

## Loa Loa

Loa loa is a nematode, or roundworm, that is also known as the "eye worm."  
Infection, which occurs through a fly bite, leads to Loa loa filariasis, a disease causing Calabar swellings in the joints, and eye swelling when it infiltrates the conjunctiva.  
Preferred treatment consists of diethylcarbamazine (DEC) or albendazole.



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### Pathophysiology

#### Nematode (Roundworm)

##### Knee-toad with Roundworms

Loa loa is a filarial nematode, or roundworm. It is known for causing subcutaneous filariasis in infected patients.

#### Fly Bite

##### Fly Biting

Loa loa uses flies as a vector. When an infected fly bites a human, Loa loa larvae penetrate the subcutaneous tissue and are able to cause disease.

#### Calabar Swellings in Skin

##### Calamari causing Swelling on Skin-suit man

This parasitic worm travels through subcutaneous tissue, leading to inflammation wherever it goes. When the parasite stops for a short period of time, local inflammation, known as Calabar swelling, occurs. This typically presents as localized, tense, inflammatory edema in the joints for 1-3 days.

#### Conjunctiva

##### Convict-eye

This roundworm can travel through and infect the eye, causing eye swelling. The worm can often be seen when it enters the eye, as it moves subcutaneously in the conjunctiva.

### Treatment

#### Diethylcarbamazine (DEC)

##### Devil-car

Diethylcarbamazine (DEC) is the treatment of choice for microfilariae and adult worms. Surgical removal of the worms can also be done. Patients with serious or heavy infections may experience brain inflammation after treatment with DEC. Ivermectin is another medicine that is sometimes used against loa loa, but also has a high risk of causing encephalitis and therefore is not preferred.

#### Albendazole

##### Abe-Bond

Albendazole is sometimes used after multiple treatments with diethylcarbamazine (DEC). It works to cause death in adult loa loa worms, but not in microfilariae. This drug has less side effects than DEC.