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PS-016. The use of insecticide-impregnated bed nets

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Mosquito nets provide a degree of personal protection against night-biting mosquitoes and other night-biting insects, provided that the nets are intact and the mesh is fine enough.If used by a large proportion of a community, treated nets suppress the vector population and hence disease transmission.These nets have the advantages like requiring less insecticide use compared to insecticide spraying,effective protection of communities and easily usage by anyone living in the house. Clinical trials have also indicated that treating mosquito nets with insecticide could be a potentially cost-effective method of preventing mosquitoes.Insecticide-impregnated bed nets significantly reduce mortality and morbidity, as well as the incidence of severe malaria and give greater protection than nonimpregnated bed nets. Pyrethroids are the only insecticides currently recommended for treatment of mosquito nets.Being highly lipophilic,pyrethroids pass through cell membranes anda re absorbed through the skib,by inhalation and by ingestion. However,their rapid matabolism greatly lowers the magnitude of the resultant toxicity.The volatility of pyrethroids is also low;given the low dosages of insecticide used for the treatment of nets,the risk of inhalation toxicity by the users of treated nets is remote. A study showed that treated eave and door curtains significantly reduced child mortality due to malaria.Symptoms of poisoning due to treatment or use of mosquito nets are rare, apart from transient numbness or tingling if there has been significant dermal contact and synthetic pyrethroids in mosquito nets have low toxicity and volatility to mammals,a high insecticidal activity. In long term toxicity studies of pyrethroid insecticides commonly used for treatment of mosquito nets,no teratogenic,carcinogenic or mutagenic effects have been detected in experimental animals. Insecticides used for treatment of mosquito nets are not harmful to people if used correctly. Although the pyrethroids used to treat bednets are relatively safe,vector control programes should still involve a degree of supervision or training.

Keywords: Insecticide-impregnated bed nets, human safety, mosquito nets