



**KAMARAJ IAS ACADEMY**  
Only IAS Academy by Grandson of "Perunthalaivar Kamarajar"

# Onchocerciasis (River Blindness)

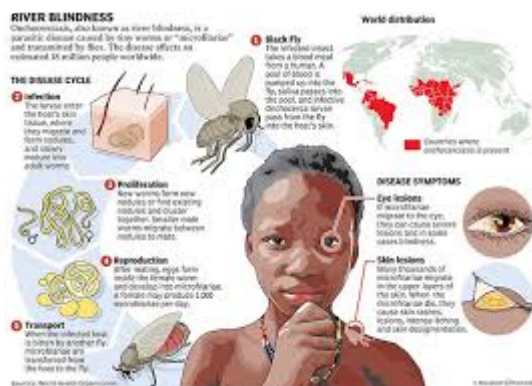
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## Context

- Niger has been officially declared by its government and **verified by the World Health Organization (WHO)** as the **first African country to eliminate onchocerciasis**, also known as **river blindness**.
- This achievement marks a significant public health milestone in the fight against **neglected tropical diseases (NTDs)** in Africa.

## What is Onchocerciasis?

- **Cause:** Parasitic infection by the **filarial worm Onchocerca volvulus**.
- **Transmission:** By **infected Simulium blackflies**, which breed near **fast-flowing rivers and streams**.
- **Endemic Regions:** Over **99% of cases** occur in **sub-Saharan Africa** and **Yemen**; small pockets exist in **Brazil–Venezuela border**.
- **Significance:** Second leading **infectious cause of blindness**, after trachoma.



## Key Features

### 1 Pathology

- oChronic infection with microfilariae causes **intense inflammation**.
- oLeads to **severe itching, disfiguring skin changes** (“leopard skin”), and **progressive eye damage**.
- oAdult worms live **10–15 years**, necessitating **long-term treatment**.

### 2 Symptoms

- o**Skin:** Itching, rashes, thickening, depigmentation
- o**Eyes:** Lesions, impaired vision, potential **permanent blindness**
- o**Nodules:** Firm subcutaneous lumps containing adult worms

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o**Children:** Early infection linked to **epilepsy** in some regions

### 3Community Impact

oBlindness and disfigurement reduce **productivity**, increase **poverty risk**, and affect **quality of life**.

### Treatment

- **Ivermectin (Mectizan):**
- Administered **once or twice yearly** for 10–15 years to interrupt transmission.
- Mass drug administration and vector control programs are crucial for **elimination**.

### Significance of Niger's Achievement

- **Public Health Milestone:** First African country to eliminate river blindness.
- **Global NTD Goals:** Supports WHO's **neglected tropical disease roadmap**.
- **Model for Other Endemic Countries:** Demonstrates effectiveness of **mass drug administration, community engagement, and surveillance**.