SMOKING CESSATION: Pearls of Wisdom

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Learning Objectives

Describe	Describe	Assist
Describe health risks associated with tobacco use/smoking cigarettes	Describe health benefits associated with tobacco/smoking cessation	Be able to assist patients with tobacco/smoking cessation utilizing best practice methods

Cigarette Smoking and Mortality/Morbidity

Leading preventable cause of mortality, responsible for > 7 million deaths worldwide, and > 480,000 deaths in the US annually

The 3 major causes of smoking related mortality are atherosclerotic CV disease, cancer, and COPD

Counseling patients and providing smoking cessation assistance is the most valuable preventive service that can be offered in health care

Cigarette Smoking and Mortality/Morbidity, continued

Although up to ½ of all people who smoke can be expected to die from a tobacco related illness, smoking cessation is associated with a mortality benefit irrespective of age, gender, race, or ethnicity.

Quitting > 40 yrs of age is associated with a larger decline in premature mortality than stopping at a later age

Quitting > 60 yrs is associated with a lower risk of death compared to older adults who continue to smoke

Quitting > 80 yrs appears to reduce mortality

Cigarette Smoking and Mortality/Morbidity, continued

- **INDIVIDUALS WHO QUIT SMOKING REDUCE THEIR RISK OF DEVELOPING AND DYING FROM TOBACCO-RELATED DISEASES, GAINING UP TO AN ESTIMATED TEN YEARS OF LIFE EXPECTANCY!!!!**

Smoking Cessation and Malignancy

Cancers associated with smoking: Colorectal, cervix, esophagus, kidney, larynx/pharynx/trachea/bronchus, renal pelvis, ureter, bladder, lung, nasal cavity and paranasal sinus, oral cavity, pancreas, stomach, mesothelioma, and myeloid leukemia

The excess CA risk decreases gradually after smoking cessation, dropping to approximately ½ compared to those who continue to smoke 10-15 yrs after cessation, and continues to decrease thereafter.

Smoking Cessation and Malignancy, continued

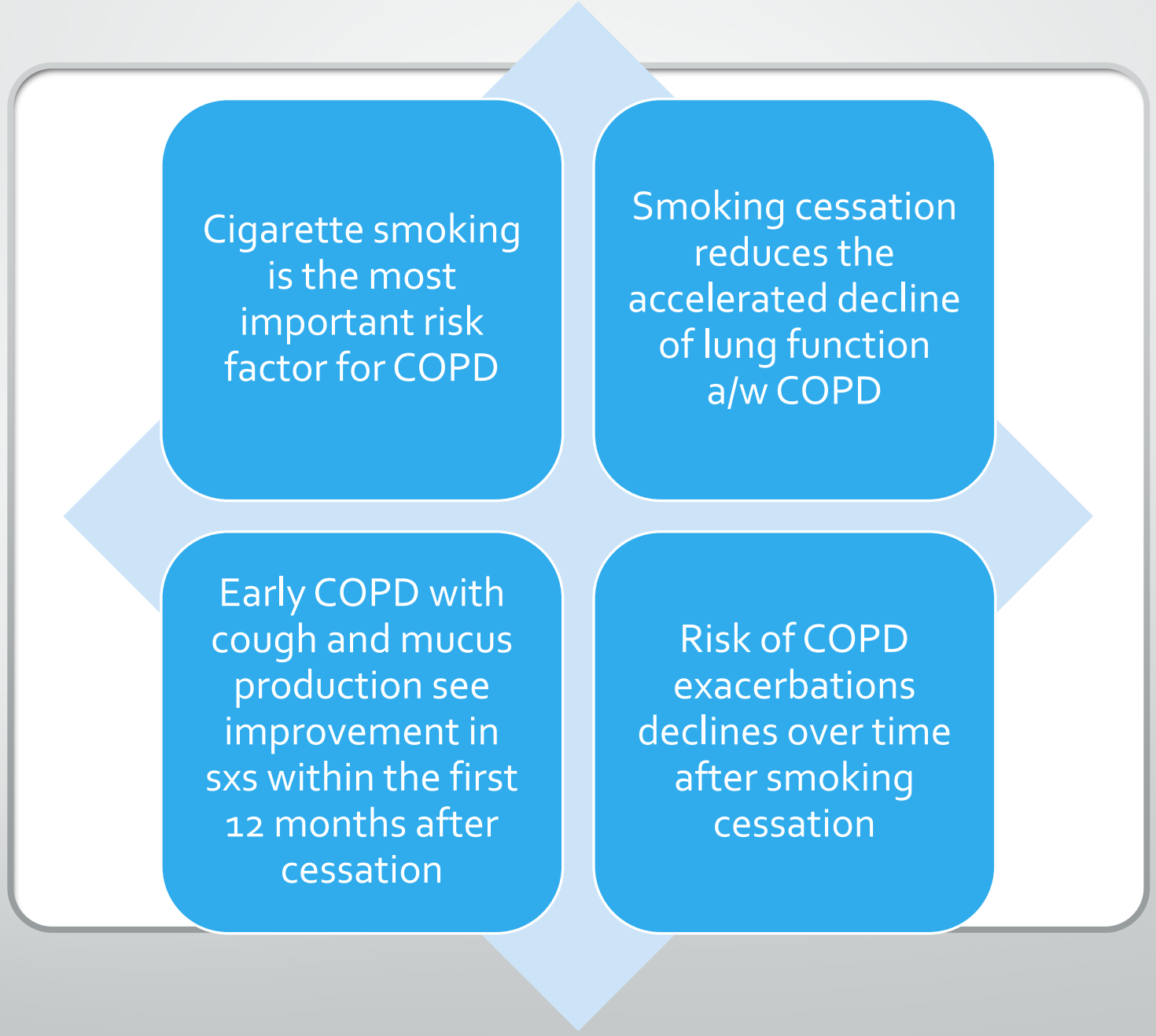
If someone who smokes develops a smoking-related malignancy, smoking cessation decreases the risk of developing a 2nd smoking related malignancy and improves the outcomes of CA treatment.

The evidence suggests among CA patients who are smokers at dx, smoking cessation reduces subsequent all-cause mortality.

Health Benefits of Smoking Cessation: Cardiovascular Disease

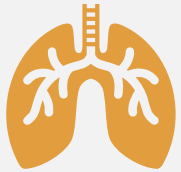
- Smoking is estimated to be responsible for > 10% of CV deaths worldwide and 33% of all CV deaths in the US
- Harmful effects of tobacco on CV system: coronary vasoconstriction, increased hypercoagulability, dyslipidemia, inflammation, and endothelial dysfunction
- Smoking cessation is a/w a rapid and substantial reduction in the risk of CV events
- Smoking cessation also reduces progression of symptomatic PAD and is a/w a reduced risk of recurrent stroke

Health Benefits of Smoking Cessation: COPD



Health Benefits of Smoking Cessation: Other Lung Diseases

Smoking is associated with development of combined pulmonary fibrosis and emphysema (CPFE)



Other smoking related ILD conditions: Respiratory bronchiolitis, desquamative interstitial pneumonia (DIP), and pulmonary Langerhans cell histiocytosis (PLCH)

Asthma sxs typically worsen when smoking cigarettes

Health Benefits of Smoking Cessation: Other Conditions

Increased risk of infections: Tb, pneumococcal PNA, meningococcal disease, influenza, and the common cold

The number of cigarettes smoked daily is a/w an increased risk for developing T2DM over the long term (nicotine's effect on insulin sensitivity)

Smoking accelerates bone loss and is a risk factor for hip fx in females. Cessation can reverse loss of bone mineral density and decrease fx risk after 10 yrs of quitting

Benefits of Smoking Cessation: Other Conditions

Reproductive disorders: pregnancy complications, premature menopause, erectile dysfunction, and subfertility in males and females

PUD and H. Pylori infection

Periodontal disease

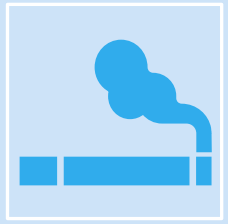
Opthamologic disorders: cataracts and age-related macular degeneration

Post-op morbidities: delayed wound healing and pulmonary complications. The longer time of cessation pre-surgery is a/w lower rates of p/o complications

Is Smoking Reduction Acceptable if Unable to Quit Completely?

- Health risks remain even with consistent lower-level smoking (< 10/day):
  - A study of people aged 59-82 at baseline found all cause mortality and CA incidence were higher among those who consistently smoked < 10/day compared with never smokers
  - Even those who smoked < 1 cigarette/day had an elevated risk of all-cause mortality
  - Those who smoked 1 – 10 cigarettes/day were also 2.34 times more likely to develop a smoking related CA.

Is Smoking Less Acceptable?



At least two prospective cohort studies found people who reduced smoking by 50% had no change in all-cause mortality, whereas those who quit completely had decreased risks of all-cause mortality.

One cohort study did find reduced risk for CV related mortality with smoking reduction, but this was in a baseline heavy smoking group

Consistent benefits in CV disease risk have not been seen with reduction in smoking short of quitting

Smoking Cessation Treatment Strategies

- Best Practice Guidelines:
  - Treat/recognize smoking as a chronic disease: Cigarette smoking is a chronic relapsing disorder sustained by a physical dependence on nicotine and learned behaviors that are rewarding for the individual
  - Required: a motivated patient
  - Pharmacologic intervention: NRT + Varenicline or Bupropion
  - Behavior and Cognitive change interventions
  - Accountability with ongoing counseling sessions

Smoking Cessation Treatment, Continued:

- Ask patients about their motivations to quit smoking, what triggers them to smoke, habits and routines which surround smoking, and their level of dependence on nicotine
- Motivational interviewing
  - Get them to do the talking about their motivations and their "why's"
- Behavior and cognitive change strategies and ideas
  - All usual routines in their day must be altered to be successful at cessation
  - New behaviors or distractions must take the place of smoking at the usual times
- Stress related response alternatives
  - Explore their emotional attachment to cigarettes, and help them find new ways to manage emotional smoking responses

Smoking Cessation Treatment, Continued

- Pharmacologic Treatment:
  - NRT: Nicotine transdermal patch, Nicotine lozenges or gum (4 or 2 mg), Nicotrol nasal spray
    - Make sure to dose high enough to cover the amount they smoke currently
  - Varenicline: 0.5mg qd x 3, then BID x 4, then 1mg BID thereafter
    - Must have Cr Clr > 30 mL/"; take with food, caution regarding insomnia, vivid dreams, increased feelings of depression
  - OR Bupropion (my 2nd choice): 150mg XR qd x 3, then BID thereafter
    - Must have no hx of seizure disorder or alcoholism

Smoking Cessation Treatment, Continued

Set realistic goals for each follow-up visit

Avoid nicotine withdrawal sxs with use of NRT

Warn about weight gain—avg is 10 pds weight gain while working on cessation. Advise healthy snack foods available.

Enroll in NE Quit Now or state related Quit programs for potential free NRT

What are the Results?

In a meta-analysis of 65 trials and 19,488 participants, combined behavioral and pharmacotherapy produced greater smoking abstinence at 6 months or more compared with usual care or brief advice

With optimal treatment, 15-35% of people who smoke and try to quit can succeed for 6 months or more. By contrast, only 3 – 6% of those who make an unaided quit attempt are still abstinent one year later.

Statistics show at 12 months only 20% of patients who quit remain abstained from smoking

Questions? Thank-you!

- References:
  - Benefits and consequences of smoking cessation: UTD, author Nancy A Rigotti, MD, section editors: Mark D Aronson, MD, Hasmeena Kathuria, MD, Deputy editor Sara Swenson, MD. Literature review current through Feb 2025; last topic update 8/16/24.
  - Overview of smoking cessation management in adults: UTD, author Nancy A Rigotti, MD, section editors: Mark D Aronson, MD, Hasmeena Kathuria, MD, Deputy editor Sara Swenson, MD. Literature review current through Feb 2025; last topic update 3/7/25.
  - Mayo Clinic Tobacco Treatment Specialist Certification training. Education completed 5/2023; Certification granted 12/1/23.