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238. Tobacco use and cessation

P1966

Nicotine yield and roll your own (RYO) cigarette usage in a large municipal hospital smoking cessation center

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Purpose: Men and women differ in their sensitivity to nicotine. In addition many smokers believe that roll-your-own (RYO) cigarettes are not as addictive as manufactured cigarettes. The purpose of our study was to compare the different characteristics of smokers addressing to our smoking cessation center.

Methods: Forty three people (20 male and 23 female), mean age of 48,81±1,62, smoking 41,92±3,46 packyears participated in our survey, at Evangelismos Hospital during the last year.

Nineteen (19) used RYO cigarettes, while 24 used manufactured cigarettes. Analysis was performed with the aid of the independent sample t- test.

Results:** Men using RYO cigarettes were of mean age 40,43±3,45 and smoked 48,28±8,65 packyears while women using manufactured cigarettes aged 55,46±2,84 and smoked 49,38±6,52 packyears.

On the other hand women using RYO cigarettes were of mean age 45,91±3,45 smoking 26,29±5,06 while women using manufactured cigarettes aged 49,45±2,36 and smoked 46,09±6,25 packyears.

The difference of smoking usage (packyears) is statistical significant at 0,05 (both sided).

Nicotine yield of manufactured cigarettes was different between men and women (0,68±0,067 mg vs 0,48±0,073 mg) at a p =0,052), while there is no record of RYO nicotine composition.

**Results expressed as mean ± SE

Conclusions: Smokers using RYO cigarettes are younger than those using manufactured cigarettes. Interestingly women using RYO cigarettes present a significantly smaller (by 46%) amount of packyears than those using manufactured cigarettes. In addition women smoke less than men and they chose cigarettes with less nicotine yield.

P1967

Implementing smoking cessation strategies in primary health care in Russia: Opportunities and challenges

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Since 3 years Russia implements FCTC and National Policy against tobacco for years 2010-2015. But yet the Health System is not prepared for effective tobacco control(TC).

The study aims to assess opportunities, challenges for smoking cessation(SC) strategies in various settings in Primary Health Care(PHC) to define algorithms for effective TC. Pilot studies in 2 various settings conducted: 1)randomized control trial for SC in outpatient clinic conducted in 60 patients. SC intensive advice plus

NRT and without NRT was offered to intervention and control groups 2)prospective study to assess the impact of workplace health promotion programs (WHPP) on SC rates conducted in 348 health professionals at 4 outpatient clinics in 12-months period.

Average age of patients was 49±12. At first visit 94.8% were diagnosed with COPD GOLD II/III and 77.6%-with high blood cholesterol, of which 58.2% and 51%respectively were new findings(p<0,05). By the end of treatment SC rates in intervention group were 46.7% compared to 3.3% of controls(p<0,001). Increase of lung function was observed in intervention group compared with controls (p<0,01). Stress levels did not increase in 50% quitters and decreased in 35.7% cases. Among participants of WHPP after 12-months in intensive intervention settings (HE interventions+HP handouts) significant decrease of 17% of smoking rates was reached, in reference settings(only handouts given) no significant changes observed.

Prevention of NCD requires systematic identification of smokers and provision of SC assistance at all levels of PHC. Workplaces are ideal settings for HP interventions. Intensive assisted SC interventions significantly increase success rates.

P1968

The INAsma study – Environmental tobacco smoke exposure at home and smoking prevalence in the Portuguese population

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Background: The data on the prevalence of tobacco smoking and environmental tobacco smoke (ETS) exposure in Portugal is scarce, especially after the 2008 smoking bans.

Aims: We aimed to: 1) estimate the prevalence of exposure to ETS at home and of tobacco smoking in Portugal; 2) identify variables associated with smoking or exposure to ETS.

Methods: Nationwide, cross-sectional, population-based telephone survey; 6003 individuals participated. ETS exposure at home was defined as exposure to at least one current smoker (CS) at home. A smoker was someone with ≥15 years smoking at least 1 cigarette per day during a year; a CS smoked in the last month.

Results: Exposure to ETS at home was reported by 26.6% (95%CI 25.5-27.7). Age <18 years old (OR=1.57; 95%CI[1.17-2.12]), current asthma (OR=1.69; 95%CI[1.16-2.46]), living in households with ≥3 persons (OR=34.31; 95%CI[4.45-264.57]) and presence of at least one man in the household (OR=6.71; 95%CI[4.33-10.40]) were positively associated with ETS exposure.

Nineteen percent (95%CI 18.0-20.0) of the Portuguese population is CS and 17.2% (95%CI 16.2-18.2) are ex-smokers; CS prevalence is higher in males than females (26.5% vs. 12.2%, p<0.001). The odds of being an adult CS was higher for male (OR=8.93; 95%CI[6.10-13.09]), the more educated (OR=6.54; 95%CI[3.97-10.77]), those living in households with ≥3 persons (OR=2.21; 95%CI[1.50-3.27]) and those exposed to ETS at home (14.39 [10.14-20.41]).

Conclusion: Exposure to ETS at home in Portugal was higher than previously reported. Children/adolescents and asthma patients had a higher risk of exposure. The prevalence of tobacco smoking was slightly lower than in previous reports.

P1969

Efficacy of smoking cessation assistance in Tunisian women

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Introduction: Smoking is the most preventable cause of death. Although, woman started smoking in greater numbers later than man, she seems to have more difficulties in quitting cigarette than him.

Aim: Evaluate the smoking intoxication rate in Tunisian woman and the effectiveness of smoking cessation intervention.

Patients and methods: It's a prospective study, including 100 women smokers treated for smoking cessation during the period from 2007 to 2010. We extracted data on smoking history, degree of nicotine dependence, strategies of smoking cessation and the most successful intervention after 3 and 6 months.

Results: Mean age of women smokers was 43.6±13.3 years. The mean age of onset of tobacco use was 19.7±6.4 years. The mean duration of exposition was 23±12 years, with a mean of cigarettes consumption of 22±11 cigarettes/day. Tobacco dependence level was important in 65% of women. A half of them had a low level of education attained, and most of them (71.4%) had unfavourable socioeconomic status. According to HAD test, 20 patients were anxious and 45 patients were depressive. The principal reason of quitting cigarette smoking was health problems associated with cigarette (83.2%). Nicotine replacement treatment was the most strategy prescribed (98%). After the first counselling, 40% were lost of sight. Con-

tinuous cessation rate at 3 months was 65%. Only 15% stopped definitely smoking at 6 months. Relapses were especially due to greater withdrawal symptoms.

Conclusion: This study illustrates the importance of tobacco dependence in Tunisian women. Smoking seems to become a phenomenon associated with poorer and less-educated people. Relapses were common after 6 months of smoking cessation assistance.

P1970

Predictors of success in smoking cessation among Brazilian subjects

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The predictors of success or failure in smoking cessation programme (SCP), specific for the Brazilian population have been low studied. We evaluated characteristics influencing the success in a SCP. This non-randomized, prospective and open clinical trial evaluated 172 smokers attended in a SCP based on cognitive behavioral treatment associated or not with medication therapy. Individuals were followed for 12 months. Statistical analysis was performed using the R statistical software. For quantitative variables (age, pack years index and cigarettes/day) were used t-tests and for qualitative variables (gender, education level, lived with others smokers, medication therapy, nicotine dependence, socioeconomic, anxiety and depression level) were used χ^2 test. The influence of epidemiologic characteristics on smoking cessation (SC) in univariate and multivariate analyses was tested, calculating Relative Risks (RR) with confidence intervals of 95% (CI). Variables resulting in $P < 0.05$ for univariate analysis were selected to enter into logistic regression model. Differences were considered significant at $P < 0.05$.

Results: 172 individuals were included, 126 (73%) started treatment, of which 61 individuals (48%) started abstinent and according the logistic model the individuals who used medication therapy had eight-fold more chances to started abstinence ($P = 0.0002$ RR=8 CI 3-29). Thirty-three per cent of individuals remained abstinent for 12 months and smokers with lower socioeconomic level had nine-fold more chances to return to smoking ($P = 0.005$ RR=9 CI 2-57).

Conclusions: The success rate of this program was 16% and medication, as well as socioeconomic status are predictors of success in SC.

P1971

Effectiveness of smoking cessation skills building workshops in educating smoking cessation techniques to Pakistani physicians

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Introduction: Physician advice to quit smoking is an effective component of a smoking cessation strategy. Published data indicates that teaching/training smoking cessation skills to physicians improves their smoking cessation practices and increases quit rates among their patients.

Objective: To determine the effectiveness of smoking cessation skills building workshops (SCW) among local physicians.

Methods: Five one-day SCW were arranged across Pakistani cities. A validated questionnaire assessing attitude and knowledge related to smoking was administered pre-workshops (PRW) and immediately post-workshops (POW) attendance.

Results: 113 physicians completed the SCW. 90 were men. Age range was 22-61 years (mean age \pm SD 37 \pm 11 yrs). 72 were GPs, 11 chest physicians, 11 cardiologists, 8 consultant internist and 11 trainee physicians.

Post workshop the physicians felt 'very confident' about their knowledge to treat nicotine dependence- 15.9% (PRW) vs. 64.6% (POW); they felt 'very confident' in discussing the smoking cessation issues with their patients- 52.2% (PRW) vs. 80.9% (POW); their knowledge regarding pharmacotherapy improved- 9.7% (PRW) vs. 49.1% (POW). The 5As approach was answered correctly by 17.7% (PRW) vs. 69.9% (POW). Appropriate prescribing of Nicotine Replacement Therapy improved - 39.8% (PRW) vs. 61.1% (POW). Awareness of possible adverse effects of medications enhanced - 46.9% (PRW) vs. 71.1% (POW).

Conclusion: After attending a one-full day smoking cessation skills building workshop, physician's felt more confident in discussing anti-smoking issues with their patients and their smoking cessation knowledge improved significantly.

P1972

Motivation to quit smoking among patients with atherosclerosis compared with asymptomatic smokers

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Smoking habit is a severe factor of risk that exacerbates diseases of human organs accentuating pulmonary diseases. It is worth to assess the range of addiction and motivation to quit smoking among patients suffering from one of the form of atherosclerosis- peripheral arterial disease(PAD).

The objective of this study was to compare the stage of addiction and the level of motivation to quit smoking of patients with PAD with asymptomatic smokers.

30 patients with PAD and 40 asymptomatic smokers were examined using Schneider motivation test (Sm) and Fagerstrom Test (FT) for Nicotine Dependence. The clinical data was collected: Fontaine's classification, number of pack- years, amputation episodes, amount of hospitalization, age and associated diseases.

Sm score of patients with PAD is higher (8,8 points) than motivation of asymptomatic smokers (8,6 points) whereas the stage of addiction is lower (5,2) in contrast to the control group(5,7)-difference not significant. There is a significantly higher score of Sm among patient with amputation versus patient without ($p < 0.01$). The correlation between the pack-years smoked with FT was observed ($p = 0.02$, $R = 0.54$). Distinctive is the progress of lower limbs ischemia in order to the second-hand smoke exposition ($p = 0.01$). There was a tendency to the correlation between the motivation level and the FT results.

Patients with PAD represent a very specific group which is required to provide an effective way of addiction recovery. The higher is the level of disability correlated with amputation episodes, ischemia and IHD, the more significant is the score of Sm. The participation of the second- hand smoke is the agent which affects the PAD course.

P1973

Patients attitudes towards inhaler use

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Introduction: Inhaled therapies can only be effective if the patient uses the delivery device correctly and complies with treatment, which in turn may be influenced by their attitude towards the disease and its treatment. Patient education is fundamental to optimizing this, as is their perceived effectiveness of medication. This study explores patients' attitudes towards inhaled therapy with a view to provide targeted education.

Methods: Forty eight respiratory clinic patients (60% male) completed a self-administered structured questionnaire evaluating attitudes towards their current inhaled therapy.

Results: All respondents considered Inhaler therapy important, and 61% had a good understanding of their lung condition. Although 70% had been given advice regarding inhaler use, 67% did not use these as prescribed (see table). Moreover, 63% had not discussed their concerns with a doctor or nurse but 80% would like more training (73% preferred pharmacists to do this).

Reasons (%) for not using inhaled therapy as prescribed

Reason	%	Reason	%
Lack of time	9	Side effects	19
Doesn't help breathing	26	Difficult regime	34
Cannot use them	2	Feel well enough	23
Unsure of what they are for	30	Anger about condition	0
Cost factors	6	Pharmacy/GP far away	2
Forget to use/too cumbersome to carry	61	Social stigma	6

Conclusions: This study has identified a need to further address education. A significant proportion of patients do not use their inhaler as prescribed and have some concerns about inhaled therapy, emphasizing the importance of providing patients with adequate information about their disease and treatment at every opportunity to enhance compliance. To aid this, targeted education and training sessions delivered by Pharmacists are being developed.

P1974

Pregnancy and smoking: cessation advice and health consequences of CO fetal exposure: An exploratory study

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Introduction: Fetal exposure to second-hand smoke (SHS) is the most important avoidable cause of fetal morbidity and mortality. Health professionals' (HPs) cessation advice is crucial, since women may be more prone to change.

Study aims: To evaluate: - HPs' cessation advice,

- Fetus exposure to CO and association with anthropometric parameters of the newborn.

Methods: Prospective cohort study. Face-to-face structured interviews were applied to 94 pregnant, followed up at São Sebastião Hospital, mean age 31 years. Newborn parameters were collected from clinical files. We performed "baby CO". We used chi squared, Mann-whitney, Kruskal Wallis tests, and Pearson's correlation.

Results: 37% of the participants were smokers (average 6 cigarettes/day). 54% had a smoker partner. 80% reported SHS exposure. 67% were questioned about smoking. 93% of the smokers wanted to change their consumption, but only 7.4% did quit (cold turkey, on their own). The observed decrease in consumption was significantly associated with HP counseling ($p < 0.05$), while cessation counseling was not associated with quitting. Neonates of the smokers were born, on average, 231,30g lighter and with less 0.76 cm of cephalic perimeter ($p < 0.05$).

Conclusions: The majority of pregnant women was advised to change tobacco consumption and was exposed to SHS. Most of the smokers wanted to reduce smoking, but did not want to quit. Cessation counseling was not effective. Nevertheless the low consumption, smoking and CO levels were negatively associated with newborn parameters. There is a need to train HPs in cessation counseling, including SHS exposure and partners' smoking.

P1975**Characteristics of mentally ill smokers participating in a smoking cessation program**

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Rationale: An appreciation of the high rate of tobacco use by those with mental illness is emerging. Although the practice guidelines suggest that interventions useful with the general population should be used, it remains unclear whether mentally ill smokers could benefit from smoking cessation program. The study aims were to determine the abstinence rate among people with or without mental illness, and to identify the factors influencing on it.

Methods: An observational study was conducted on all smokers who participated in the three-months smoking cessation program in our clinic between August 2007 and March 2011. Clinical and tobacco-related variables were assessed.

Results: Of the 370 participants, 105(28.4%) had mental disorders (mean age: 52.7±12.8, male/woman=52/53). 49 (46.7%) mentally ill patients accomplished the program. The cessation rate at 12 weeks was 49.0% in those with mental illness and 70.4% in those without mental illness ($P<0.01$), respectively. Among those with psychiatric conditions, quitters are older (57.7±11.3 and 51.0±10.1, $P=0.035$), showed lower exhaled carbon monoxide level (11.8±8.9 and 18.3±11.7, $P=0.037$), and lower %FEV1 (70.1±22.3 and 83.6±15.9, $P=0.020$), compared with smokers. No significant differences were found between quitters and smokers in the average nicotine addiction level, according to the tobacco dependence screener (TDS) test, the average pack-year, and the prescription rate of varenicline. **Conclusions:** The quit rate in mentally ill people was lower than in general population. Further studies are needed to modify the cessation interventions that address mental illness.

P1976**A pharmacological intervention with varenicline among a lung cancer LDCT screening trial: The MILD experience**

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Introduction: Low dose CT screening (LDCT) for lung cancer may be a teachable moment for smoking cessation (SC), but no pharmacological intervention has been performed in LDCT trials.

Aim: A three-month Varenicline course in a group of patients (Pts) enrolled in the Milan Lung Detection Trial, with biochemical verification of the smoking status. **Materials and Methods:** 187 Pts received Varenicline; 43% and 32% of them were allocated to 1 vs 2-year LDCT, while 25% to minimal SC advice and no LDCT (Ctrl). Lung function testings (PFTs), exhaled carbon monoxide (CO) and side effects were longitudinally recorded. Pts with a CO ≤6 ppm were considered abstinent. Descriptive statistic as well as parametric and non-parametric tests were performed.

Results: Pts were 61±5.2 years old, with a mean CO of 16.3±7.9 ppm, a smoking history of 22.2±21.9 pack/years, a Fagerström test of 7.5±2.2 points and a slight decrease in mean FEV1% (84.1±14.6). Global quit rates were 51.7%, 50.7% and 41.8% on month 1, 3, 6 respectively; quit rates were equal in LDCT subgroups but they were lower in the subgroup of Pts with FEV1% ≥70<80%. Among non-quitters, those in the LDCT active arms, as well as those with a FEV1% ≥70<80% showed higher CO values than Ctrl at baseline and along the study. Side effects were present in 28.4% of Pts and therapy discontinuation happened in 20.4% of cases.

Conclusion: A pharmacological intervention within a LDCT trial can lead to rewarding percentages of SC. Mild function impairment poses a higher risk of continuative smoking, while being in an active LDCT arm may result in stronger smoking intensity over time.

P1977**Influence of smoking among resident doctors in a tertiary teaching hospital and their attitude of giving smoking cessation advice**

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Introduction: Smoking among resident doctors would be an obstacle to effective Smoking prevention, in particular the practice of minimal advice.

Objectives: To assess the Smoking habits of resident doctors in a tertiary teaching Hospital and to study the link between their Smoking status and their practice of minimal Smoking cessation advice in 2011 in a legislative context unfavorable to smokers.

Methods: From a total 477 resident doctors in Aleppo University Hospital, 466 doctors I answered a survey (response rate: 97.6%) investigating their own Smoking habits and how they approach patients who smoke.

Results: The Prevalence of active Smoking among responders was (24%)[35% were Male, and 4% Female], 4% were former smokers and 72% never smoked. Regular smokers (58%)[smoked an average 15 cigarettes a day and [43% were nicotine dependant (5%) strongly]. 66% of smokers doctors wish to stop Smoking

an more than 50% of them wish to consult Anti-Smoking clinic. When consulting doctors systematically addressed smoking habits (62%) said that they gave minimal smoking cessation advice, in contrast with (87%) of non smokers doctors. The incidence of Smoking in the family's smoker resident doctors was (64%) in contrast with non smokers (41%).

Conclusions: Resident doctors who smoked were less prone to ask their patients if they smoke (38% versus 13% of non-smokers: $P=0.003$) and they believed that their smoking does not influence their practice of giving minimal smoking advice.

P1978**Burden of smoking in acute coronary syndrome**

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The purpose of this study was to evaluate the burden of smoking among patients who had acute coronary syndrome seen at Philippine Heart Center in terms of its outcomes and expenditures.

199 patients (138 males and 61 females) participated in the study. Smoking habits were recorded including their co-morbidities, GRACE and TIMI scores. Financial data were gathered, tabulated and evaluated. Outcomes of ACS were tabulated in relation to patients' smoking history and were evaluated.

In this study, it shows that among those patients who have acute coronary syndromes, predominantly were smokers, both direct and passive smokers comprising 72% of the patients. In a developing country like ours, the mean amount expended for each person admitted for acute coronary syndrome who smokes (direct and passive) was two hundred forty-seven thousand two hundred sixty pesos (PhP 247,260.00±276,428.00 excluding physician's professional fee) which is already a sumptuous that drains one's finances. And of these, for every smoker patients who had acute coronary syndrome, the mean expenses for each person with each admission were PhP 217,160.00±226,791.09 for those who survived and were discharged and PhP 517,960.00±448,085.23 for those who died. Therefore, smoking is still prevalent among patients who have acute coronary syndrome and with each admission, each patient expend a sumptuous amount of money for the health resources.

P1979**Smoking tendencies in physicians and surgeons from Andalusia**

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Aim: To obtain relevant information regarding smoking habits, intention of quitting and consumption in the workplace.

Material and method: General survey on smoking was performed in 15 andalusian hospitals in the last quarter of 2010, a questionnaire (written and anonymous) designed by the Global Network for Tobacco Free Health Care Services (ENSH) was used. Descriptive study was made using the statistical package SPSS for windows. Study population: medical.

Results: n=1098 (55% men, 45% women). Mean Age 42 years (range 20-66). Smoking Status: Current smoker (14%), occasional smoker (5%), non-smoker (59%), former smoker (22%). Mean Cigarettes 15 per day (1-50). 21% will try to quit in the next 6 months and 22% want to quit right now. 33% of smokers smoked during working hours.

Conclusions: Physicians and Surgeons show low prevalence of smoking, favorably disposed to quit and only one third of them smoke in the workplace.

P1980**How France has hijacked tobacco price increase, an effective tool of tobacco control, to increase the financial profits**

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Increasing the tobacco products price is a tool to reduce tobacco consumption. The FCTC announces a 4% decrease of tobacco consumption for a 10% price increase. The last decade France has experienced two opposite periods with two opposites effects.

Method: We have compared tobacco price increase to sales of cigarettes in France during the presidency of J.Chirac 2002-2007 and the presidency of N.Sarkozy 2007-2012.

Results: In 2003 President Chirac implements the first cancer plan and, among 20 measures against tobacco, a 39% increase of tobacco taxes produce price of cigarettes within 18 months, just after a 12% increase in 2002 (total = 51% increase). The price of Marlboro 20 cigarettes pack has increased of 1.4€. The number of cigarettes sold by year has dropped down from 82 billion to 54 billion (34% decrease).

From 2007 to 2012 the influence of the tobacco industry has been strong in France,

and cigarettes prices have increased 4 times of 6% and a new increase of 7, 5% is anticipated in 2012. These 32% increase of prices has been managed by the tobacco industry. As a result, the sales of cigarettes remain 54 billion a year; nevertheless at the end of 2012 we will have a total increase of cigarettes pack of 1,6 €.

Conclusion: The elasticity of the increase of price on consumption has been very high (0.67) when increase of price is driven by taxes and supported by a strong engagement. The price elasticity is 0.0 when the increase of price is driven by tobacco industry and when tobacco lobbyists may be active anywhere. Article 5.3 of FCTC on interaction between tobacco industries on politicians may prevent in France failure of tobacco control.

P1981

Is calprotectin a marker of tobacco smoke related inflammation? A pilot study in children

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Objectives: Environmental tobacco smoke (ETS) related inflammation has an anorexigenic effect through affecting the release of appetite-modulating mediators, leptin and ghrelin. Elevated serum calprotectin levels are found in a variety of inflammatory conditions. We studied the relation between ETS and body mass index (BMI), as well as serum levels of leptin, ghrelin and calprotectin.

Material and methods: A cross-sectional study was performed by searching the smoking status of parents. After filling in the questionnaires, parents were phoned and children were invited to supply fasting blood samples in order to measure serum levels of leptin, ghrelin and calprotectin, and to calculate their BMIs. Participant children were divided into Group 1, those who are exposed to and Group 2, not-exposed to indoor ETS.

Results: There were no statistical difference between BMI and serum levels of leptin and ghrelin in two groups (p values are 0.85, 0.87 and 0.42 respectively), but serum calprotectin levels were statistically higher in Group 1 (p=0.003).

Conclusions: In this study serum levels of calprotectin were found to be higher in children with indoor ETS exposure where no relation was detected with BMI and serum levels of leptin and ghrelin. Increased serum levels of calprotectin might be an indicator of inflammation related to ETS exposure.

P1982

Smoking and metabolic syndrome

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Background: Smoking causes inflammation and chronic systemic inflammation predisposes to a range of metabolic disorders usually described as metabolic syndrome. This might likely be one pathway leading to cardiovascular disease. Nicotine reduces appetite. Therefore exact control of caloric uptake (and physical activity) is necessary when studying the association between smoking and metabolic syndrome.

Methods: We used data collected during preventive check-ups among 987 employees of a large bank. Health data including routine laboratory parameters were enhanced by a detailed nutritional recall protocol and a standardised physical activity questionnaire. Physical activity and calories uptake were indeed significant predictors of several metabolic outcomes thus proving the data reliability. Associations were investigated using linear regression.

Results: Current smoking (number of cigarettes currently smoked) showed a non-linear association with most outcomes including waist circumference, high density lipids, fasting glucose, and triglycerides: While moderate smoking did not differ significantly from non-smoking the daily consumption of more than 20 cigarettes lead to significantly adverse effects on all these parameters. Adverse effects were more pronounced and roughly linear when cumulative smoking (pack years) was considered. Smoking also lead to an increase in white blood cell counts indicating an inflammatory response.

P1983

The association of smoking and blood viscosity

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Despite the efforts towards controlling all well known risk factors, pulmonary and cardiovascular diseases are still the most common causes of death. This obvious fact stimulates the investigators to look for new risk factors. We aimed to investigate the relationship between smoking and blood viscosity from this point of view. One hundred people were invited and three groups were formed. group 1

composed of exsmokers, group 2 composed of individuals who had been smoking, group 3 composed of the individuals who never smoked. Measurements of blood viscosity were performed at three different shear rates. Since the hematocrit levels can significantly effect viscosity, in order to avoid this, hematocrit levels were fixed at 40.

Table 1. Blood viscosity of groups at different shear rates

	Hct	BV1	BV2	BV3	40% BV1	40% BV2	40% BV3
Group 1	42,58±3,99	9,10±2,10	5,42±1,31	4,46±0,60	11,96±2,10	8,09±1,72	7,23±0,41
Group 2	44,17±8,92	9,43±1,81	5,19±1,04	4,37±0,52	12,29±1,79	7,74±1,81	6,95±1,10
Group 3	39,07±5,98	8,19±1,47	5,15±0,69	4,14±0,51	11,07±1,46	7,90±1,03	7,04±0,53

Viscosity measurements of groups measured at BV1; 23 s⁻¹, BV2; 115,2 s⁻¹, BV3; 230 s⁻¹.

According to our results we may conclude that smoking effects the measurements of blood. We found that blood viscosity was higher in smokers and exsmokers compared to the ones who never smoked.

Table 2: Statistical analysis among groups

	Hct	BV1	BV2	BV3	%40BV1	%40BV2	%40BV3
Group 1–Group 2	0,338	0,689	0,221	0,971	0,652	0,941	0,095
Group 1–Group 3	0,658	0,138	0,001***	0,642	0,133	0,022*	0,478
Group 2–Group 3	0,459	0,188	0,004**	0,506	0,201	0,011	0,069

*p<0,05, **p<0,01, ***p<0,001.

We think that corrective measures for increased blood viscosity may be important for preventing and/or treatment of related diseases mainly cardiovascular ones.