

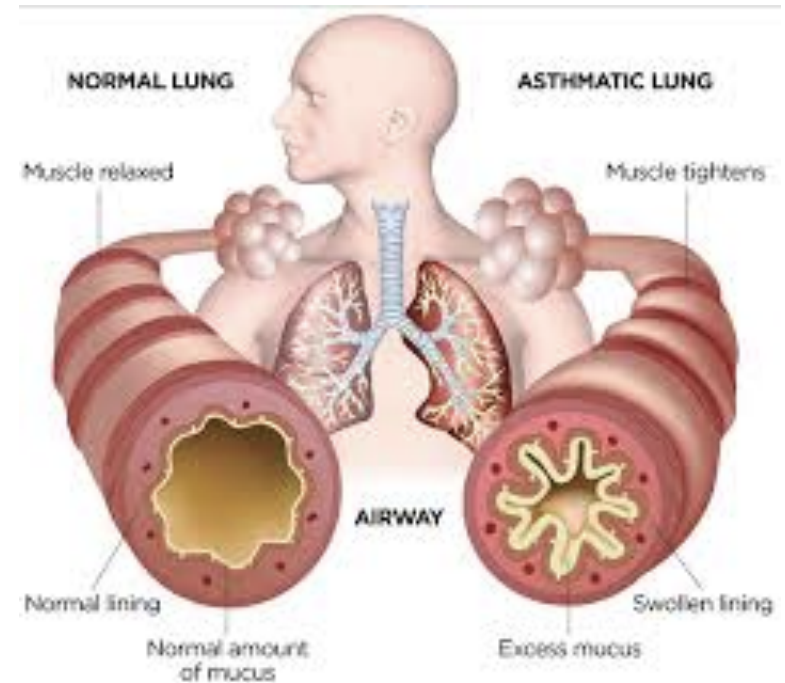
ASTHMA

- A correlation between exposure to pesticides, bronchial hyper-reactivity, and asthma symptoms have been noted by many clinical and epidemiological studies
- There are several pesticides that act as sensitizers or irritants and directly damage the bronchial mucosa.



ASTHMA

- This makes the airway very sensitive to allergens or other stimuli.
- However, many pesticides have a limited potential to sensitize airways in exposed populations.
- Pesticides are also likely to increase the risk of developing asthma, worsen a previous asthmatic condition, or even cause asthma attacks by increasing bronchial hyper-responsiveness



ENDOCRINE DISRUPTORS

- Endocrine disrupting chemicals (EDCs) including pesticides, are compounds which interfere with the normal functioning of the endocrine system of both humans and wildlife
- Out of the 105 chemicals identified as EDCs, insecticides comprise 46%, herbicides 21%, and fungicides 31%.
- One of the most sensitive factors is age. Compared to adults, human foetuses, infants, and children are more prone to be affected

ENDOCRINE DISRUPTORS

- Infants are highly susceptible to pre- and post-natal exposure to endocrine disruptor pesticides.
- Similarly, living near agricultural pesticide applications is often cited as a reason for developmental abnormalities in low birth weight, foetal death, and childhood cancers.
- Adverse effects of pesticide on fertility attributable to their endocrine disrupting activity has also been reported.

DIABETES

- In many researches, a link has been found between diabetes and dioxin-like chemicals, non-dioxin, and other organochlorine pesticides
- DDT levels were found to be extremely high among workers with incidence of diabetes in comparison to workers who did not have diabetes.
- Workers exposed to PCB (polychlorinated biphenyls) showed elevated levels of autoantibodies that are linked with diabetes

REPRODUCTIVE ABNORMALITIES

- The data collected for the study of reproductive toxicity in couples engaged in spraying organochlorine, organophosphorus, and carbamate insecticides in cotton fields revealed abnormal reproductive performance in the couples
- Male children exposed to endosulfan showed delayed sexual maturity and interferences with sex hormone synthesis

REPRODUCTIVE ABNORMALITIES

Table 1 Comparison of reproductive effects observed in couples engaged in spraying insecticides with unexposed subjects

<i>Reproductive problems</i>	<i>Exposed (%)</i>	<i>Unexposed (%)</i>
Abortions	26.0	15.0
Stillbirths	8.7	2.6
Neonatal deaths	9.2	2.2
Congenital defects	3.0	0.1

Source Rupa, Reddy, and Reddy (1994)