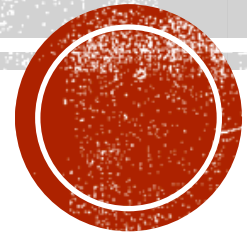


YOUR PATIENTS WANT TO QUIT TOBACCO AND YOU CAN HELP!

KAREN MYERS, ARNP

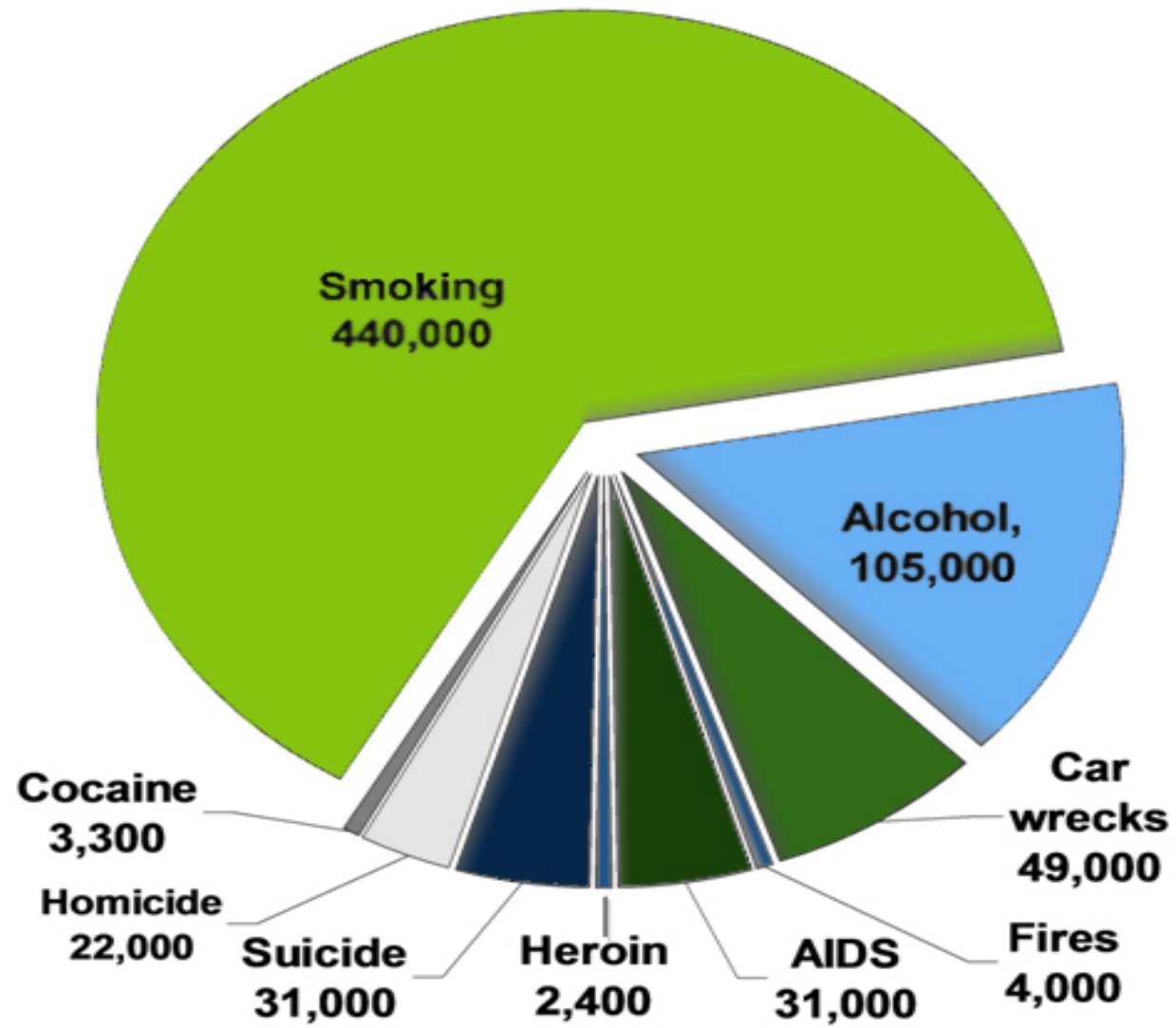
Certified Tobacco Training Specialist



OBJECTIVES

- At the conclusion of this talk the learner will be able to:
 - discuss the absorption of nicotine and how it is affected
 - Discuss the addictive properties of Nicotine
 - Identify current treatments in tobacco cessation and their efficacies
 - Discuss counseling for tobacco cessation
 - Discuss the special population of mental health patients and tobacco use





DISEASES CAUSED BY SMOKING

CANCERS

Larynx

Oropharynx

Oesophagus

Trachea, bronchus or lung

Acute myeloid leukemia

Stomach

Pancreas

Kidney and Ureter

Colon

Cervix

Bladder

CHRONIC DISEASES

Stroke

Blindness, Cataracts

Periodontitis

Aortic aneurysm

Coronary heart disease

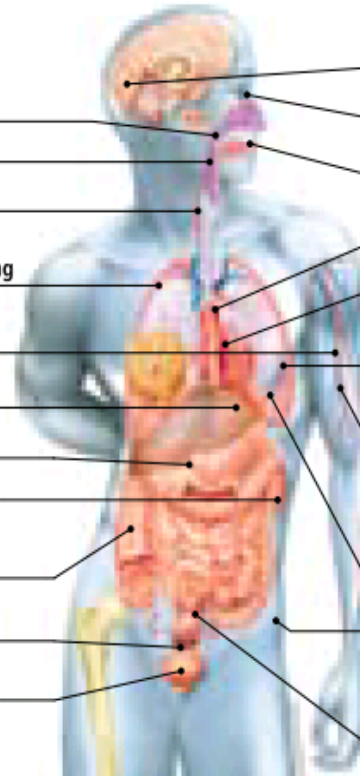
Pneumonia

Atherosclerotic peripheral vascular disease

Chronic obstructive pulmonary disease (COPD), asthma, and other respiratory effects

Hip fractures

Reproductive effects in women (including reduced fertility)



Source: U.S. Department of Health and Human Services. *The health consequences of smoking: a report of the Surgeon General*. Atlanta, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004 (http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2004/chapters.htm, accessed 5 December 2007).

DISEASES CAUSED BY SECOND-HAND SMOKE

CHILDREN

Brain tumours*

Middle ear disease

Lymphoma*

Respiratory symptoms, Impaired lung function

Asthma*

Sudden Infant Death Syndrome (SIDS)

Leukemia*

Lower respiratory illness

ADULTS

Stroke*

Nasal irritation, Nasal sinus cancer*

Breast cancer*

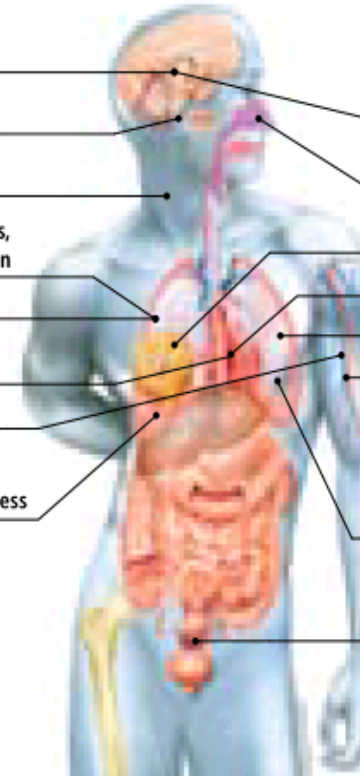
Coronary heart disease

Lung cancer

Atherosclerosis*

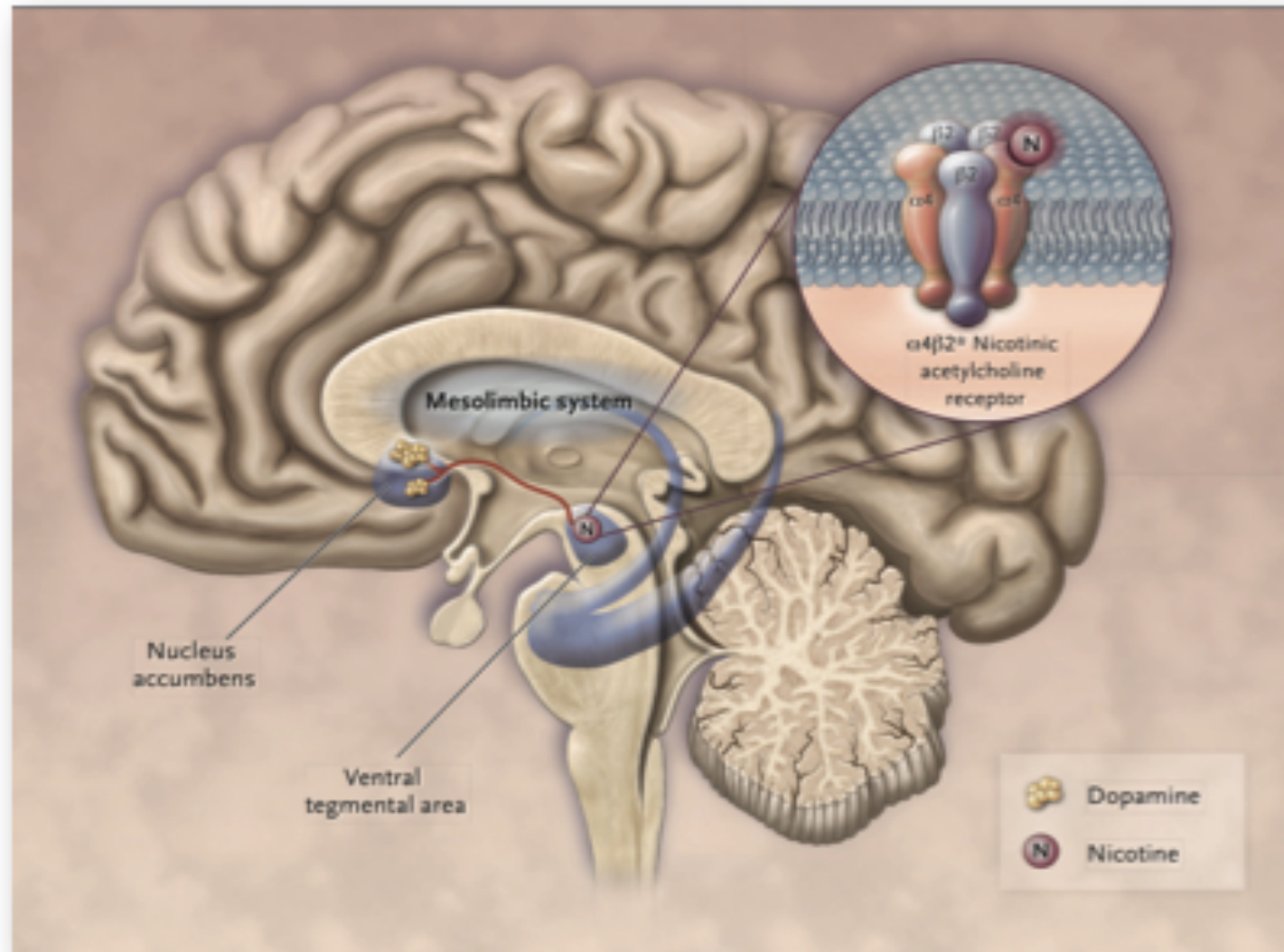
Chronic obstructive pulmonary disease (COPD)*, Chronic respiratory symptoms*, Asthma*, Impaired lung function*

Reproductive effects in women: Low birth weight; Pre-term delivery*



* Evidence of causation: suggestive
Evidence of causation: sufficient

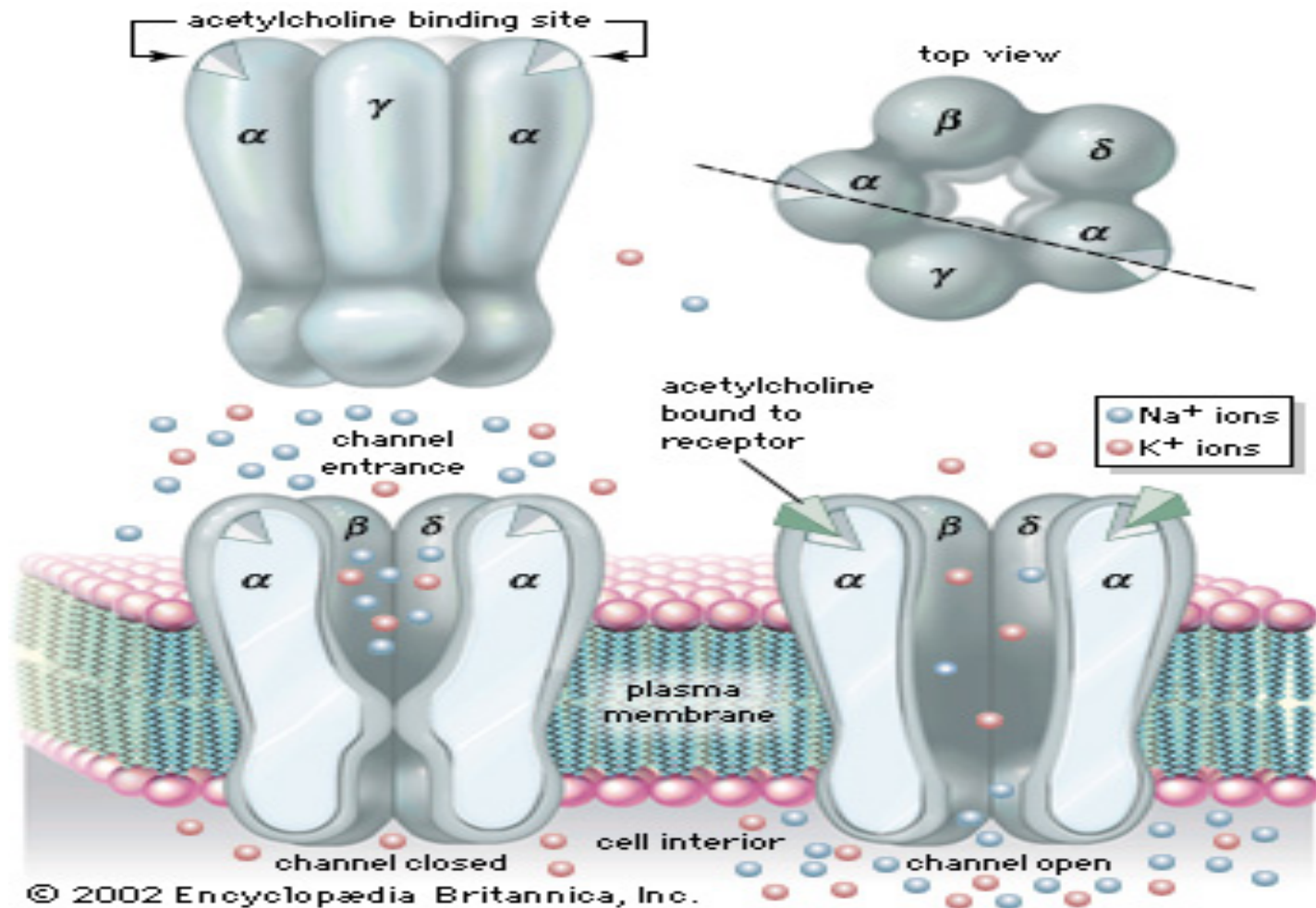
Source: U.S. Department of Health and Human Services. *The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General*. Atlanta, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006 (<http://www.surgeongeneral.gov/library/secondhandsmoke/report/fullreport.pdf>, accessed 5 December 2007).



Benowitz NL. Nicotine addiction NEJM 362:2295, 2010



NICOTINIC-ACETYLCHOLINE RECEPTOR



NICOTINE: PHYSIOLOGICAL EFFECTS

Central Nervous
System

Pleasure, Reward, Arousal,
Improved Concentration,
Anxiolytic

Cardiovascular

Increased heart rate, cardiac
output and blood pressure,
vasoconstriction of coronary
arteries

Other

Decreased appetite, weight loss,
muscle relaxation

NICOTINE: METABOLISM

$$\text{Daily dose nicotine (mg)} = \text{pCL} \times 0.08$$

- Primarily metabolized to cotinine
- Daily intake of nicotine can be estimated from plasma cotinine levels (pCL)

EXAMPLE: If the cotinine level is 250 ng/mL then....

$$\text{Daily dose} = 250 \times 0.08 = 20 \text{ mg}$$

$$1 \text{ cigarette} = 1 \text{ mg} \Rightarrow 20 \text{ cigarettes}$$

Therefore the person is smoking 1 pack per day

NICOTINE: EXCRETION

- The half-life of nicotine is ~ 2hours
- The half-life of cotinine is ~ 18 hours
 - Makes it a more reliable marker for exposure to nicotine
- Products of nicotine metabolism are primarily excreted through the kidneys

NICOTINE: ABSORPTION

Absorption is affected by pH...

Acidic Environment



Ionized Molecule



Poor Absorption

Basic Environment



Nonionized Molecule



Well Absorbed

Nicotine is readily absorbed at a
physiological pH of 7.3-7.5.

CIGARETTES... THE ULTIMATE DELIVERY DEVICE....

Nicotine is readily absorbed in the lungs due to three factors:

- pH = 7.4
- Large alveolar surface area
- Extensive capillary system

Tobacco Companies Have Made Cigarettes More Addictive and More Deadly

Bronchodilators

Added chemicals expand the lungs' airways, making it easier for tobacco smoke to pass into the lungs.

Flavorings

Added flavors like liquorice and chocolate mask the harshness of smoke and make products more appealing to new users, especially kids.

Increased Nicotine

Tobacco companies control the delivery and amount of nicotine to ensure addiction

Tobacco-specific Nitrosamines

American-style cigarettes are made with blended tobacco that has much higher levels of cancer-causing nitrosamines.

Ammonia Compounds

Adding ammonia compounds increases the speed with which nicotine hits the brain.

Menthol

Menthol cools and numbs the throat to reduce irritation and make smoke feel smoother.

Sugars and Acetaldehyde

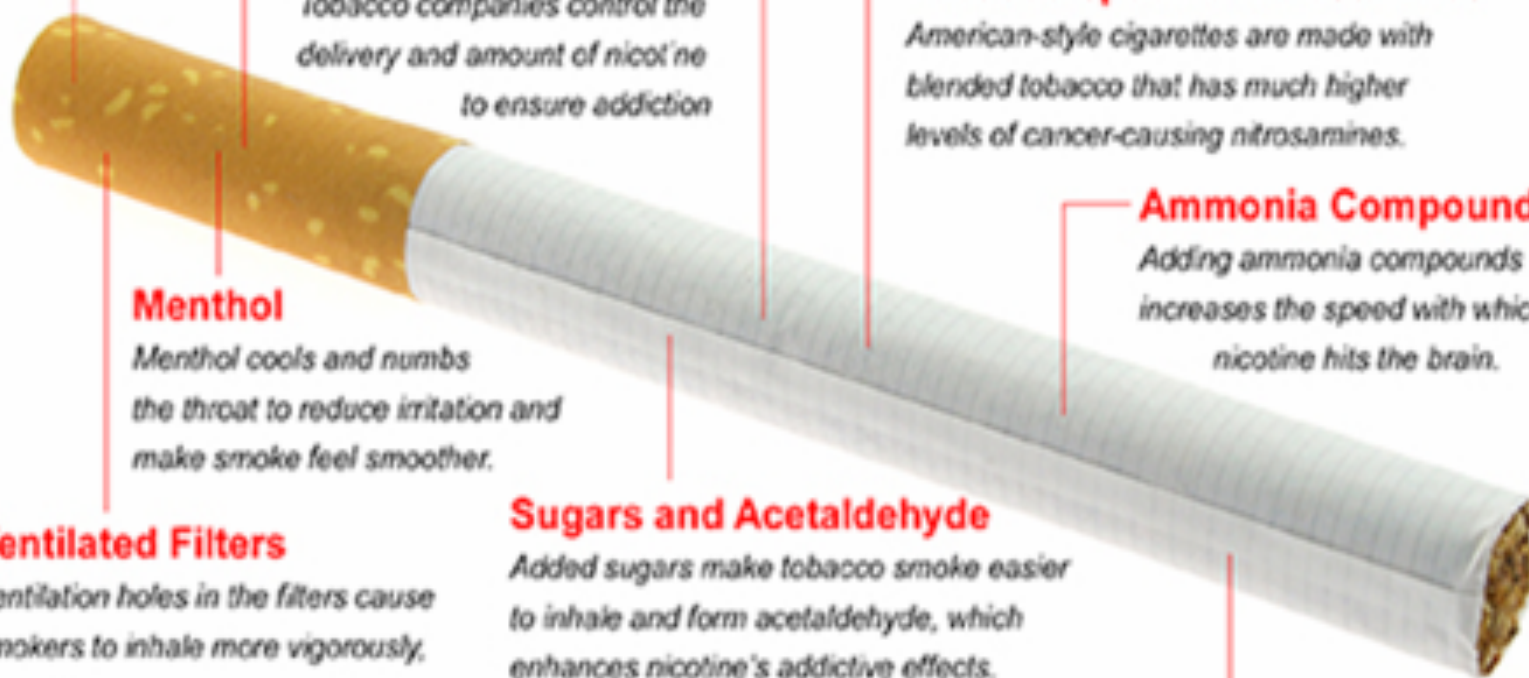
Added sugars make tobacco smoke easier to inhale and form acetaldehyde, which enhances nicotine's addictive effects.

Ventilated Filters

Ventilation holes in the filters cause smokers to inhale more vigorously, drawing carcinogens more deeply into the lungs.

Levulinic Acid

Added organic acid salts reduce harshness of nicotine and make smoke smoother, less irritating.



NICOTINE: TRANSDERMAL ABSORPTION

- Nicotine is readily absorbed through the skin.
- Allows for the transdermal delivery of nicotine

NICOTINE: BUCCAL ABSORPTION

- REMEMBER...nicotine is readily absorbed in an alkaline environment.

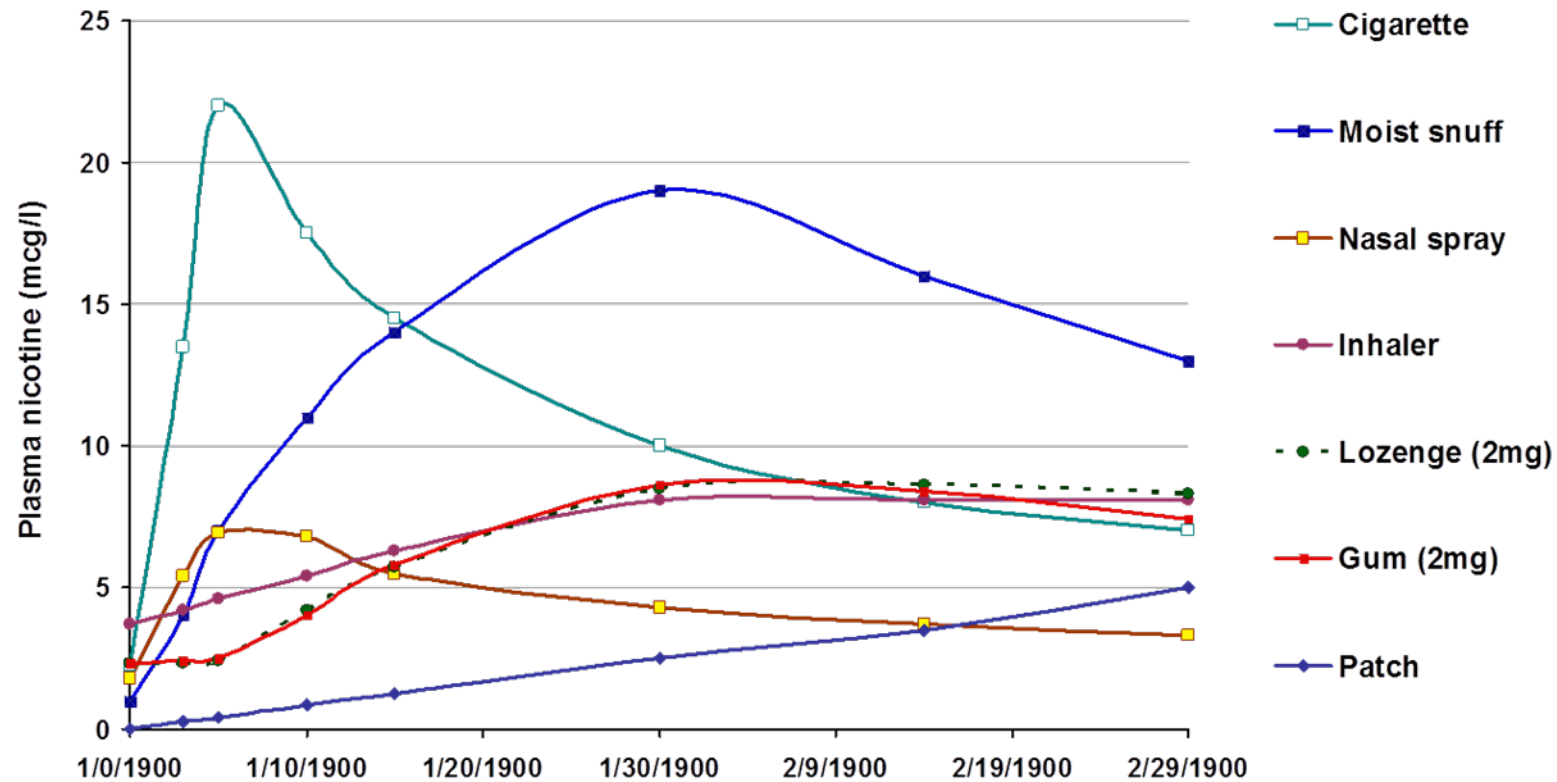
Cigarettes

Acidic = Limited Absorption

Smokeless Tobacco

Alkaline = **SIGNIFICANT** Absorption

NICOTINE CONCENTRATIONS



Choi et al., 2003; Fant et al., 1999; Schneider et al., 2001

HEALTH EFFECTS OF SMOKING

- Heart Disease
- Lung Disease
- Cancer
- Stroke
- Cataracts
- Anxiety
- Osteoporosis
- Early Menopause
- Miscarriage
- Impotence
- Gum Disease
- Tooth Decay
- Lupus
- Rheumatoid Arthritis
- Multiple Sclerosis
- Depression

HEALTH BENEFITS AFTER CESSATION

20 minutes	————→	Decreases in heart rate and blood pressure
12 hours	————→	Carbon monoxide levels decrease to normal
Within 9 months	————→	Cough and shortness of breath decrease, cilia regain normal function
After 1 year	————→	Risk of cardiovascular disease is half that of a smoker.
After 5-15 years	————→	Risk of stroke is reduced to that of a non- smoker
After 10 years	————→	Lung cancer is half that of a smoker.
After 15 years	————→	Risk of cardiovascular disease is that of non- smoker.

NICOTINE: WITHDRAWAL SYMPTOMS

- Anxiety
- Irritability
- Cravings
- Decreases in concentration
- Hunger
- Constipation
- Drowsiness
- Changes in sleep
- Joint Pain
- Restlessness

CESSATION METHODS

- Behavioral Modifications
- Pharmacological Treatment
 - Nicotine Replacement Therapy (NRT)
 - Non-nicotine Replacement Therapy

Nicotine Replacement Therapy Continued

- Nicotine does not have drug reactions to other medications (psychiatric medications included)
- Nicotine is not a carcinogen and is not a significant risk factor for heart attacks
- NRT takes the edge off of withdrawal symptoms; NRT is not a “new drug” – it is the same one the patient has already been taking, but at a lower dose, in a less addictive form over a relatively short period of time (in purer form)

Replace Lost Nicotine

- Give patient back nicotine in its pure form
- Average person receives 1.5 mg nicotine per cigarette
 - Roughly 10 hits per cigarette
 - 200 hits of nicotine for 1 pack/day smoker
 - Do the math: 30 mg nicotine per pack
- Consider mode of delivery
 - Cigarettes are a very effective drug delivery device
 - 7-10 seconds to get nicotine to the brain



Nicotine Replacement Therapy

- Severity of cravings and withdrawal symptoms are reduced by approximately 50%
- Very safe – getting the same drug in purer form at a lower dose, in a less addictive manner, over a defined time period, without 4,000 toxins
- In clinical trials NRT roughly **doubles the success rate**



NRT: AVAILABLE FORMULATIONS

- Nonprescription Products
 - Patches
 - Gum
 - Lozenges
- Prescription Products
 - Nasal Spray
 - Inhaler



NRT: PATCHES

Dosing	Cautions	Adverse Effects	Cost/Day
Based on cigarettes per day.	Recent MI Arrhythmia Angina Pregnancy	Skin irritation Sleep disturbances Headache	\$1.52-3.48

Other Considerations

Water Activities
Eczema or Psoriasis

NRT PATCHES: PATIENT COUNSELING POINTS

- Do not cut the patches.
- Alternate application sites to avoid skin irritation.
- If the patient experiences sleep disturbances they can remove the patch before bedtime.

Nicotine Transdermal Patch

USE

- Apply to clean, dry, hairless skin – rotate sites
- | | |
|----------------------|----------------------|
| >10 cigarettes a day | <10 cigarettes a day |
| 21 mg/day x 4 wks | 14 mg/day x 6 wks |
| 14 mg/day x 2 wks | 7 mg/day x 2 weeks |
| 7 mg/day x 2 wks | |
- 16 hour vs. 24 hour patch: which works better for your patient; 16 hr may interfere less with sleep

ADVANTAGES

- Provides constant nicotine levels
- Place and forget

DISADVANTAGES

- Passive (nothing to do when cravings come)
- Local irritation – treat with steroid cream, rotate site location



NRT: GUM

Dosing	Cautions	Adverse Effects	Cost/Day
Based on time to first cigarette upon waking. May be used PRN in combination with patches Maximum = 24 pieces/day Duration = 12 weeks	Recent MI Arrhythmia Angina Pregnancy	Mouth Jaw Soreness Hiccups Dyspepsia Increased Salivation	\$1.90-3.70 (9 pieces)

Other Considerations

TMJ

Dental Hygiene

NRT GUM (CONT.)

Advantages

- Satisfies oral cravings
- Delays weight gain
- Allows for titration
- Available in various flavors

Disadvantages

- Need for frequent dosing
- Dental concerns
- Must use the proper technique
- Gum chewing may not be socially acceptable

NRT GUM: PATIENT COUNSELING POINTS



- Must use the “Chew & Park” method
- Park in different areas of the mouth
- No food or beverages 15 minutes before or during use.
 - REMEMBER acidic environments decrease absorption of the drug.

Nicotine Gum

USE

- >25 cigarettes a day: 4 mg
- <25 cigarettes a day: 2 mg
- Park between cheek and gum

ADVANTAGES

- Can use as needed
- Gum use may delay weight gain

DISADVANTAGES

- Acidic foods/beverages interfere with nicotine absorption
- If swallowed can cause nausea
- Cannot be used with dentures



NRT: LOZENGES

Dosing	Cautions	Adverse Effects	Cost/Day
Based on time to first cigarette upon waking. May be used PRN in combination with patches Maximum = 24 pieces/day Duration = 12 weeks	Recent MI Arrhythmia Angina Pregnancy	Nausea Cough Hiccups Dyspepsia Flatulence	\$2.66-4.10 (9 pieces)

NRT LOZENGES (CONT.)

Advantages

- Satisfies oral cravings
- Delays weight gain
- Allows for titration
- Available in various flavors
- Offers an alternative for patients who cannot use gum.

Disadvantages

- Need for frequent dosing
- Gastrointestinal side effects limit usefulness.

NRT LOZENGES: PATIENT COUNSELING POINTS

- Allow lozenge to dissolve slowly in the mouth over 20-30 minutes and occasionally rotate to different areas of the mouth.
- Do not chew or swallow lozenges whole.
- Nicotine release may cause a warm, tingling sensation.
- No food or beverages 15 minutes before or during administration.

Nicotine Lozenge

USE

- Dosing based on time of first AM cigarette
- 1st cigarette, <30 minutes after waking: 4 mg
- 1st cigarette, >30 minutes after waking: 2 mg
- 9-15 lozenges a day for 6 weeks then taper off over next 6 weeks**
- Do the math: 15 lozenges at 4 mg is equiv. to 2 PPD
- Slowly dissolves in mouth

ADVANTAGES

- Can use as needed
- Can be used with dentures

DISADVANTAGES

- Acidic foods/beverages interfere with nicotine absorption
- If swallowed can cause nausea



NRT: NASAL SPRAY

Dosing	Cautions	Adverse Effects	Cost/Day
1-2 doses/hour 1 dose = 1 spray in each nostril. Duration of therapy 3-6 months <u>Maximum</u> 5 doses/hour 40 doses/day	Recent MI Arrhythmia Angina Pregnancy Chronic Nasal Disorders Severe Reactive Airway Disease	Nasal/Throat Irritation Rhinitis Tearing Sneezing Cough Headache	\$5.00 (8 doses)

NICOTINE NASAL SPRAY: DIRECTIONS FOR USE

- Prime the pump (before first use)
 - Re-prime (1-2 sprays) if spray not used for 24 hours
- Blow nose (if not clear)
- Tilt head back slightly and insert tip of bottle into nostril as far as comfortable
- Breathe through mouth, and spray once in each nostril
- Do not sniff or inhale while spraying



NICOTINE NASAL SPRAY: DIRECTIONS FOR USE (CONT.)

- If nose runs, gently sniff to keep nasal spray in nose
- Wait 2–3 minutes before blowing nose
- Wait 5 minutes before driving or operating heavy machinery
 - Spray may cause tearing, coughing, and sneezing
- Avoid contact with skin, eyes, and mouth
 - If contact occurs, rinse with water immediately
 - Nicotine is absorbed through skin and mucous membranes

Nicotine Nasal Spray

USE

- 1-2 doses/hour (1 dose = 1 spray in each nostril)
- Each spray deliver .5 mg nicotine; 1 dose = 1.0 mg
- 8-40 doses/day

ADVANTAGES

- Rapid onset, highest peak nicotine levels
- Can use as needed
- Good product for those highly addicted
- Reaches the blood stream faster than any other NRT product

DISADANTAGES

- Nasal/throat irritation



NICOTROL INHALER: DIRECTIONS FOR USE



- During inhalation, nicotine is vaporized and absorbed across oropharyngeal mucosa
- Inhale into back of throat or puff in short breaths
- Nicotine in cartridges is depleted after about 20 minutes of active puffing
 - Cartridge does *not* have to be used all at once
 - Open cartridge retains potency for 24 hours
- Mouthpiece is reusable; clean regularly with mild detergent

NICOTROL INHALER: PATIENT COUNSELING

- The inhaler may not be as effective in very cold (<59°F) temperatures—delivery of nicotine vapor may be compromised
- Use the inhaler longer and more often at first to help control cravings (best results are achieved with frequent continuous puffing over 20 minutes)
- Effectiveness of the nicotine inhaler may be reduced by some foods and beverages

**Do NOT eat or drink for 15 minutes BEFORE
or while using the nicotine inhaler.**

Nicotine Oral Inhaler (Puffer)

USE

- Can be puffed just like a cigarette
- 6-16 cartridges/day
- 1 cartridge can be used 3-4 times (20 minutes of puffing)
- Can use 1 cartridge every 1-2 hours
- Each 10 mg cartridge delivers **4 mg of nicotine**
- Titrate dose accordingly

ADVANTAGES

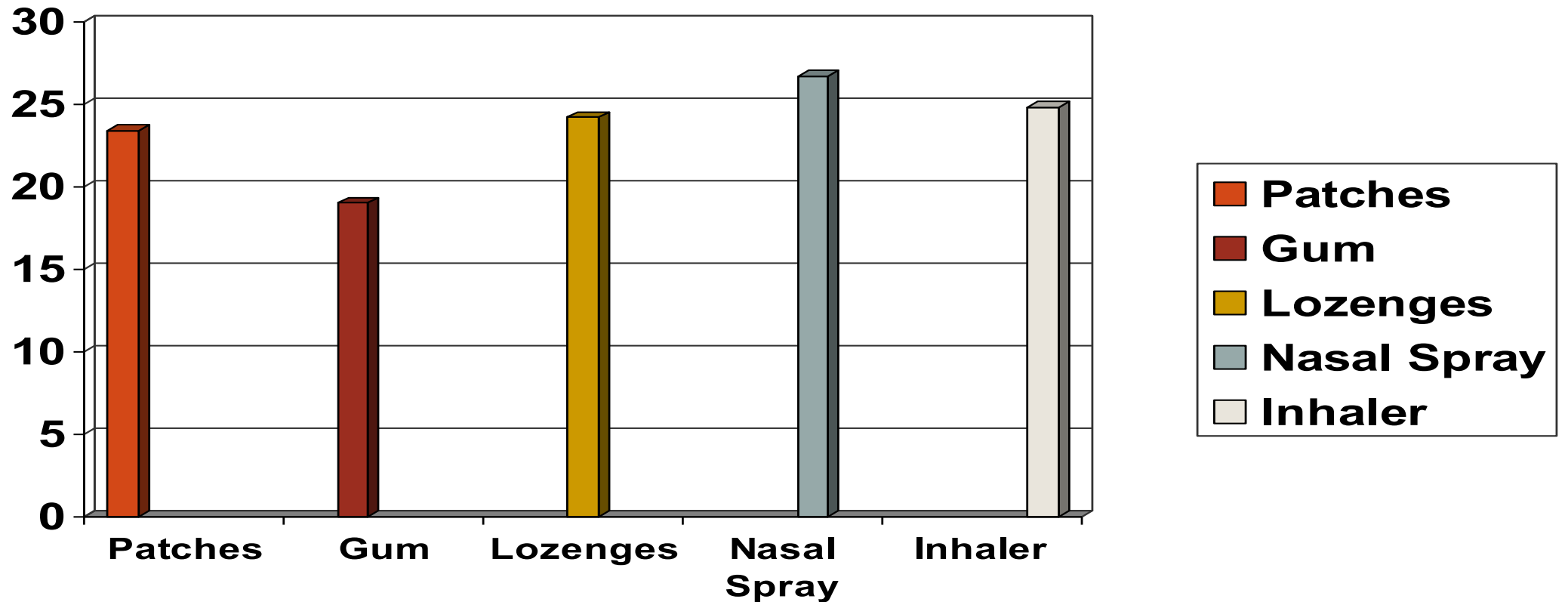
- Can use as needed
- Mimics hand-to-mouth ritual of smoking
- Seems to be more effective in female populations

DISADVANTAGES

- Throat and/or mouth irritation
 - Cartridges cannot be stored in very warm/cold conditions
-



COMPARATIVE EFFICACY OF NRT



US Department of Health and Human Services. Treating Tobacco Use and Dependence. Clinical Practice Guidelines 2008 Update.

NRT: CARDIOVASCULAR DISEASE

- Conflict between expert opinion and product labeling.

GENERAL RECOMMENDATIONS

- Avoid use in patients who have had a serious cardiovascular within the past 2 weeks.
- Do not exceed the manufacturers recommended dose.
- Warn patients against using NRT while continuing to smoke.
- Use oral dosage forms rather than patches.

McRobbie H, Hajek P. Nicotine replacement therapy in patients with cardiovascular disease: guidelines for healthcare professionals. Addiction. 2001.

NON-NICOTINE REPLACEMENT THERAPY

44

BUPROPION

Dosing	Cautions	Adverse Effects	Cost/Day
150 mg daily for 3 days, then twice daily. Therapy begins 1-2 weeks before quit date. Duration 7-12 weeks.	Medications that lower seizure threshold Severe liver disease Pregnancy	Insomnia Dry Mouth Nervousness Rash Constipation Seizures	\$2.72-6.22

Contraindications

Diagnosis of Bulimia or Anorexia Nervosa

Seizure Disorders

Current use of bupropion

Recent abrupt discontinuation of alcohol or benzodiazepines

MAOI therapy within 14 days

BUPROPION

Advantages

- Easy to use oral therapy
- May delay weight gain
- Can be used with NRT
- Might be beneficial in patients with depression
- Can be used in patients with cardiovascular disease
- Generic available

Disadvantages

- Increased risk of seizures
- Several contraindications limits usefulness in some patients

BUPROPION

- Set a quit date to fall within 1-2 weeks of initiation of therapy.
- Allow at least 8 hours between doses.
- Avoid bedtime dosing to minimize insomnia
- Do not crush or chew tablets.

Bupropion

(Zyban and Wellbutrin SR)

Use

- Dose 150 mg each day for 3-7 days then twice per day (be flexible)
- Doses at least 8 hours apart
- Start 7-10 days prior to quit date
- Continue 7-12 weeks or longer

Mechanism of Action

- mechanism for smoking cessation unknown; exact mechanism of action for depression unknown, inhibits neuronal uptake of norepinephrine and dopamine

Contraindications

- seizure disorder, eating disorders, MAO use, allergy

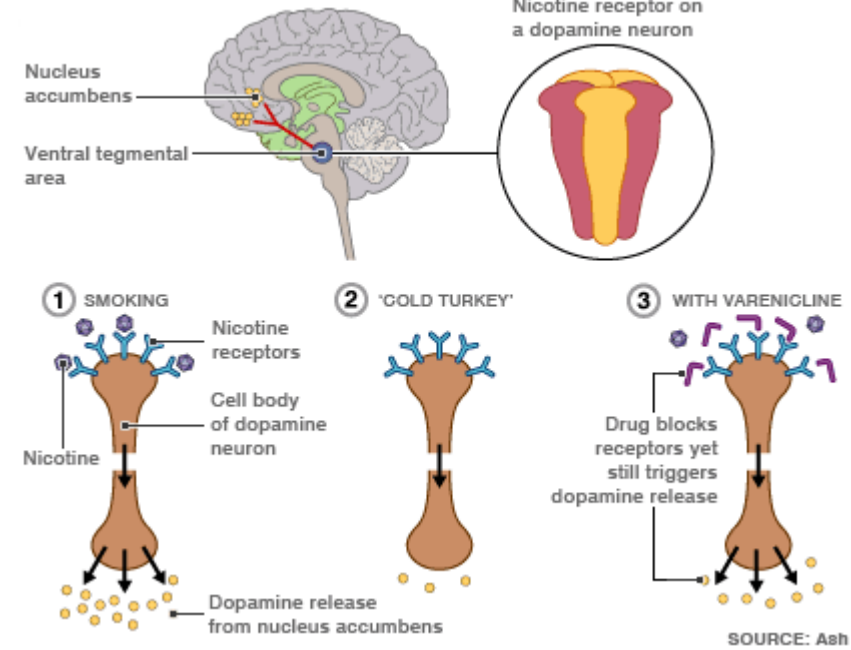
Side Effects

- Insomnia (40%)
- Dry mouth (10%)



VARENIC LINE

HOW VARENICLINE WORKS



VARENICLINE

Dosing	Cautions	Adverse Effects	Cost/Day
Days 1-3 0.5 mg daily, days 4-7 0.5 mg twice daily then 1 mg twice daily. Should initiate 1 week prior to quit date	Severe renal impairment Psychiatric disorders	Nausea Insomnia/Vivid Dreams Constipation Neuropsychiatric symptoms	\$8.24

Special Precautions

Serious psychiatric disorders (BBW)

VARENICLINE

Advantages

- Easy to use oral therapy
- Unique mechanism of action
- Can be used in patients with cardiovascular disease

Disadvantages

- Usefulness limited in psychiatric population
- Nausea is seen in 30% of patients
- Cost (uninsured)

VARENICLINE

- Set the quit date to fall after 1 week of therapy
- Take dose after meals with a full glass of water
- Patients should report any changes in mood to the physician

Varenicline (Chantix)

Use

- 0.5 mg PO qd x3 days, then 0.5 mg PO bid x4 days, then 1 mg PO BID for 3 months total
- may cont. additional 12wk if initial tx successful

Mechanism of Action

- partial nicotine agonist/antagonist

Contraindications

- Allergy or <18yo
- CAUTION – psychiatric illness or renal impairment

Side Effects

- Nausea (30%)
- Headache (18%)
- Sleep disturbances and nightmares (15%)



Varenicline (Chantix) Safety

- Caution with psychiatric illness is currently being studied
- Several studies including a meta-analysis showed **no increase** in psychiatric adverse events including, anxiety, depression, mood disorder, and suicide
- Similar results are seen in studies including combination therapy with varenicline. Pre-publication results of one study showed:
"Compared to smokers using other medication options, subjects who used varenicline or combination meds had no increase in serious psychological distress."

Steinberg MB, et al. "Comparative abstinence/mood effects for varenicline and combination pharmacotherapy in a tobacco treatment clinic."



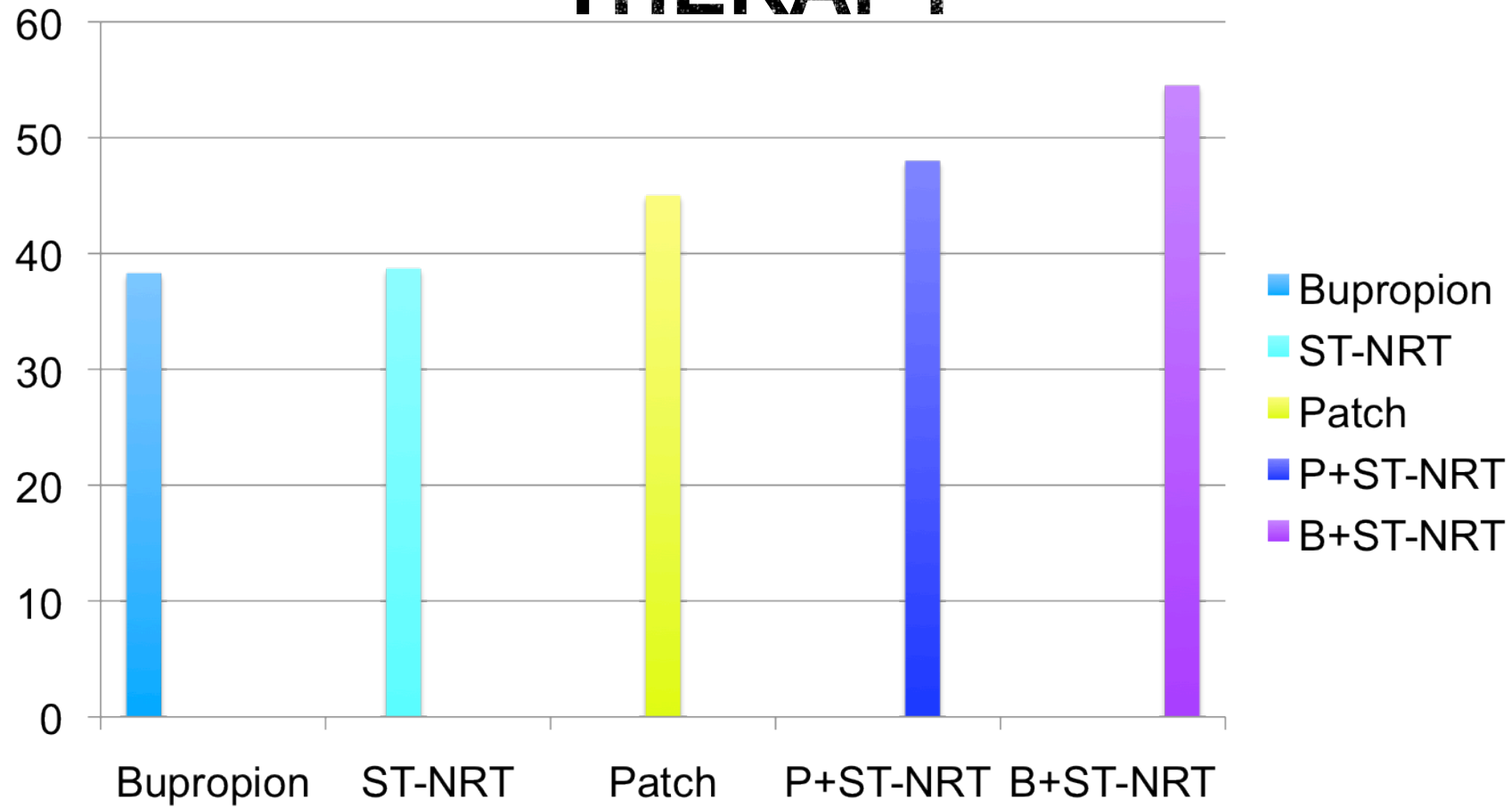
COMBINATION THERAPY

- Continuous NRT + Short-acting NRT
 - Patch + Lozenge
- NRT + Bupropion
 - Bupropion + Patch + Lozenge

Verenicline + Short-acting NRT

Verenicline + patch + gum

COMPARATIVE EFFICACY OF COMBINATION THERAPY



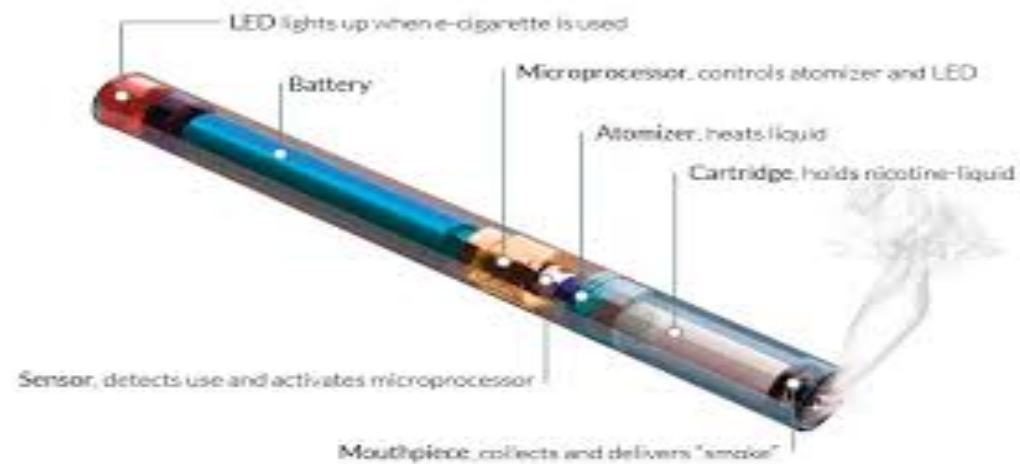
Smith S, McCarthy D, Japuntlich S, et al. Comparative Effectiveness of 5 Smoking Cessation Pharmacotherapies in Primary Care Clinics. Arch Intern Med 2009;169(22):2148-2155

Current Tobacco Cessation Pharmacotherapy Options

Product	Use	Advantages	Disadvantages	Precautions	Side Effects	Cost
Nicotine Patch	Apply each day to a clean, dry, hairless skin; start 21 mg patch if > 10 cig per day; can taper to 14 mg in 4-6 weeks then 7 mg in 2 weeks if no cravings.	Place and Forget; over the counter; can decrease morning cravings if worn at night	Passive - no action to take when craving occurs	Not recommended to use while smoking; caution within 6 weeks of heart attack.	Skin reaction (50%) usually mild. Rotate sites; vivid dreams or sleep disturbances possible at night.	\$45/2 week supply (generics available and effective)
Zyban, Wellbutrin SR Bupropion	150 mg each morning for 3-7 days, then 300 mg/day. Start prior to quit day. (If Zyban or SR, doses must be at least 8 hours apart; take second pill in early evening to reduce insomnia)	Less weight gain while using; safe to smoke while taking.	side effects common; passive - no action to take with cravings; prescription required.	Do Not Use with seizure disorders; current use of Wellbutrin, or MAOIs; electrolyte abnormalities; eating disorder; monitor blood pressure.	Insomnia (40%); dry mouth, headache, anxiety, rash. Flexible dosing (keeping at 150mg/day) helpful with side effects	\$90/month
Chantix (Varenicline)	0.5 mg once daily days 1-3 0.5mg twice daily days 4-7 then 1 mg twice daily. Use up to 12 weeks; additional 12 weeks if needed	Reduces withdrawal and may prevent relapse	Passive - no action to take with cravings; Prescription required	Do Not Use if you have severe kidney disease	Nausea (30%) usually mild - can reduce to 0.5 mg level; take with food, insomnia	\$90/month
Nicotine Gum	Chew every 1-2 hours as needed; chew and park; 2 and 4 mg strength (ling if a round 1 pack)	Use as needed; can self-dose; over the counter	Difficult to chew	Avoid food and acidic drinks 15 minutes before and while using (decreases absorption)	Jaw pain nausea if swallowing saliva	\$50/ 2 week supply
Nicotine Inhaler	Puffed as needed; use up to 16 cartridges/day; less needed if using combination therapy; oral absorbed no need to inhale deeply	Use as needed; mimics hand-mouth behavior	Costly, visible; requires prescription	Avoid food and acidic drinks before and while using	Cough, throat irritation (usually mild)	\$150/168 cartridges
Nicotine Nasal Spray	1-2 sprays per hour; do not sniff/inhale - tilt head back and spray	Use as needed; rapid relief of symptoms	Cost; requires prescription	Asthma; nasal/sinus problems	Nasal irritation/ sinus problems	\$45/bottle
Commit Nicotine Lozenge	2 and 4 mg (4 mg if smoke within 30 minutes of waking); dissolve in mouth; do not chew; use 5-15 per day for 6 weeks then taper	Ease of use; over the counter; flexible dosing	Cost (no generic available)	Avoid food and acidic drinks before and while using	Hiccups, nausea, heartburn	\$45 for 72 lozenges

E-CIGARETTE

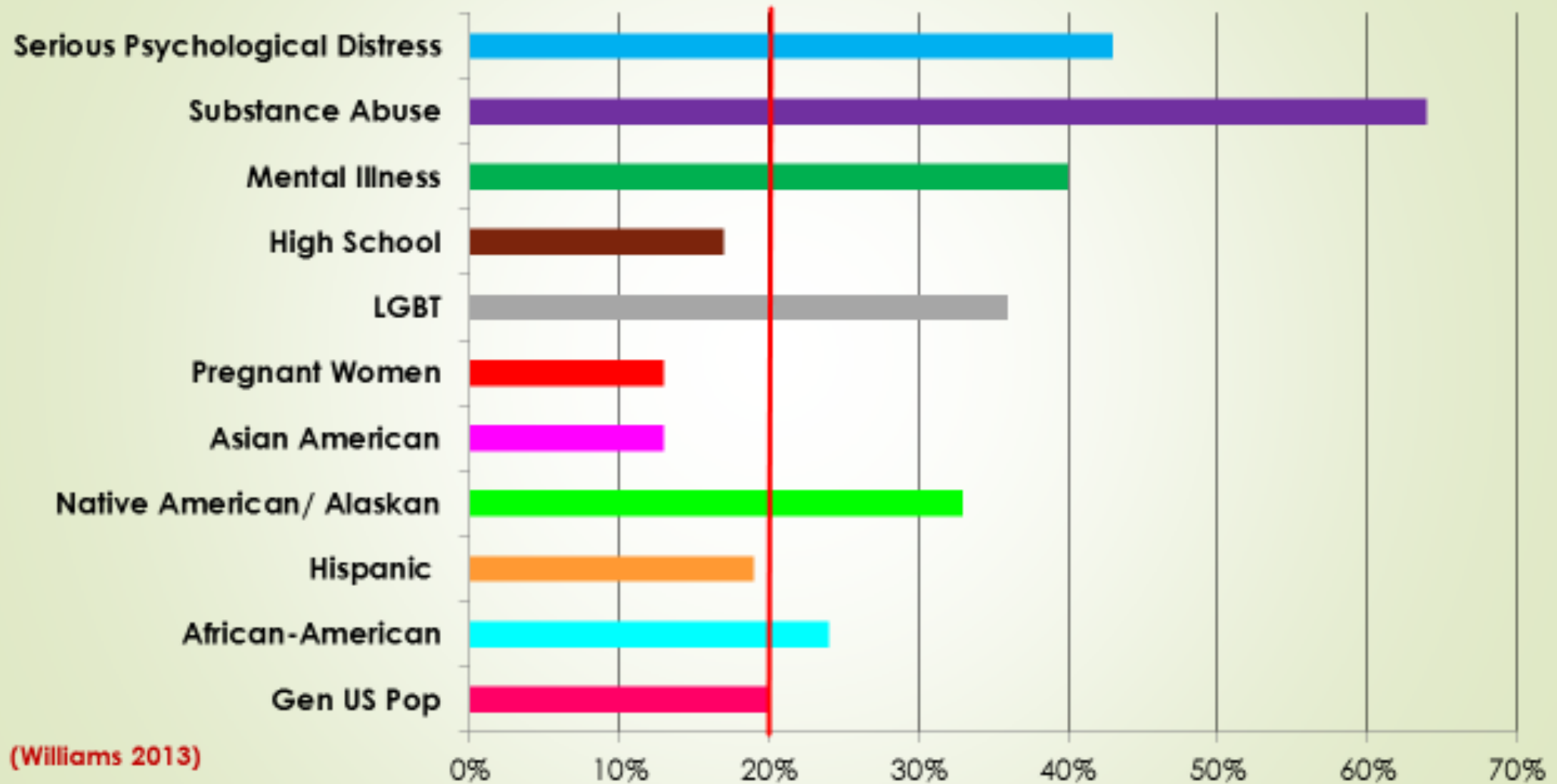
- Contains nicotine, flavor and other chemicals.
- Contain diethylene glycol (antifreeze)
- Flavored versions are appealing to kids.



SO WHO IS IT THAT NEEDS OUR HELP THE MOST??



Tobacco Use Disparity Populations



Smoking related illnesses cause half of all deaths among people with behavioral health disorders

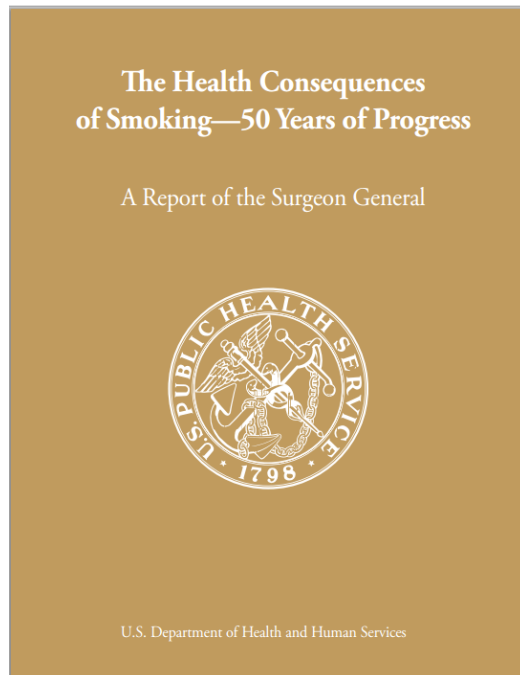
- 53% of total deaths among individuals w/ schizophrenia (23,620/44,460)
 - 48% in bipolar cohort (6004/12,564) and
 - 50% in the depression cohorts (35,729/71,058)
-
- *“Addressing tobacco use in psychiatric populations is a critical clinical and public-health concern, especially in light of the currently limited clinical attention devoted to tobacco use in these groups.”*

(Callaghan 2014)



THE HEALTH CONSEQUENCES OF SMOKING-50 YEARS OF PROGRESS: A REPORT OF THE SURGEON GENERAL REPORT (2014)

- Tobacco industry documents indicate that the industry funded research for the specific purpose of perpetuating the belief that smoking improves symptoms in schizophrenic patients, advocated for exceptions for smoking in hospitalized psychiatric patients, and funded studies of medicinal uses of nicotine analogs to treat mental illness. Chapter 5, page 124



IMPROVED MENTAL HEALTH AFTER QUITTING

Meta-analysis of 26 longitudinal studies

- Consistent evidence that stopping smoking is associated with improvements in
 - Depression
 - Anxiety
 - Stress
 - Psychological quality of life and
 - Positive affect
- **"The effect sizes are equal or larger than those of antidepressant treatment for mood and anxiety disorders."**



TREATMENT PLANNING IN BEHAVIORAL HEALTH

- Add Tobacco Use Disorder to Problem List and Treatment Plan
- Complete an assessment: Identify level of dependence and motivation to change
- Identify measurable long-term and short-term goals



PATIENT ASSISTANT PROGRAMS

- Prescription assistance
 - www.RxAssist.org
- Together Rx Access Card Brand Assistance
 - www.TogetherRxAccess.com
- Patient Assistance Program/Medication Coupon Search Engine
 - www.PatientAssistance.com
- Pfizer PAPs
 - Chantix®, Nicotrol® Inhaler, Nicotrol® Nasal Spray
 - www.PfizerHelpfulAnswers.com
 - Connection to Care Program
 - Maintain Program
 - Pfizer Pfriends Program
 - RSVP Reimbursement support
- Glaxo-Smith-Kline PAP
 - Zyban®, Brand name NRT patches and gum
 - www.GSKForYou.com
 - Nicoderm CQ Coupons
 - www.NicodermCQ.com
 - Nicorette Coupons
 - www.Nicorette.com

HELPFUL RESOURCES

■ For the Patient

- Smoking Cessation Information
 - 1-800-QUITNOW
 - www.smokefree.gov
- Support for Pregnant women
 - 1-866-66-START
 - <http://www.helppregnantsmokersquit.org>
- Support for Veterans
 - www.Ucanquit2.org

■ For the Clinician

- University of California San Francisco Clinician-Assisted Tobacco Cessation Program
 - www.rxforchange.ucsf.edu
- American Cancer Society Practitioner Tools
 - <http://www.yesquit.com/toolkit.php>

SUMMARY

- 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
- Use of effective combinations of medications should be considered

QUESTIONS?



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