

REVIEW

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PASSIVE SMOKING



DR. SHAH NAWAZ HASSAN GARDEZI, MBBS. FCPS.

Emergency Physician,
Accident and Emergency Department,
Nishtar Hospital, Multan.

doctorshahnawaz@hotmail.com

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INTRODUCTION

Definition: Breathing other people's smoke is called passive, involuntary or second hand smoking.

Types:- Side stream – from burning tip of the cigarette
Maintenance – inhaled and exhaled by smoker.

Environmental tobacco smoke (ETS) is a major source of indoor air pollution.

PREVALENCE

According to WHO, more than thousand million adults smoke world wide. It also estimates that around four million, or almost half of the world's children, breathe air polluted by tobacco smoke particularly at home¹.

TOXINS IN SMOKE

Tobacco smoke contains over 4000 chemicals in the form of particles and gases². Particulate phase includes tar, nicotine, benzene and benzo (a) pyrene. Gas phase includes carbon monoxide, ammonia, dimethyl-nitrosamine, formaldehyde, hydrogen, cyanamide and acrolein. Some have marked irritant properties and some (60) are known or suspected carcinogen. The Environmental Protection Agency (EPA) in the USA has

classified environmental tobacco smoke as a class A (known human) carcinogen along with asbestos, arsenic, benzene and radon gas².

HEALTH IMPACT

Non-smokers who are exposed to passive smoking in the home, have a 25% increased risk of heart disease and lung cancer^{3,4}. A more recent review of the health impacts of passive smoking by the international agency for research on cancer (IARC) noted "the evidence is sufficient to conclude that involuntary smoking is a cause of lung cancer in never smoker"⁵.

Based on the findings of the SCOTT (Scientific Committee on Tobacco and Health) report and the review by the California Environmental Protection Agency ASH has calculated that, each year in the UK, about 600 lung cancer deaths and up to 12000 cases of heart disease in non-smokers can be attributed to passive smokers^{6,7}.

RISK TO YOUNG CHILDREN

Several adverse consequences of involuntary tobacco smoke exposure of children as well understood, specially parental and peer smoking are critical and detrimental influences on future regular tobacco use. In

addition maternal smoking during pregnancy causes ----- established demonstrable harms by reducing birth weight and increasing infant mortality.

CHILDHOOD EXPOSURE

Almost half of all children in the UK are exposed to tobacco smoke at home^{8,9}.

A). RESPIRATORY HEALTH AND MIDDLE EAR DISEASE

ETS exposure is casually associated with increased risks of lower respiratory tract illness including bronchitis and pneumonia⁹ in the first year of life. It also causes middle ear diseases including both acute (glue ear) and chronic otitis media¹⁰. It is a cause of chronic respiratory symptoms in school-aged children. ETS exposure increases the severity and frequency of symptoms in children with asthma⁹.

B) SUDDEN INFANT DEATH SYNDROME (SIDS)

There is sufficient evidence to conclude that maternal smoking causes a marked increase in SIDS.

C) NEURO-DEVELOPMENTAL EFFECTS

When compared to children of non-smokers, children of smokers perform more poorly in school. They also have lower scores in cognitive functioning tests, in particular language and auditory processing and have more behavioral problems, including conduct disorder, hyperactivity, and decreased attention spans. A US study found defects in reading and reasoning skills¹¹.

D) CARDIOVASCULAR EFFECTS

Studies have shown deleterious effects in oxygen transport, high density lipoprotein (HDL) cholesterol and possibly endothelial function in children.

E) CHILDHOOD CANCER

There is suggestive evidence that parental smoking may increase the risk of some childhood cancers (like brain tumour, lymphomas and lung cancer). However, the potential roles of pre-conceptional, in utero, and postnatal exposures are unknown.

F) FOETAL GROWTH

ETS exposure of non-smoking women during pregnancy is a cause of reductions in average birth weight i.e. < 2500 gm. It also leads to intrauterine growth retardation^{12,13}.

CONCERN FOR DEVELOPING COUNTRIES

The majority of studies measuring costs of children's exposure to tobacco smoke have been in developed countries. For developing countries, these costs while likely to be significant may be affected by country, specific conditions. The magnitude of costs in any country depends not only on the levels of children's exposure and rates of disease but also on the monetary values placed on health care and other resources. If a country lacks a well- developed health care system, costs will appear artificially low, as individuals cannot have access to care. As less developed countries develop and their health system evolve, costs will become more real and are likely to grow from their current levels as smoking prevalence rises in these countries, more children are affected and remains become available to offer them treatment for the illness in which tobacco smoke is implicated.

THE NEED FOR ACTION

In view of the significant health risks posed to children by ETS, public health policies are needed to protect this vulnerable population. The aim of such policies is to ensure the right of every child to grow up in an environment free of tobacco smokes, in accordance with the United Nations Convention as the rights of child.

WHO and other international and intergovernmental bodies recommend measures such as:

1. Banning all advertising and promotion of tobacco products.
2. Increasing prices beyond inflation.
3. Regulating tobacco products.
4. Prohibiting rules to minor as steps towards

reducing overall consumption

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**Never react abruptly;
Always think and rethink.**

Shuja Tahir