- pulmonary disease. Part I. Psychosocial and psychological considerations. *Chest* 1980; 77: 413–420.
- **8** Isoaho R, Keistinen T, Laippala P, Kivela SL. Chronic obstructive pulmonary disease and symptoms related to depression in elderly persons. *Psychol Rep* 1998; 76: 287–297.
- **9** van der Meer RM, Wagena EJ, Ostelo RW, Jacobs JE, van Schayck CP. Smoking cessation for chronic obstructive pulmonary disease. *Cochrane Database Syst Rev* 2003; 2: CD002999.

DOI: 10.1183/09031936.06.00145805

From the authors:

We appreciate the comments by R. Polosa regarding our recent article in the *European Respiratory Journal* [1]. In this study, we described unexpectedly high quit rates, both for asymptomatic smokers and smokers with chronic obstructive pulmonary disease (COPD). Since smoking cessation is a difficult task, especially in COPD patients, R. Polosa's most important question is how we obtained such high quit rates, *i.e.* which smoking-cessation programme was used and what were the subjects' characteristics. Furthermore, he questioned whether our study had the power to raise any tools to develop a special smoking-cessation programme for COPD patients. We are pleased to have the opportunity to give more information about our experiences on smoking cessation.

In our study, we used an intensive group-orientated smoking-cessation programme, which has been described and commented on in more detail elsewhere [2]. In short, the programme is based on cognitive behavioural therapy and relapse prevention according to the model of Marlatt [3]. It consisted of 15 group meetings during 1 yr, 10 meetings within the first 3 months and another five throughout the rest of the year. In addition, the participants attended seven hospital visits before the smoking-cessation programme started, and three hospital visits throughout the rest of the year (at 2, 6 and 12 months).

We included patients with COPD and asymptomatic smokers who were willing to quit smoking and to undergo several tests, including two bronchoscopies. Participants were recruited by newspaper advertisements and at our outpatient clinic. Participants originated from the north of the Netherlands (rural and urban areas). Their motivations to quit were: 1) to improve health; 2) to become independent of cigarettes; 3) not to be a social outcast; and 4) not to smoke around grand-children. Most individuals had tried to quit between one to three times previously.

We offered our patients nicotine-replacement therapy (NRT), yet none of those patients who had quit for 1 yr had used NRT. Only three participants (two asymptomatic smokers and one smoker with COPD) tried NRT for 3–14 days; however, none of them succeeded in smoking cessation. Bupropion was not used in this study simply because the study started in 1998 and bupropion was not introduced into the Netherlands until 2000. In our opinion, the high quit rates are probably due to the intensive smoking-cessation course in combination with our research setting.

As soon as a smoker started to smoke again, we had to withdraw them from the study, since the medical ethics committee decided it was unethical to re-assess individuals who had relapsed after one smoking-cessation attempt. No participant who successfully quit smoking for 1 yr dropped out of the study. Our explanation for the relative lack of dropouts is the high state of motivation of the participants, together with intensive guidance in the smoking-cessation programme. As we stated in our article, all 12 COPD quitters produced sufficient sputum samples at the four visits, but the bronchial biopsy of one patient was of insufficient quality. Of the 16 asymptomatic smokers, 15 produced good-quality sputum samples at all time points, and 14 out of the 16 had biopsies of good quality at all time points.

Only 28 smokers with COPD were included in this study and 12 of them succeeded in quitting smoking for 1 yr. Only these patients were included in the analyses. Of course, we would have liked to have included more COPD patients; however, we were limited in time, money and, unfortunately, in patients with COPD who did not use inhaled or oral corticosteroids.

We agree with R. Polosa that smokers with COPD may need a different approach towards smoking-cessation guidance than smokers without COPD, since they have greater nicotine dependence and a higher prevalence of depression-like symptoms. In our study, we did not find a significant difference in quit rates between asymptomatic smokers (68%) and smokers with COPD (42%) [2]. Our study was not set up to evaluate the smoking-cessation programme used and our population was too small to generalise the results. Nevertheless, the results are the most promising, given the 50% abstinence! Despite similar success rates in asymptomatic smokers and COPD patients, it was remarkable that, from the unsuccessful individuals, most COPD patients (37%) relapsed within the first 2 months of smoking cessation, whereas most asymptomatic smokers (20%) did so between 2 and 6 months [2].

We hypothesise that special smoking-cessation guidance for chronic obstructive pulmonary disease patients may increase quit rates in this group of smokers. Therefore, we propose a combination of intensive 1-yr cognitive behavioural therapy, relapse prevention and the use of pharmacological support during the first 2 months. In our opinion, a research setting will contribute to higher quit rates.

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REFERENCES

1 Willemse BWM, ten Hacken NHT, Rutgers B, Lesman-Leegte IGAT, Postma DS, Timens W. Effect of 1-year smoking cessation on airway inflammation in COPD



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- and asymptomatic smokers. Eur Respir J 2005; 26: 835–845.
- **2** Willemse B, Lesman-Leegte I, Timens T, Postma D, ten Hacken N. High cessation rates of cigarette smoking in subjects with and without COPD. *Chest* 2005; 128: 3685–3687.
- **3** Larimer ME, Palmer RS, Marlatt GA. Relapse prevention. An overview of Marlatt's cognitive behavioural model. *Alcohol Res Health* 1999; 23: 151–160.

DOI: 10.1183/09031936.06.00004006

A day at the European Respiratory Society Congress: passive smoking influences both outdoor and indoor air quality

To the Editors:

Outdoor and indoor air quality is a well known determinant of human health [1]. Environmental tobacco smoke (ETS) is a recognised risk factor for respiratory diseases [2] and the most important source of indoor particulate matter (PM) pollution [3]. In recent years, several countries have issued smoking policy rules to protect nonsmoking people from ETS with a good compliance [4]. This year, the European Respiratory Society (ERS) Congress was held in Copenhagen (Denmark), a country where, like many others, comprehensive anti-smoking rules are not yet fully endorsed [5]. In fact, although smoking has been restricted in state-owned governmental premises since 1988, the legislation doesn't apply to the hospitality industry or to workplaces in the private sector. The ERS has made the case of passive smoking one of utmost importance for respiratory prevention [6]. Congress participants were advised to refrain from smoking both inside and in front of the Copenhagen Congress venue at the Bella Center, which was indicated by signs stating the following: "Tobacco is the major cause of lung disease. Please refrain from smoking in and in front of the Congress venue, including meeting rooms, the exhibition, poster areas, restrooms, restaurants and bars." The ERS Congress represented a good opportunity for air quality measurement and comparisons in relation to ETS pollution. PM2.5, as a representative marker of outdoor pollution [1] and as a surrogate of ETS [7], was measured in different places in the city, in the proximity of the Bella Center and inside the Bella Center, and compared with official 24-h urban backgrounds.

PM2.5 measurements were carried out on the third day of the Congress (September 17, 2005) from the morning to late in the evening with time-tabled records of the place of measurements. We measured PM concentrations sequentially in the Congress car parking place (open space), inside the Bella Center, outdoors in front of the Bella Center with smokers under a roof (18 smokers during a measurement time of 35 min), along the motorway to the city centre, and inside a Copenhagen restaurant where smoking was allowed. Official outdoor PM2.5 values for the same day were taken for comparison from an urban background location in Copenhagen (H.C. Ørsted Institute) belonging to the Danish Air Quality Monitoring Programme [8].

PM2.5 measurements were carried out by means of model AEROCET 531 (Metone Instruments Inc., Grants Pass, OR, USA), a hand-held laser-operated monitor of particle size and mass concentration with a 2-min sampling time. The instrument had been pre-calibrated using a reference gravimetric system. The weather was cloudy and with a light breeze, with the temperature ranging 17–27°C and the relative humidity 44–74%. For each site, a minimum of eight consecutive measurements for a total of 16 min were taken. US-EPA air quality index (AQI) was chosen as a reference [9]. The official outdoor PM2.5 values at the urban background location were measured with TEOM technology (Tapered-Element Oscillating Microbalance; Rupprecht & Patashnick Co. Inc., Albany, NY, USA).

Mean ± SEM PM2.5 records are reported in figure 1. With reference to time-sequence of measurements, PM2.5 complied

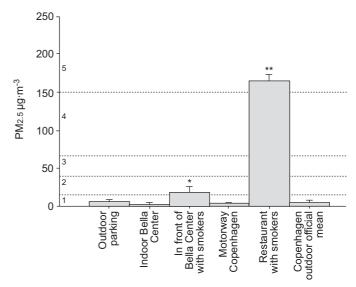


FIGURE 1. Comparison of particulate matter (PM2.5) concentrations at different sites during the third day of the European Respiratory Society Copenhagen Congress, 2005. ···: air quality index break-points, which correspond to the following. 5: very unhealthy; 4: unhealthy; 3: unhealthy for sensitive groups; 2: moderate; 1: good. *: p<0.05 as compared with outdoor, indoor, motorway and official mean; **: p<0.001 as compared with outdoor, indoor, motorway and official mean.