

## ***Smoking cessation in difficult population groups***

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### **AIMS**

The aim of this presentation is to discuss how health physicians can help smokers with respiratory diseases to quit. Scientific documents provided by ERS will be presented and analyzed in order to give recommendations for therapeutic interventions and motivational tips to help this specific group of difficult “hardcore” smokers with respiratory diseases, as COPD, Asthma, Lung Cancer and Tuberculosis.

### **SUMMARY**

#### **Introduction**

Cigarette smoking is the major preventable cause of illness and premature death in developed countries. (1). Many scientific evidences are showing that lung cancer, chronic obstructive pulmonary disease (COPD), asthma and pulmonary tuberculosis are common pulmonary diseases caused or worsened by tobacco smoking. (1, 2.) Growing observational evidence suggests that symptoms and prognosis of these conditions improve upon smoking cessation (2,3).

Smoking cessation strategies include both pharmacological and non-pharmacological (behavioral or psychosocial) approaches. The basic components of smoking cessation interventions include simple advice, written self-help materials, individual and group behavioral support, telephone quit lines and specific pharmacotherapy with nicotine replacement therapy (NRT), bupropion and varenicline. (4,5)

As nicotine addiction is a chronic, relapsing condition that usually requires several attempts to overcome, cessation support is often tailored to individual needs, while recognizing that in general, the more intensive the support, the greater the chance of success. Success at quitting smoking decreases in relation to lack of motivation to quit, a history of smoking more than a pack of cigarettes a day for more than 10 years, a lack of social support, such as from family and friends, and the presence of mental health disorders (such as depression) or a chronic illness.

Smoker Patients with Chronic Respiratory Diseases have several of these characteristics and are less motivated to try to quit as they believe that is too late to reverse the disease and they require more support.

A specific ERS Task Force document with the title “ERS Statement on smoking cessation in COPD and other Pulmonary Diseases and in smokers with co morbidities who find it difficult to quit” has been published in ERJ to advise physicians and other health alliance professionals to help respiratory patients to quit. The document was based on a qualitative review regarding smoking cessation in patients with COPD and other pulmonary disorders, written by a group of European Respiratory Society experts. (6) The epidemiological links between smoking and pulmonary disorders, the evidence for benefits of stopping smoking, the interventions that currently work best to help pulmonary patients to quit are described in this statement that is an update review of the published

scientific evidence and current developments in the field of Smoking cessation. Previous reports on smoking cessation in patients with respiratory diseases have been published from another ERS Task Force in 2007 and in an ERS Monograph in 2008. (7, 8).

Furthermore ERS has provided another source with useful information regarding health risks for pulmonary diseases associated with smoking, the SmokeHaz website ([www.smokehaz.eu](http://www.smokehaz.eu)) that has been created in collaboration between ERS, European Lung Foundation (ELF) and the UK Centre for Tobacco and Alcohol Studies. The aim of the SmokeHaz website was to provide a one-stop web platform assessing the relationship between active and passive smoking and a range of specific health outcomes, particularly focusing on lung health. The data presented were based on methods included systematic reviews and meta-analyses of relevant studies (9).

Healthcare professionals have always to motivate respiratory patients and make it clear that quitting smoking is the best thing they can do to improve their lung health. Smokers with COPD, lung cancer, asthma and TB have always to be advised to stop smoking. There are several benefits of smoking cessation in all smokers and specifically in smokers with respiratory diseases. (See tables of ppt presentations)

Combination of counseling and pharmacological treatments is recommended. NRT, bupropion and varenicline all have strong evidence of efficacy. However despite increasing numbers of (small) randomized controlled trials suggesting intensive smoking cessation treatments work in people with pulmonary diseases many patients are not given specific advice on the benefits or referred for intensive cessation treatments and, therefore, continue smoking. There are very few real world studies in smokers with asthma or COPD showing that intensive behavioral interventions with pharmacotherapy have comparable smoking abstinence effectiveness as in smokers without chronic disease. (10).

According to the ERS Statement document in smokers with respiratory diseases that have more difficulties to quit a combination of two or more NRT products, higher than usual dosing, extended use prior to quitting and extended use post-quitting can improve treatment efficacy. Extended use of varenicline prior to and after the target quit date, and the combination of varenicline with nicotine patches or bupropion can improve treatment outcomes. Furthermore in smokers who are highly motivated to quit but are unable to do so, a harm reduction approach is often considered using varenicline and NRT at higher doses and for a more prolonged duration prior to quitting. In some patients, at least, such intervention can still facilitate successful cessation.

Assessment and Interventions with treatment approach in smokers with COPD are presented in figure.

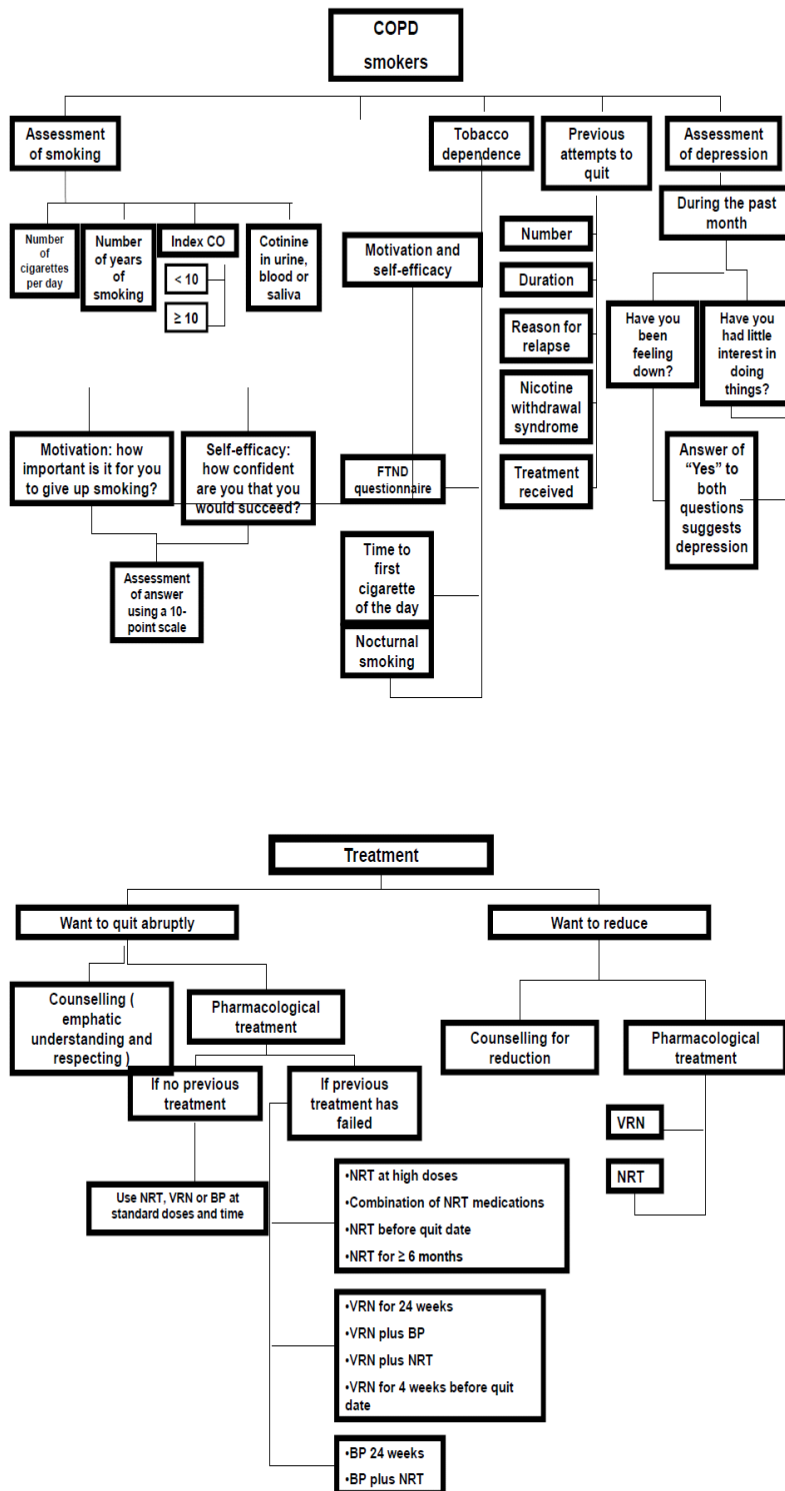
## **Conclusion**

In conclusion smoking cessation is one of the most cost-effective interventions in medicine. It should be used more widely. Education and training of health professionals in facing the problem that is caused by smoking is absolutely urgent and it should be included in the training curricula of all health professionals and medical students. Smoking prevention and cessation can reduce the burden of many respiratory diseases, and the health cost of these diseases.

Nicotine addiction can now be treated in all smokers and smoking cessation can be a part of the disease management in all respiratory patients an optimistic approach by health professional is needed in order to offer more smoking cessation opportunities, organize smoking cessation clinics and use behavioral interventions and approved effective and safe pharmacotherapy treatments for smoking cessation.

Health care professionals have also to be more active in advising and educating the general population on health consequences of smoking and also in advising policy makers for the right control policies at national and international level.

**Figure 1 : Assessment and Treatment Interventions in smokers with COPD**  
 (ERS Statement ERJ 2015 Jul; 46(1):61-79)



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## FURTHER READING

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## EVALUATION

1. What is true in the nicotine addiction mechanism in COPD smoker ?
  - a. The negative reinforcement of nicotine is due to dopamine release
  - b. Craving is through the withdrawal pathway that is mediated by noradrenergic activity in the locus coeruleus
  - c. The positive reinforcement of nicotine is due to dopamine release in the reward pathway
  - d. The 2 and 3
  - e. The 1 and 2
  - f. It is of lower activity than in other smokers

2. How we can better assess the nicotine addiction in a smoker with Asthma?
  - a. By measuring exhaled CO
  - b. By measuring exhaled NO
  - c. By measurement of HbCO
  - d. By Fagerstrom questionnaire
  - e. By peak flow rate
  - f. By DSMVI score
  
3. What is the factor that reflects better the Nicotine addiction in a COPD smoker?
  - a. The first cigarette in the morning
  - b. The years of smoking
  - c. The existence of morning Cough and Dyspnea
  - d. The morning need for b2-agonist
  - e. The Use of Other addictive substances
  - f. All the above
  
4. What are the factors that you will assess in a smoker with COPD in order to help him/her better to quit?
  - a. Motivation,
  - b. Self-efficacy
  - c. Nicotine dependence
  - d. Previous attempts to quit
  - e. Depression
  - f. All
  
5. What medications can be recommended as first line in smoking cessation treatment in a smoker with Lung cancer?
  - a. Clonidine and Nortriptyline
  - b. Varenicline
  - c. Nicotine Patch, Nicotine Inhaler
  - d. Bupropion
  - e. Naltrexone
  - f. 2,3,4
  
6. In a primary care setting, which of these characteristics is important to know in order to make an appropriate diagnosis of smoking in a COPD patient?
  - a. Blood cotinine levels.
  - b. CO monoxide levels in expired air.
  - c. FTND-score
  - d. PEFr
  - e. Spirometry
  - f. DSMV score
  
7. According to meta-analyses, which of these is the less effective method to help smokers to quit?
  - a. Bupropion.
  - b. Nicotine patch
  - c. Psychological treatment.
  - d. Nicotine gum.
  - e. Brief advice

## CASES FOR DISCUSSION

### Case 1.

What is the best intervention treatment for an asthmatic lady who

- Smokes less than 10 cigarettes per day,
- She has an FTND-score 4 points (he smokes the first cig.4 min. after waking up)
- She has no previous attempts to quit
- She had a severe asthma attack last month
- She is considering to be pregnant in the near future

Treatment Options

1. Behavioural treatment
2. Behavioural treatment plus 16 hours nicotine patch
3. Behavioural treatment plus 24 hours nicotine patch
4. Behavioural treatment plus bupropion
5. Varenicline

### Case 2.

Which of these medications is the best treatment for a smoker with TB who :

- Smokes less than 10 cigarettes per day,
- He has an FTND-score 4 points (he smokes the first cig.4 min. after waking up)
- He has failed in previous serious attempts to stop.
- He did not use any kind of pharmacological treatment before
- He has suffered from anxiety, nervousness and irritability.

### Case 2

Treatment Options

1. I wouldn't use pharmacological treatment.
2. Nicotine patch plus nicotine gum.
3. Bupropion plus nicotine gum
4. Nicotine patch
5. Nicotine gum.
6. Varenicline

### Case 3.

Which is the best treatment for SC for a smoker who is suffering from moderate COPD who

- He tried to quit many times but he had always, failed.
- He never used pharmacological treatment.
- Now, he is frustrated and he is not happy with the idea of trying again.
- He smokes 12 cigarettes per day and he is depressed.

### Case 3

Treatment Options

1. I would use antidepressants and after that I would prescribe pharmacological treatment for smoking cessation
2. I would recommend him a programme of smoking reduction with NRTS and then stop.
3. I would insist with medical advice to motivate by pointing out all the benefits of smoking cessation without any medication
4. I would recommend him to quit and I would prescribe bupropion