



Smoking Cessation: Principles of Addiction and Assisting Patients With Quitting

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"CIGARETTE SMOKING..."

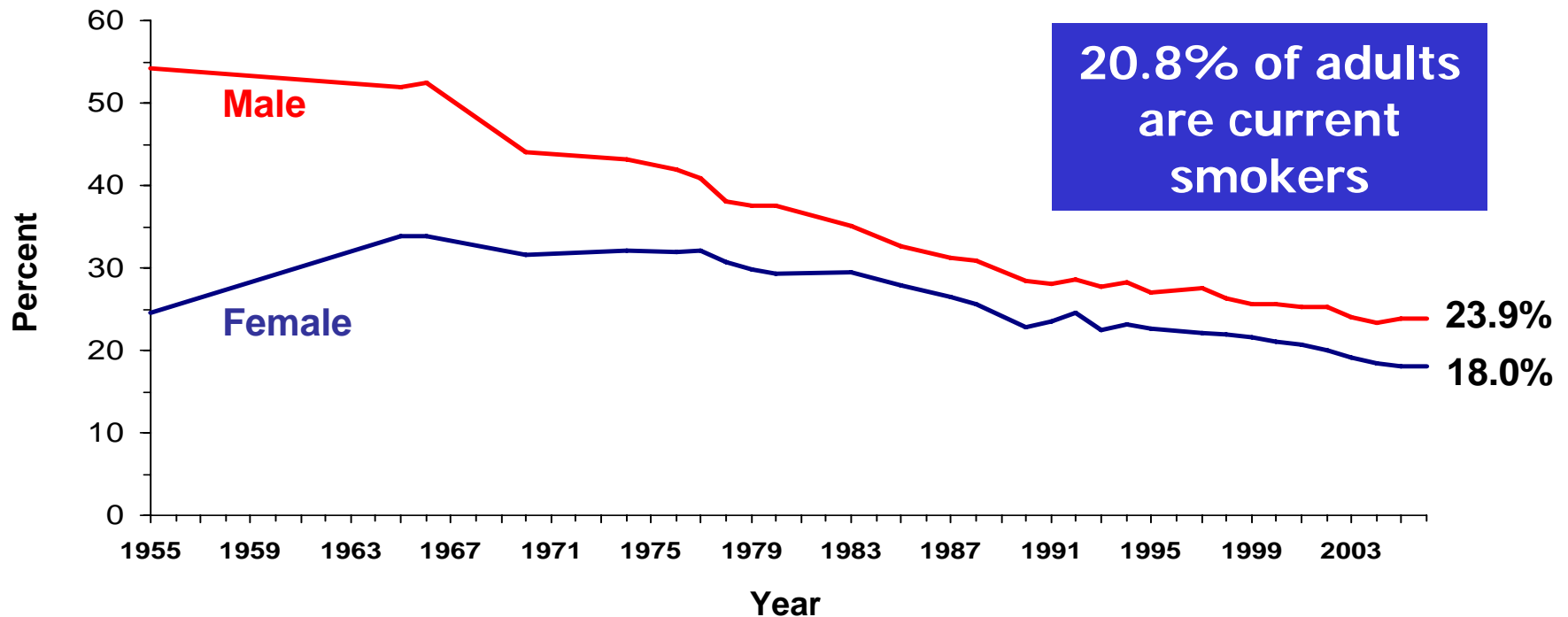
is the chief, single,
avoidable cause of death
in our society and the most
important public health
issue of our time."

C. Everett Koop, M.D., former U.S. Surgeon General



TRENDS in ADULT SMOKING, by SEX—U.S., 1955–2006

Trends in cigarette current smoking among persons aged 18 or older



70% want to quit

Graph provided by the Centers for Disease Control and Prevention. 1955 Current Population Survey; 1965–2005 NHIS. Estimates since 1992 include some-day smoking.





FORMS of TOBACCO

- Cigarettes
- Smokeless tobacco (chewing tobacco, oral snuff)
- Pipes
- Cigars
- Clove cigarettes
- Bidis
- Hookah (waterpipe smoking)





COMPOUNDS in TOBACCO SMOKE

An estimated 4,800 compounds in tobacco smoke, including 11 proven human carcinogens

Gases

- Carbon monoxide
- Hydrogen cyanide
- Ammonia
- Benzene
- Formaldehyde



Particles

- Nicotine
- Nitrosamines
- Lead
- Cadmium
- Polonium-210

Nicotine is the addictive component of tobacco products, but it does NOT cause the ill health effects of tobacco use.



All Forms of Tobacco are Harmful

- Cigarettes are, by far, the most common form of tobacco used in the U.S.
- Other forms of tobacco exist, and some are increasing in popularity.
- All forms of tobacco are harmful.
- Attention to all forms of tobacco is needed.



HEALTH CONSEQUENCES of SMOKING

- Cancers
 - Acute myeloid leukemia
 - Bladder and kidney
 - Cervical
 - Esophageal
 - Gastric
 - Laryngeal
 - Lung
 - Oral cavity and pharyngeal
 - Pancreatic
- Pulmonary diseases
 - Acute (e.g., pneumonia)
 - Chronic (e.g., COPD)
- Cardiovascular diseases
 - Abdominal aortic aneurysm
 - Coronary heart disease
 - Cerebrovascular disease
 - Peripheral arterial disease
- Reproductive effects
 - Reduced fertility in women
 - Poor pregnancy outcomes (e.g., low birth weight, preterm delivery)
 - Infant mortality
- Other effects: cataract, osteoporosis, periodontitis, poor surgical outcomes

U.S. Department of Health and Human Services. (2004). *The Health Consequences of Smoking: A Report of the Surgeon General*.



ANNUAL U.S. DEATHS ATTRIBUTABLE to SMOKING, 1997–2001

Percentage of all smoking-
attributable deaths*

Cardiovascular diseases	137,979	32%
Lung cancer	123,836	28%
Respiratory diseases	101,454	23%
Second-hand smoke*	38,112	9%
Cancers other than lung	34,693	8%
Other	1,828	<1%

TOTAL: 437,902 deaths annually

* In 2005, it was estimated that nearly 50,000 persons died due to second-hand smoke exposure.

Centers for Disease Control and Prevention. (2005). *MMWR* 54:625–628.



NICOTINE ADDICTION

U.S. Surgeon General's Report (1988)

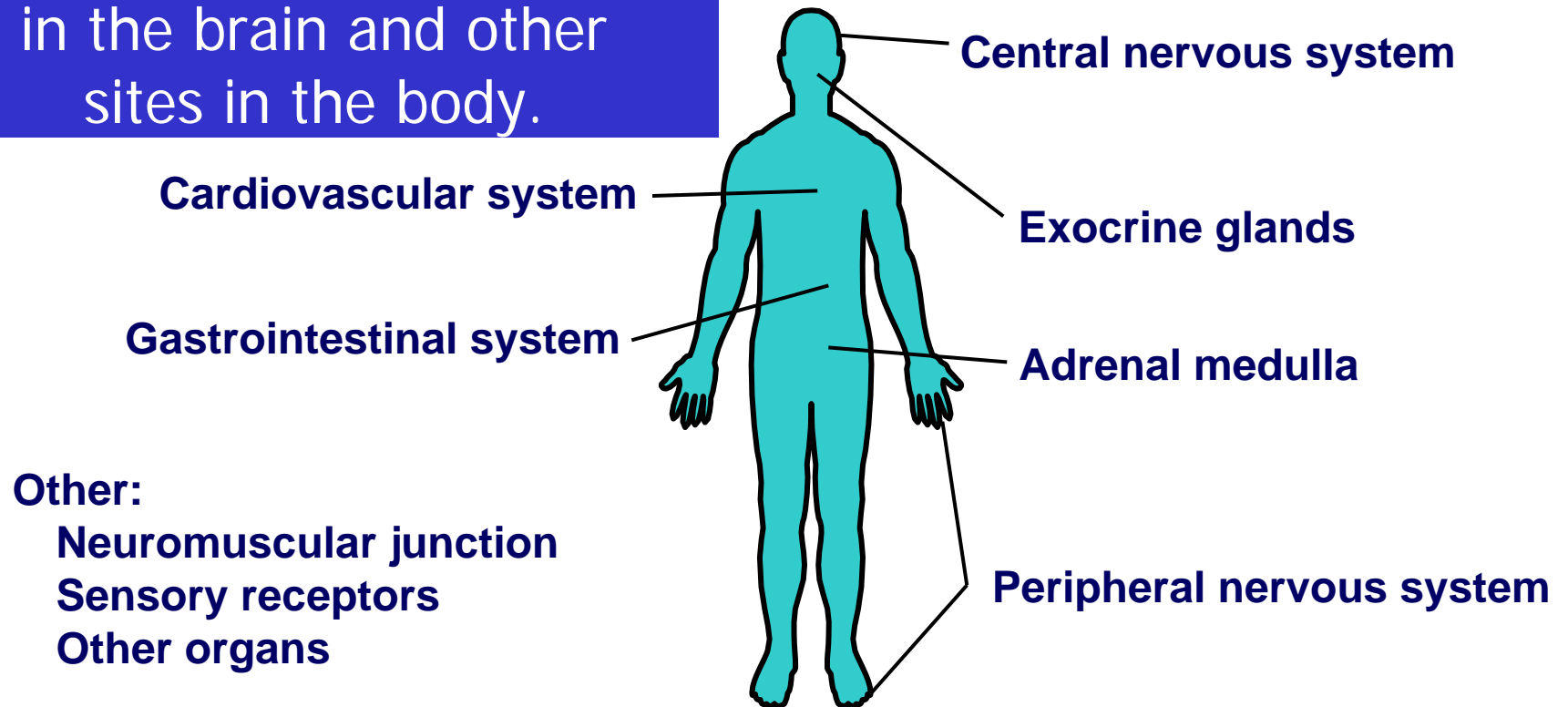
- Cigarettes and other forms of tobacco are addicting.
- Nicotine is the drug in tobacco that causes addiction.
- The pharmacologic and behavioral processes that determine tobacco addiction are similar to those that determine addiction to drugs such as heroin and cocaine.

U.S. Department of Health and Human Services. (1988). *The Health Consequences of Smoking: Nicotine Addiction. A Report of the Surgeon General.*



NICOTINE PHARMACODYNAMICS

Nicotine binds to receptors in the brain and other sites in the body.



Nicotine has predominantly stimulatory effects.



NICOTINE PHARMACODYNAMICS (cont'd)

Central nervous system

- Pleasure
- Arousal, enhanced vigilance
- Improved task performance
- Anxiety relief

Other

- Appetite suppression
- Increased metabolic rate
- Skeletal muscle relaxation

Cardiovascular system

- ↑ Heart rate
- ↑ Cardiac output
- ↑ Blood pressure
- Coronary vasoconstriction
- Cutaneous vasoconstriction



NICOTINE PHARMACODYNAMICS: WITHDRAWAL EFFECTS

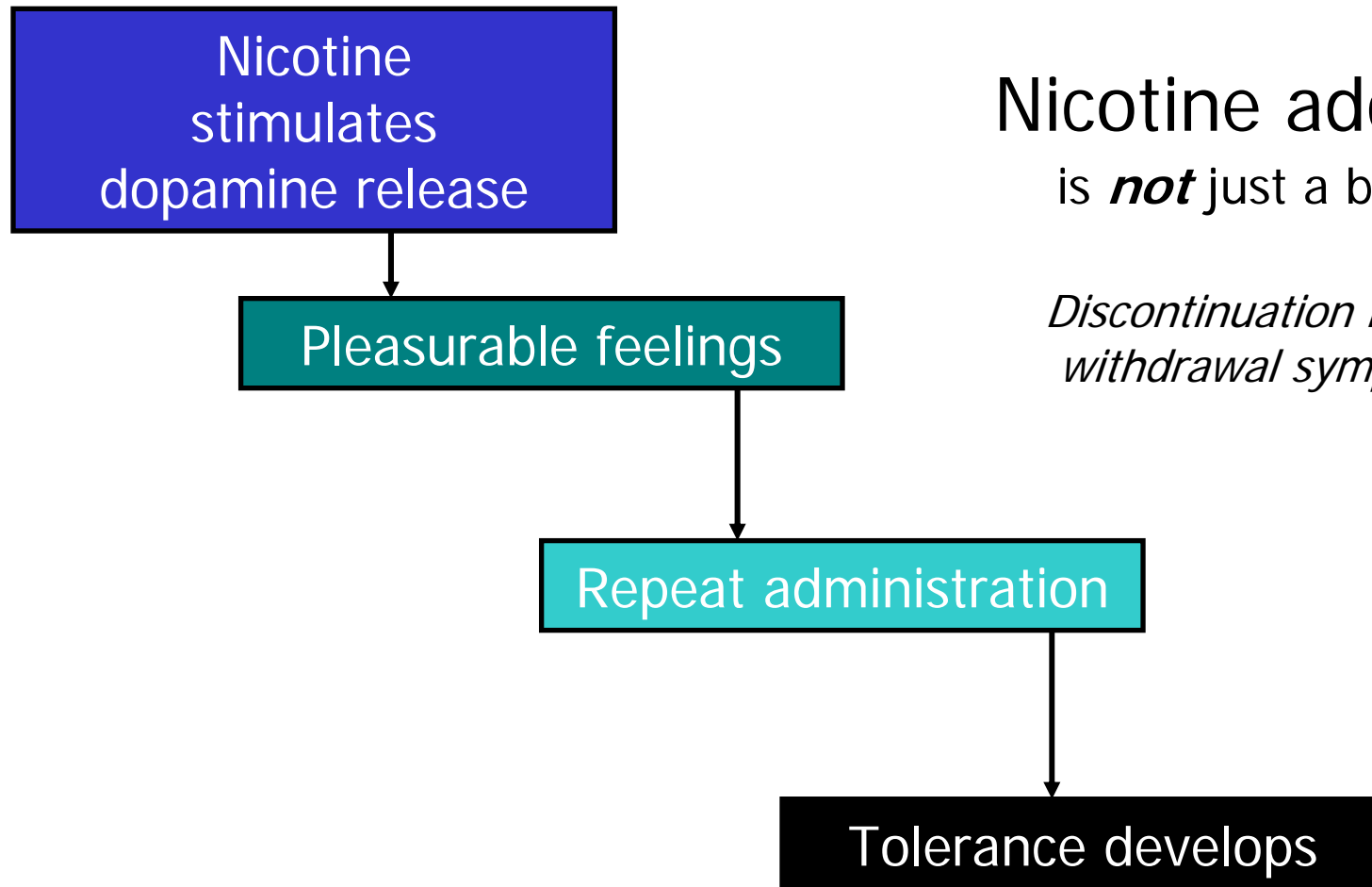
- Irritability/frustration/anger
- Anxiety
- Difficulty concentrating
- Restlessness/impatience
- Depressed mood/depression
- Insomnia
- Impaired performance
- Increased appetite/weight gain
- Cravings

Most symptoms manifest within the first 1–2 days, peak within the first week, and subside within 2–4 weeks.

HANDOUT



BIOLOGY of NICOTINE ADDICTION: ROLE of DOPAMINE



Nicotine addiction
is *not* just a bad habit.

*Discontinuation leads to
withdrawal symptoms.*



TOBACCO DEPENDENCE: A 2-PART PROBLEM

Tobacco Dependence

Physiological

The addiction to nicotine



Treatment

Medications for cessation



Behavioral

The habit of using tobacco



Treatment

Behavior change program

Treatment should address the physiological **and** the behavioral aspects of dependence.



WHY SHOULD CLINICIANS ADDRESS TOBACCO?

- Tobacco users expect to be encouraged to quit by health professionals.
- Screening for tobacco use and providing tobacco cessation counseling are positively associated with patient satisfaction (Barzilai et al., 2001).

Failure to address tobacco use tacitly implies that quitting is not important.



HELPING PATIENTS QUIT IS a CLINICIAN'S RESPONSIBILITY

**TOBACCO USERS DON'T PLAN TO FAIL.
MOST FAIL TO PLAN.**

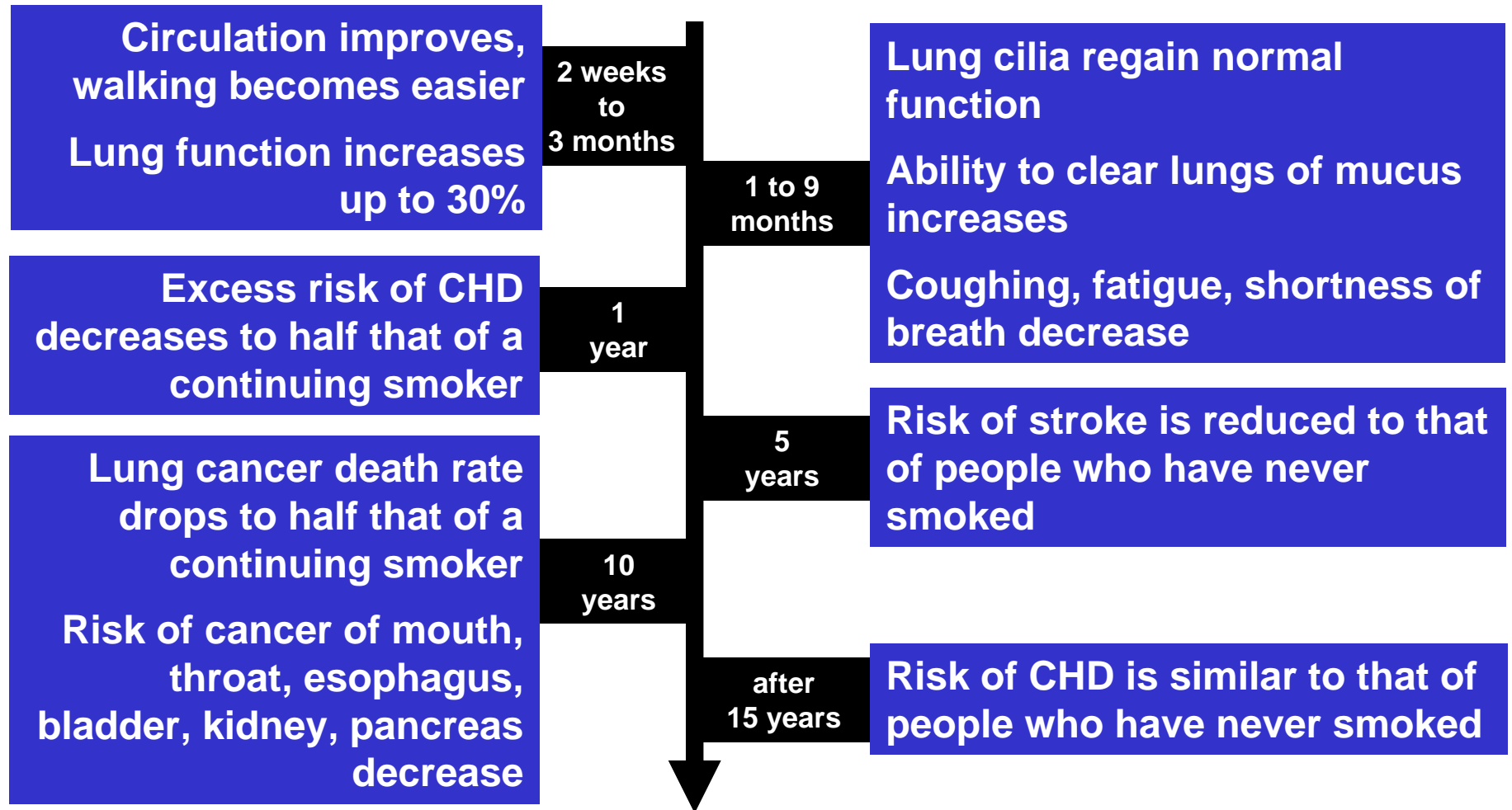
Clinicians have a professional obligation to address tobacco use and can have an important role in helping patients plan for their quit attempts.

**THE DECISION TO QUIT LIES
IN THE HANDS OF EACH PATIENT.**



QUITTING: HEALTH BENEFITS

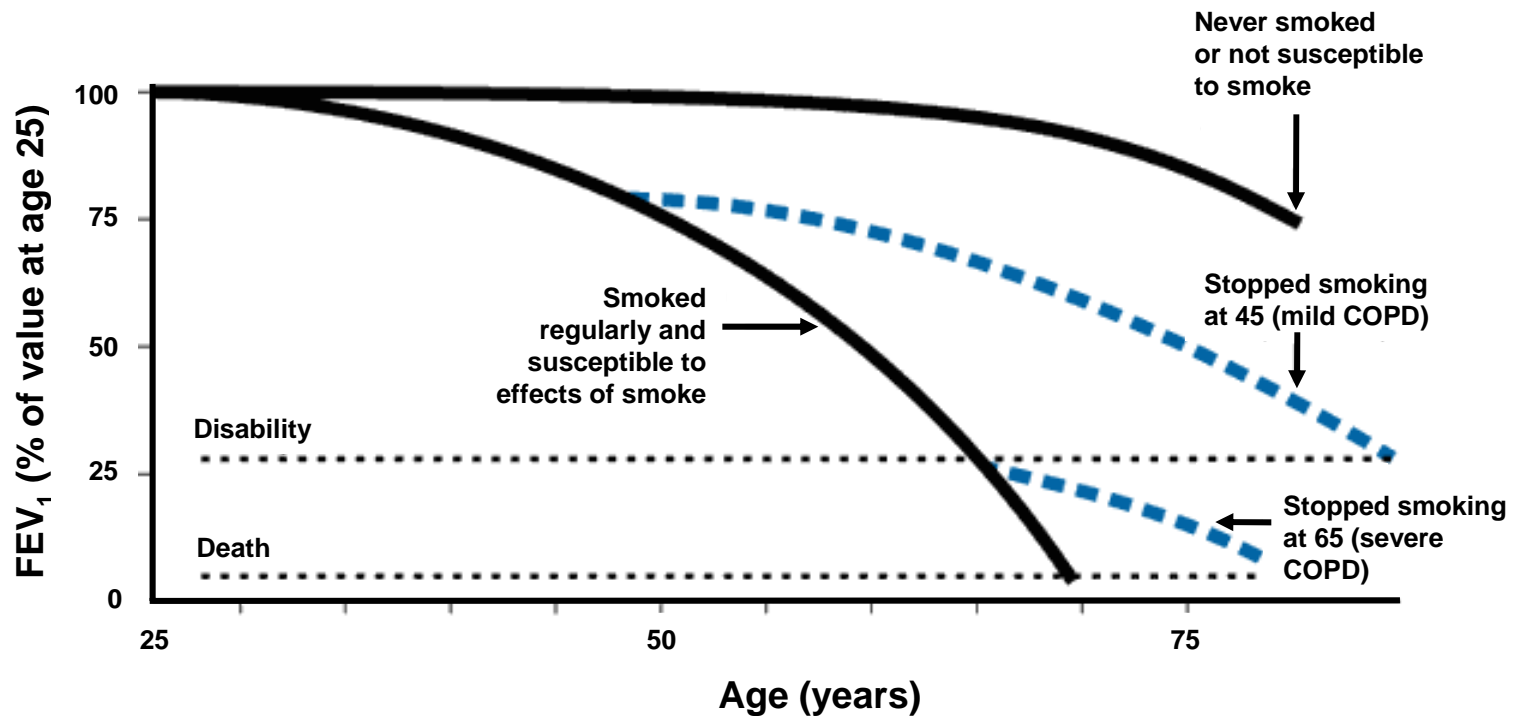
Time Since Quit Date





BENEFICIAL EFFECTS of QUITTING: PULMONARY EFFECTS

AT ANY AGE, there are benefits of quitting.



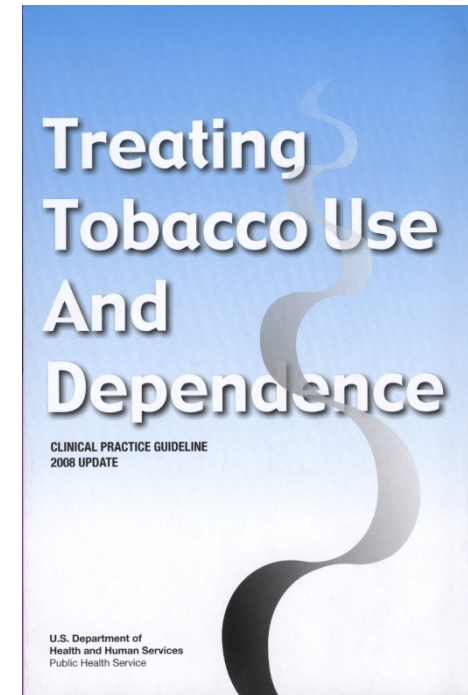
COPD = chronic obstructive pulmonary disease

Reprinted with permission. Fletcher & Peto. (1977). *BMJ* 1(6077):1645–1648.



CLINICAL PRACTICE GUIDELINE for TREATING TOBACCO USE and DEPENDENCE

- Update released May 2008
- Sponsored by the U.S. Department of Health and Human Services, Public Health Service with:
 - Agency for Healthcare Research and Quality
 - National Heart, Lung, & Blood Institute
 - National Institute on Drug Abuse
 - Centers for Disease Control and Prevention
 - National Cancer Institute

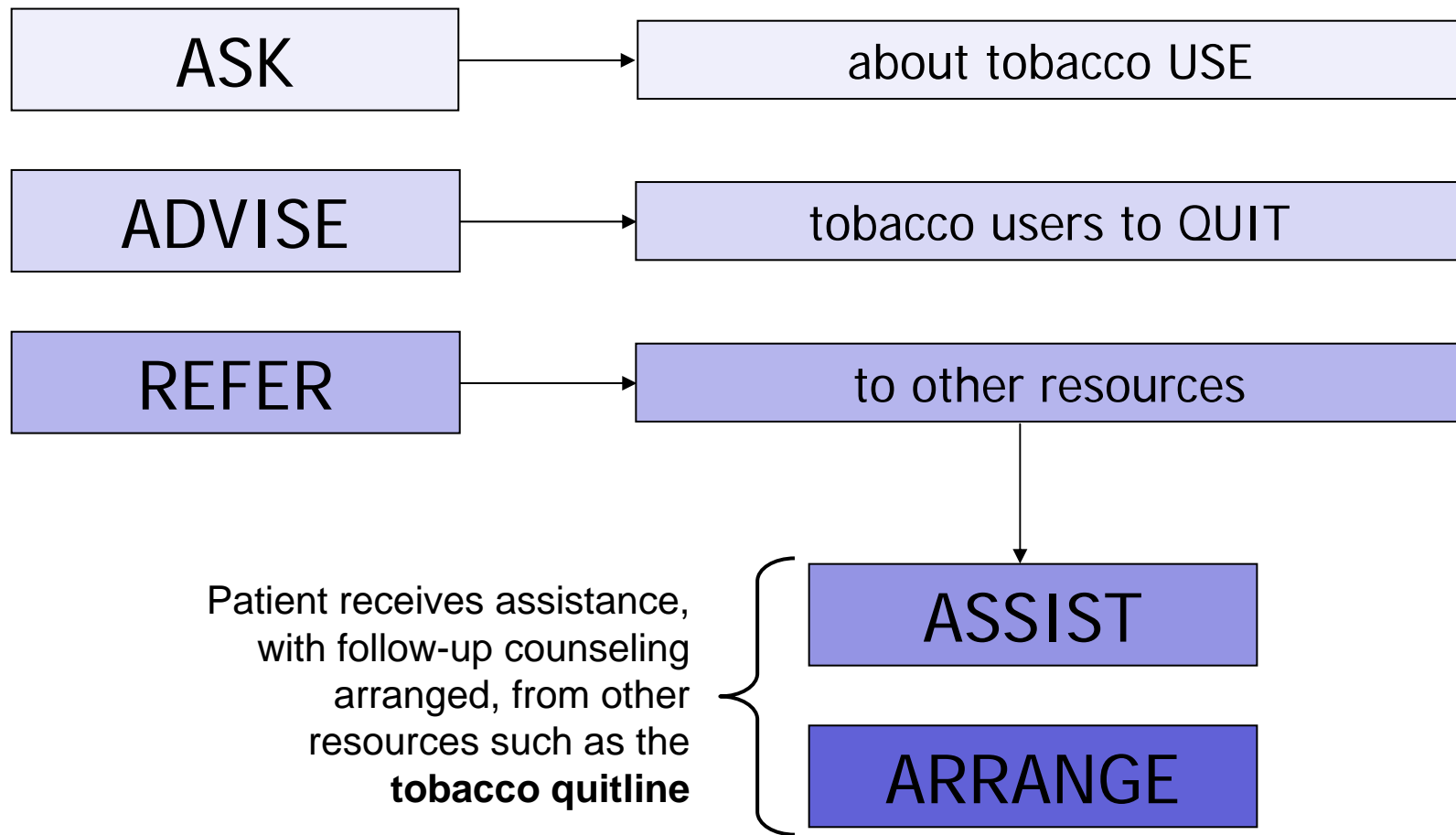


www.surgeongeneral.gov/tobacco/

HANDOUT



BRIEF COUNSELING: ASK, ADVISE, REFER





ASSESSING READINESS to QUIT

Patients differ in their readiness to quit.

STAGE 1: Not ready to quit in the next month

STAGE 2: Ready to quit in the next month

STAGE 3: Recent quitter, quit within past 6 months

STAGE 4: Former tobacco user, quit > 6 months ago

Assessing a patient's readiness to quit enables clinicians to deliver relevant, appropriate counseling messages.



STAGE 1: NOT READY to QUIT Counseling Strategies

GOAL: Start thinking about quitting.

DOs

- Strongly advise to quit
- Provide information
- Ask noninvasive questions; identify reasons for tobacco use
- Raise awareness of health consequences/concerns
- Demonstrate empathy, foster communication
- Leave decision up to patient

DON'Ts

- Persuade
- "Cheerlead"
- Tell patient how bad tobacco is, in a judgmental manner
- Provide a treatment plan



STAGE 1: NOT READY to QUIT

Counseling Strategies (cont'd)

Consider asking:

"Do you **ever** plan to quit?"



If NO

Strongly advise patient to quit, and offer to assist (if they change their mind)

If YES



"How would it benefit you to quit later, as opposed to now?"



Most patients will agree: there is no "good" time to quit, and there are benefits to quitting sooner as opposed to later

"What is the worst thing that would happen if you were to quit now?"

Responses will reveal some of the barriers to quitting



STAGE 1: NOT READY to QUIT Counseling Strategies (cont'd)

The 5 R's—Methods for enhancing motivation:

- Relevance
- Risks
- Rewards
- Roadblocks
- Repetition

**Tailored,
motivational
messages**



Motivational Interviewing

“Motivational Interviewing is not a technique for tricking people into doing what they do not want to do. Rather, it is a clinical style for eliciting from patients their own good motivations for making behavior changes in the interest of their own health”

“If your consultation time is limited, you are better off asking patients why they would want to make a change and how they might do it rather than telling them that they should.”

“A patient who is active in the consultations, thinking aloud about the why and how of change, is more likely to do something about this afterward. ”

M.I. in Healthcare, S. Rollnick, W. Miller, C. Butler, Guilford Press 2008



STAGE 2: READY to QUIT

Discuss Key Issues

GOAL: Achieve cessation.

- Reasons/motivation to quit
- Confidence in ability to quit
- Triggers for tobacco use
 - What situations lead to temptations to use tobacco?
 - What led to relapse in the past?
- Routines/situations associated with tobacco use
 - When drinking coffee
 - While driving in the car
 - When bored or stressed
 - While watching television
 - While at a bar with friends
 - After meals or after sex
 - During breaks at work
 - While on the telephone
 - While with specific friends or family members who use tobacco



STAGE 2: READY to QUIT

Discuss Key Issues (cont'd)

Stress-Related Tobacco Use

THE MYTHS

- "Smoking gets rid of all my stress."
- "I can't relax without a cigarette."

THE FACTS

- There will always be stress in one's life.
- There are many ways to relax without a cigarette.

Smokers confuse the relief of withdrawal with the feeling of relaxation.

STRESS MANAGEMENT SUGGESTIONS:

Deep breathing, shifting focus, taking a break.



STAGE 2: READY to QUIT

Discuss Key Issues (cont'd)

Concerns about Withdrawal Symptoms

- Most pass within 2–4 weeks after quitting
- Cravings can last longer, up to several months or years
 - Often can be ameliorated with cognitive or behavioral coping strategies
- Refer to Withdrawal Symptoms Information Sheet
 - Symptom, cause, duration, relief

Most symptoms manifest within the first 1–2 days, peak within the first week, and subside within 2–4 weeks.



STAGE 2: READY to QUIT

Facilitate Quitting Process (cont'd)

Cognitive Coping Strategies

- Review commitment to quit
- Distractive thinking
- Positive self-talk
- Relaxation through imagery
- Mental rehearsal and visualization





STAGE 2: READY to QUIT

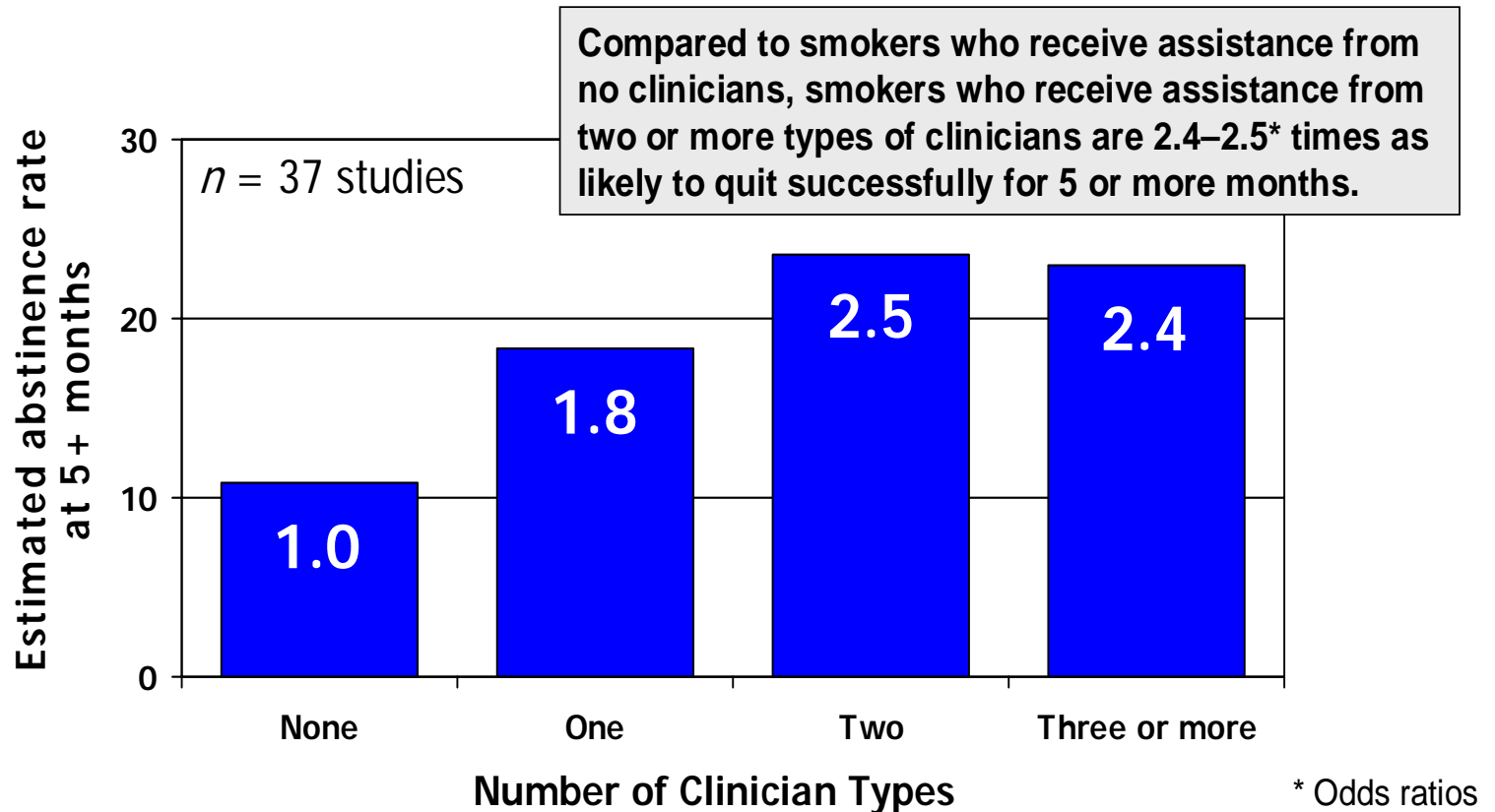
Facilitate Quitting Process (cont'd)

Behavioral Coping Strategies

- Control your environment
 - Tobacco-free home and workplace
 - Remove cues to tobacco use; actively avoid trigger situations
 - Modify behaviors that you associate with tobacco: when, what, where, how, with whom
- Substitutes for smoking
 - Water, sugar-free chewing gum or hard candies (oral substitutes)
- Take a walk, diaphragmatic breathing, self-massage
- Actively work to reduce stress, obtain social support, and alleviate withdrawal symptoms



The NUMBER of CLINICIAN TYPES CAN MAKE a DIFFERENCE





MAKE a COMMITMENT...

Address tobacco use

with all patients.

At a minimum,

make a commitment to incorporate brief tobacco interventions as part of routine patient care.

Ask, Advise, and Refer.



METHODS for QUITTING

- Nonpharmacologic
 - Counseling and other non-drug approaches
- Pharmacologic
 - FDA-approved medications

Counseling and medications are both effective, but the combination of counseling and medication is more effective than either alone.



PHARMACOLOGIC METHODS: FIRST-LINE THERAPIES

Three general classes of FDA-approved drugs for smoking cessation:

- Nicotine replacement therapy (NRT)
 - Nicotine gum, patch, lozenge, nasal spray, inhaler
- Psychotropics
 - Sustained-release bupropion
- Partial nicotinic receptor agonist
 - Varenicline



SUMMARY

- To maximize success, interventions should include counseling and one or more medications
- Clinicians should encourage the use of effective medications by all patients attempting to quit smoking
 - Exceptions include medical contraindications or use in specific populations for which there is insufficient evidence of effectiveness
- First-line medications that reliably increase long-term smoking cessation rates include:
 - Bupropion SR, nicotine replacement therapy (gum, inhaler, lozenge, patch, nasal spray), varenicline
- The 2008 Clinical Practice Guideline recommends that effective combinations of medications should be considered
 - However, dosing should be in accordance with individual product labeling.