

Chronic Toxicity

- Chronic effect is the term which signifies harmful effects resulting from **exposure to small doses of pesticides repeated over time.**
- Some of the chronic effects that result from pesticide exposure are
 - Birth defects
 - Development of tumours
 - Nerve disorders
- **Sub-lethal effects** can produce **structural abnormalities** such as
 - Endocrine disruption
 - Growth reduction
 - Nerve function impairment
 - Lack of motility, behavioural changes, and the
 - development of terata (Fetus with deficient, redundant, misplaced, or grossly misshapen parts).

Chronic Toxicity

- To determine chronic toxicity estimations, the time period for which animals are exposed to sub-lethal doses can vary from months to several years. The following are some of the reactions for which the animals are assessed
 - (i) Carcinogenesis – cancer
 - (ii) Teratogenesis – birth defects
 - (iii) Mutagenicity – genetic changes
 - (iv) Oncogenicity – tumours
 - (v) Reproductive – reproductive problems
 - (vi) Nervous – nerve damage
 - (vii) Immune – allergic reactions

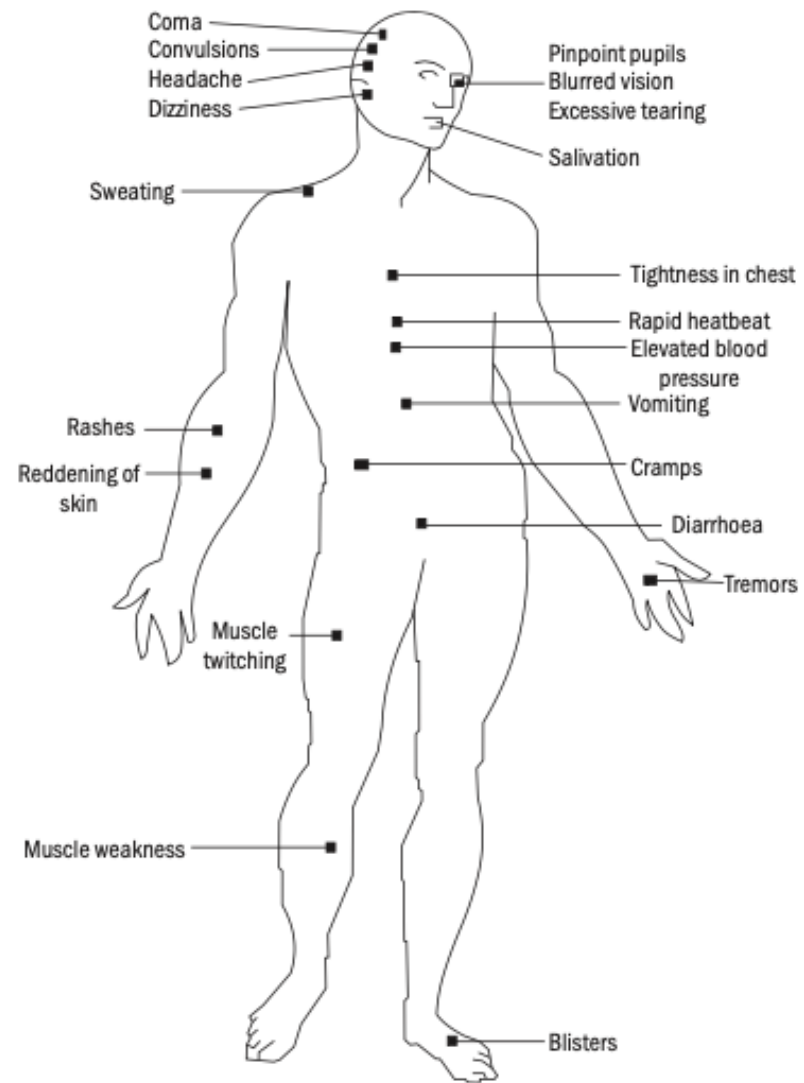


Figure 3 Symptoms of pesticide poisoning

Source Whitford, Edwards, Neal, *et al.* (1992)

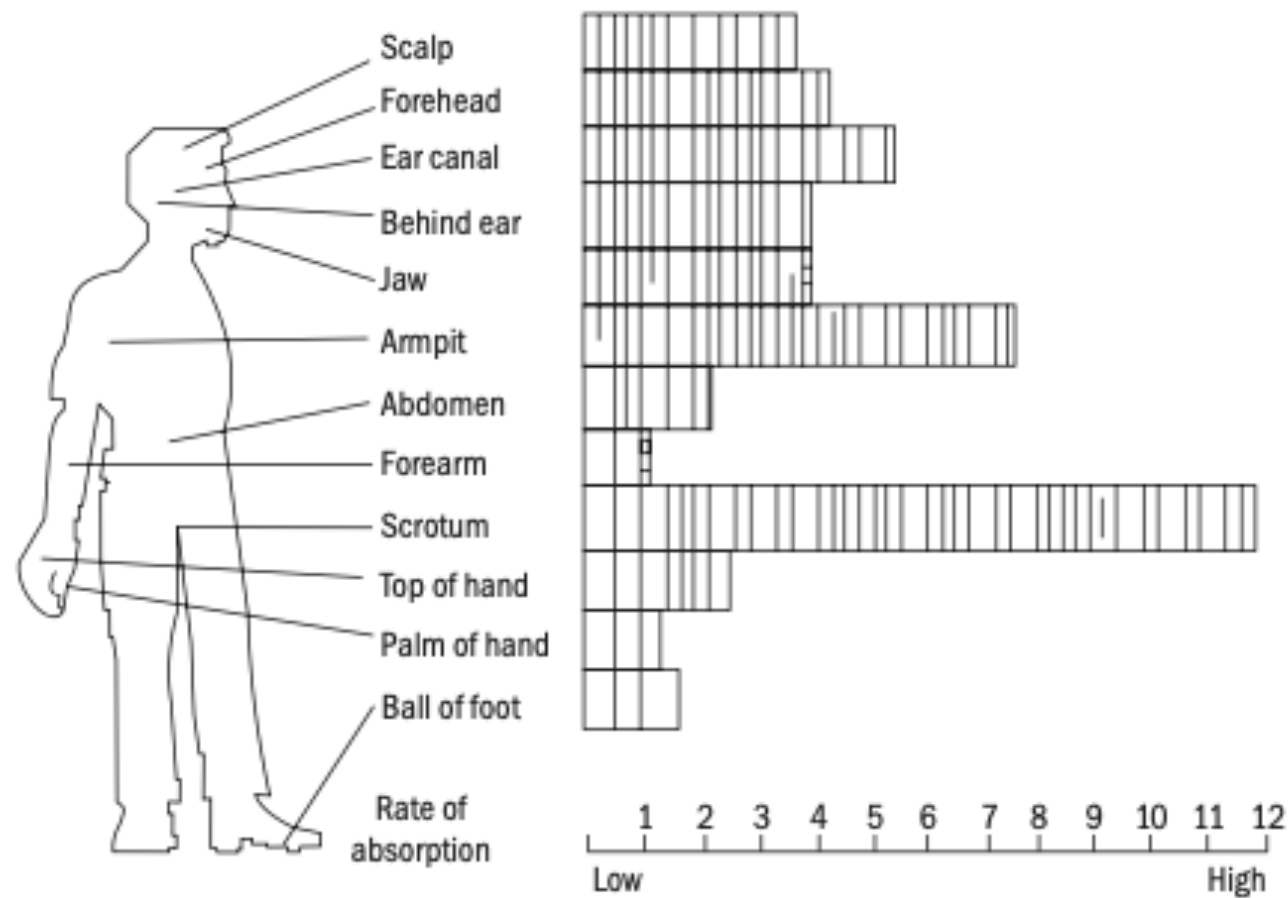


Figure 4 Specific body regions and their relative susceptibility to pesticide absorption

Source Whitford, Edwards, Neal, *et al.* (1992)