DSEST ***RENCONTRES SCIENTIFIQUES***

Département de santé environnementale et santé au travail

Faculté de médecine

**Mercredi 8 septembre 2010**

**de 12 h à 13 h**

**Pavillon Marguerite-d’Youville, salle 3038**

**Monoxyde d’azote exhalé et spirométrie pour la surveillance de santé : Étude pilote chez des apprentis boulangers et coiffeurs\*\***

Conférencier : Dr Abraham Bohadana, professeur invité au département

\*\*La conférence sera donnée en français.

*Résumé*

**Background:** Exposure to pollutants in bakeries and hairdressing salons can cause airway syndromes varying from bronchial irritation to asthma. Workplace respiratory health surveillance aims to identify possible cases requiring further investigation.

**Aims:** To compare the performance of FeNO and spirometry for health surveillance of apprentice bakers (ABs) and hairdressers (AHDs). Determinants of FeNO were also identified.

**Methods:** A total of 126 apprentices (59 ABs; 67 AHDs) participated. Symptoms and physician-diagnosed asthma were evaluated by questionnaire. Subjects with elevated FeNO (FeNO>ULN), airway obstruction (FEV1/FVC<95th percentile), and atopy (history of allergies) were identified.

**Results:** Twenty-nine (23%) apprentices had abnormal tests: 4 had associated high FeNO and airway obstruction, while 25 had either high FeNO (n=15) or airway obstruction (n=10) alone. Compared with ABs (n=16), AHDs (n=13) had more asthma (38% *vs.* 0%; p=0.02), atopy (61.5% *vs.* 6.2%; p=0.003), symptoms (61.5% *vs*. 25%; p=0.14), and elevated FeNO (69.2% *vs.* 37.5%; p=0.14); but smoked less (23% *vs.* 56.5%; p=0.13) and had less airway obstruction (30.8% *vs.* 62.5%; p=0.43). Among 97 subjects with normal tests, no differences existed between ABs (n=53) and AHDs (n=44). Average FeNO was increased in atopic non-smokers compared with atopic smokers and non-atopic subjects (p=0.01). Smoking, a history of allergies, FEV1/FVC% observed, and respiratory symptoms were the main determinants of FeNO.

**Conclusion:** FeNO and spirometry were not overlapping dimensions in apprentice bakers and hairdressers, each test contributing unique information on the physiological status of the respiratory system. FeNO may provide added information on airway inflammation not provided by spirometry.