

## **Guinea Worm Eradication Programme (GWEP)**

Certification of India as a Guinea Worm disease free country by the World Health Organisation in February 2000 is a major milestone in the history of disease eradication in India. Guinea worm is the second communicable disease after smallpox, which has been eradicated from the country, by the efforts of NICD and the concerned states.

It is caused by a large nematode, *Dracunculus medinensis*, which passes its life cycle in two hosts – Man and Cyclops. Man harbours the adult parasites in the subcutaneous tissues, especially of legs, arms and back, which are likely to come in contact with water. The escape of larvae into the water takes place in about 2-3 weeks. These larvae are ingested by Cyclops and develop into infective stage in about 2 weeks. People swallow the infected Cyclops in drinking water from step wells or ponds. The larvae are liberated in the stomach, cross the duodenal wall, and enter the retro-peritoneal connective tissues where they grow and mature. The females migrate in about 6 months to parts which come in contact with water.

Diagnosis is made by visual recognition of adult worm protruding from a skin lesion or by microscopic identification of larvae.

Prevention and control:

- Not allowing villagers, especially those with blisters and ulcers, to enter any source of drinking water,
- Filtering water in endemic areas through fine mesh (size 100 micrometers) to remove Cyclops,
- Converting step wells to draw wells, controlling of Cyclops by use of temephos, and
- Increasing awareness among endemic communities about the disease and its control.

### **Guinea-worm Eradication in India**

Government of India launched the National Guinea Worm Eradication Programme (GWEP) in 1983-84 as a centrally sponsored scheme on a 50:50 sharing basis between Centre and States with the objective of eradicating guinea worm disease from the country.

The National Institute of Communicable Diseases (NICD), Delhi now renamed as National Centre for Disease Control was designated as the nodal agency for planning, co-ordination, guidance and evaluation of GWEP in the country.

### **Programme Strategy**

- Guinea worm case detection and continuous surveillance through three active case search operations and regular monthly reporting
- GW case management
- Vector control by the application of Temephos (50% EC) in unsafe water sources eight times a year and use of fine nylon mesh/double layered cloth strainers by the community to filter Cyclops in all the affected villages
- Provision and maintenance of safe drinking water supply on priority in GW endemic villages
- Trained manpower development and
- Intensive health education
- Concurrent evaluation and operational research.

At the beginning of the Programme i.e. in 1984, there were around 39792 GW cases in 12,840 villages of 89 districts in seven endemic States. Almost two-thirds of the total cases occurred in Rajasthan (38%) and Madhya Pradesh (29%).

During April 1999, Seventh Independent Evaluation of GWEP was conducted by independent experts; the results validated the zero guinea worm status in India. International Certification Team (ICT) from International Commission for Certification of Dracunculiasis Eradication (ICCDE), WHO visited India from 9th -25th Nov.,

1999 to assess the status of guinea worm disease in the country and to prepare a report for presentation to International Commission at Geneva.

**The International Certification Team, presented its report on guinea worm disease status in India to the ICCDE in the meeting held in February 2000 in Geneva. On the basis of ICT report, India was declared as Guinea Worm disease free country in this meeting.**

Keeping in view that the global eradication of guinea worm disease has not been achieved, the States are continuing the routine surveillance for the disease (till global eradication is achieved).