To start the cycle, an infected female Anopheles mosquito injects sporozoites into the skin while feeding.

Repeated cycles cause illness and potential death if not treated.

Sporozoites enter the bloodstream and are carried to the liver, where they infect liver cells.

Within liver cells, the parasites develop into schizonts.

The schizonts rupture, releasing thousands of individual merozoites into the bloodstream.

In some malaria species, parasites remain in the liver, causing relapses.

The merozoites infect red blood cells.

The male gamete fuses with the female gamete producing a zygote.

The zygotes elongate into ookinetes which move through the stomach wall.

The ookinetes develop into oocysts.

The oocysts grow and rupture, releasing sporozoites.

The sporozoites migrate to the salivary glands, ready to be injected and renew the cycle.

Some parasites change into male and female forms called gametocytes.

When the mosquito feeds, gametocytes are ingested into its stomach.

The gametocytes emerge from the infected blood cells, becoming gametes.

The male gamete fuses with the female gamete producing a zygote.

The zygotes elongate into ookinetes which move through the stomach wall.

The ookinetes develop into oocysts.

The oocysts grow and rupture, releasing sporozoites.

The sporozoites migrate to the salivary glands, ready to be injected and renew the cycle.

The Life Cycle of Malaria

MOSQUITO STAGES
(7-10 days)

1. To start the cycle, an infected female Anopheles mosquito injects sporozoites into the skin while feeding.

2. Sporozoites enter the bloodstream and are carried to the liver, where they infect liver cells.

3. Within liver cells, the parasites develop into schizonts.

4. The schizonts rupture, releasing thousands of individual merozoites into the bloodstream.

5. In some malaria species, parasites remain in the liver, causing relapses.

6. The merozoites infect red blood cells.

7. When the mosquito feeds, gametocytes are ingested into its stomach.

8. The gametocytes emerge from the infected blood cells, becoming gametes.

9. The male gamete fuses with the female gamete producing a zygote.

10. The zygotes elongate into ookinetes which move through the stomach wall.

11. The ookinetes develop into oocysts.

12. The oocysts grow and rupture, releasing sporozoites.

13. The sporozoites migrate to the salivary glands, ready to be injected and renew the cycle.

HUMAN LIVER STAGES
(About 2 weeks)

In some malaria species, parasites remain in the liver, causing relapses.

HUMAN BLOOD STAGES
CAUSE ILLNESS
(2-3 day cycles)

Repeated cycles cause illness and potential death if not treated.

Another mosquito becomes infected, continuing the cycle.

The sporozoites migrate to the salivary glands, ready to be injected and renew the cycle.

The Carter Center / Graphic by Al Granberg