoking**
 - ❑ **Tell family members & friends that you need to quit smoking & need their support**
- 

REFERENCES

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www.who.int/ceh

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www.aap.org/richmondcenter

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**Framework Convention on Tobacco Control and PHL Tobacco Control Policies, 2014 by
Florante Trinidad, MD**

2015 GLOBAL YOUTH TOBACCO SURVEY