From a public health viewpoint, only about 1% of events of acute myocardial infarction in this population is attributable to oral contraceptive use, in strong contrast with the approximate 50% attributable to smoking among Italian women. The association between oral contraceptive use and acute myocardial infarction is now of a modest importance on a public health level in this population.

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The “healthy passive smoker”: relationship between bronchial hyper-reactivity in school children and maternal smoking

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The term 'healthy smoker effect' describes a primary process of self selection by which only healthy subjects tend to start smoking, and a secondary process of disease related attrition by which subjects with a lung disorder are likely to stop smoking. We present data from a cross sectional study on the association between maternal smoking and bronchial hyper-reactivity (BHR) in 1401 8 year old school children, in whom the phenomenon of "healthy passive smokers" was observed. Information on the children's asthma status and maternal smoking was gathered via parental questionnaires. Maternal smoking ("yes/no") was recorded for the time before pregnancy, during pregnancy, in the child's 1st year of life and the child's 8th year of life. BHR was assessed by free running test and defined as a fall in peak expiratory flow rate ≥15% after exercise.

Table 1: Epidemiological overview. Pharmacoeconomic Drug Use 1993;2:3–16.


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BHR status seems to be very distinct, especially in the group of asthmatics.

One might argue that the occurrence of respiratory symptoms associated with BHR, rather than BHR per se, might influence maternal smoking habits. We used BHR as an outcome variable because the free running test is an objective and standardised measurement, while respiratory symptoms recorded by means of parental questionnaires are likely to be affected by reporting bias. Indeed, in our study BHR was closely associated with chronic respiratory symptoms in atopic children, but the relationship between current respiratory symptoms and changes in maternal smoking habits was weak (data not presented).

If there is a mutual inter-relation between exposure and disease, the analysis of the relationship between current exposure and disease can easily give misleading results. For example, not taking information on prior passive smoke exposure into account, our data would suggest that eight year old asthmatic children of currently smoking mothers have only half the risk of developing BHR, as have asthmatic children of non-smoking mothers. We conclude that in cross sectional studies investigating long term exposure there is a high risk of underestimating effects if only information on current exposure status is available. In order to assess the true exposure-disease relationship it seems important to acquire information on status of exposure at different prior points in time as well, and, if possible, on disease status at prior points in time.

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