

What you need to know about Malaria



Earliest recording of malaria

Malaria has been with us for thousands of years. It's description, as deadly periodic fevers, was inscribed on clay tablets from Mesopotamia that date back to 2000 BCE. The malaria antigen (toxin or other foreign substance that brings about an immune response in the body) was found on Egyptian remains that dated as far back as 3200 BCE, and was mentioned in Indian literature in 1500 BCE (Arrow et al., 2004).



Malaria has taken the lives of between 150 and 300 million people in the 20th century alone (Arrow et al., 2004). It stubbornly remains one of the most prevalent health challenges in the world, particularly in sub-Saharan Africa.

Malaria around the world

In 2020, 241 million people across 85 countries contracted malaria – 14 million more than in 2019. Most cases of malaria occurred in Africa. (WHO, 2021a)

In 2021 only 29 of 85 countries globally accounted for 96% of malaria cases. (WHO, 2021a)

Malaria is most prevalent in sub-Saharan Africa with lower incident rates in the Caribbean, Southeast Asia, Oceania, the Middle East and parts of Central and South America.

Countries are certified as malaria-free when they can demonstrate with credible evidence that there have been no cases of indigenous (infection at source) malaria transmission by the Anopheles mosquito for three consecutive years. (WHO, 2021b)

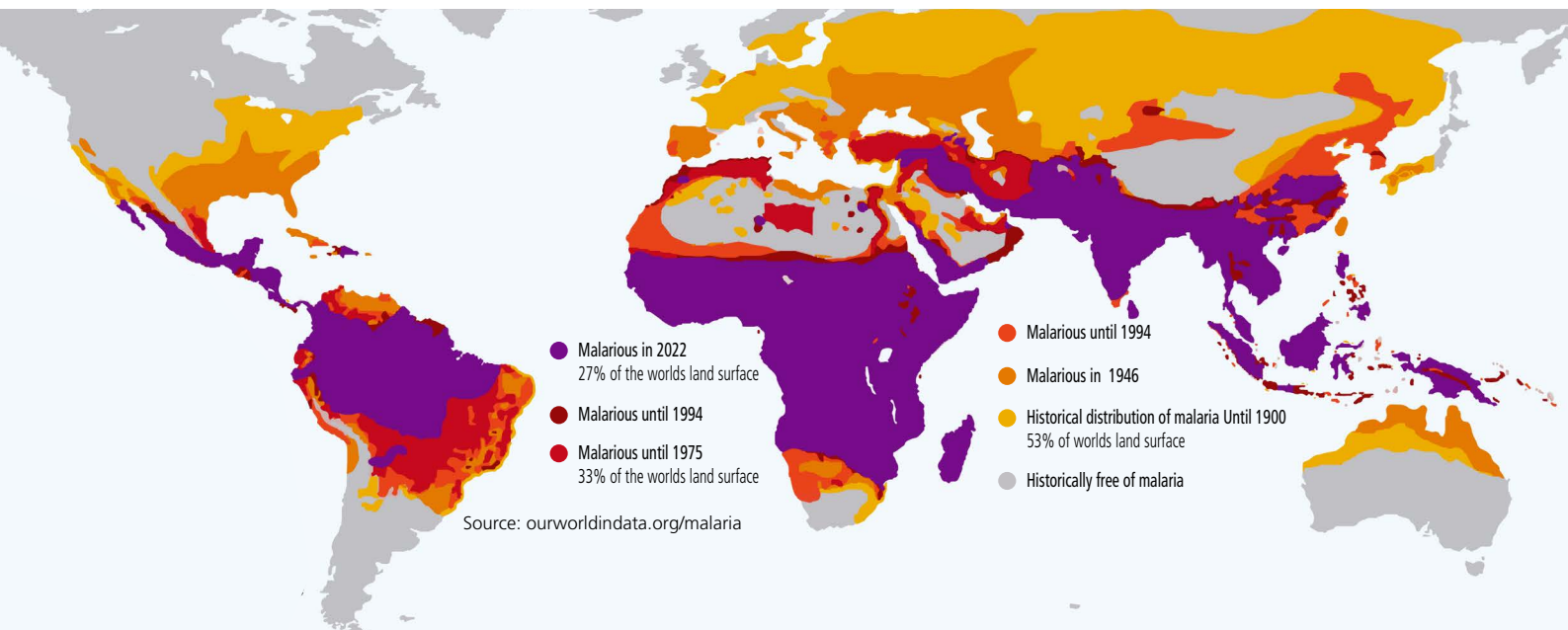


Unsafe drinking water

PHOTO CREDIT: © PIERRE HOLTZ | UNICEF

The World Health Organization (WHO) has recognised 40 countries as malaria-free, including China and El Salvador in 2021, Algeria and Argentina in 2019, Paraguay and Uzbekistan in 2018 and Europe in 2016; with Australia receiving this recognition in 1981, Singapore in 1982 and Brunei in 1987. (WHO, 2021b)

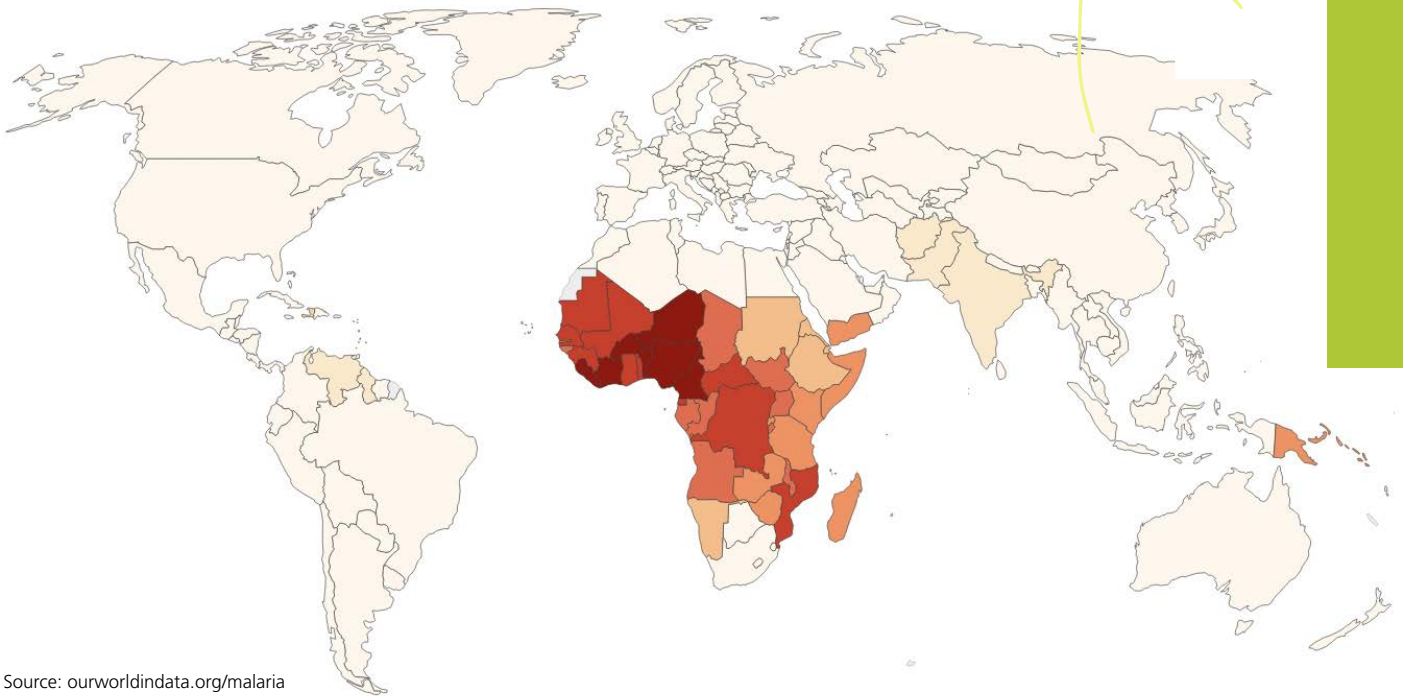
Malaria was prevalent in many parts of the world that are free of malaria today





Malaria in Africa

2019 death rate from malaria per 100 000 people

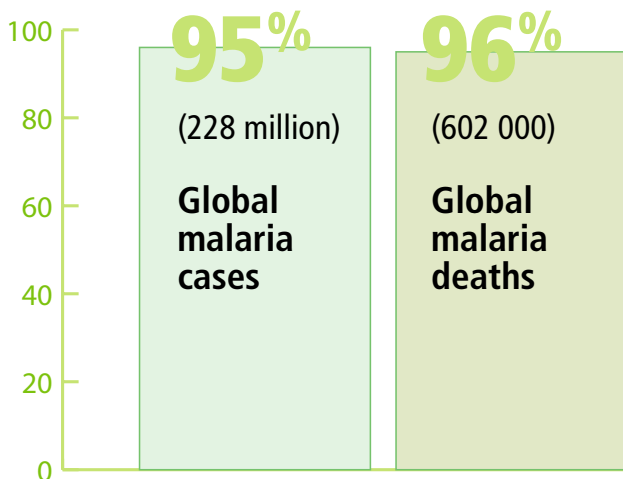


Source: ourworldindata.org/malaria

Millions of dollars are poured into **malaria research** and **interventions** in Africa, yet Africa still bears the brunt of malaria infections.

- Disruptions to health services by COVID-19 lockdowns contributed to the increase in cases from 222 to 232 cases per 1 000 people in Africa (WHO, 2021a)
- About 80% of those who died were children under the age of five (WHO, 2021a); who were too young to have developed partial immunity (CDC, 2020)
- Incidences of malaria are concentrated in six sub-Saharan countries, which account for 55% of global cases (WHO, 2021a)

In 2020 Africa accounted for;



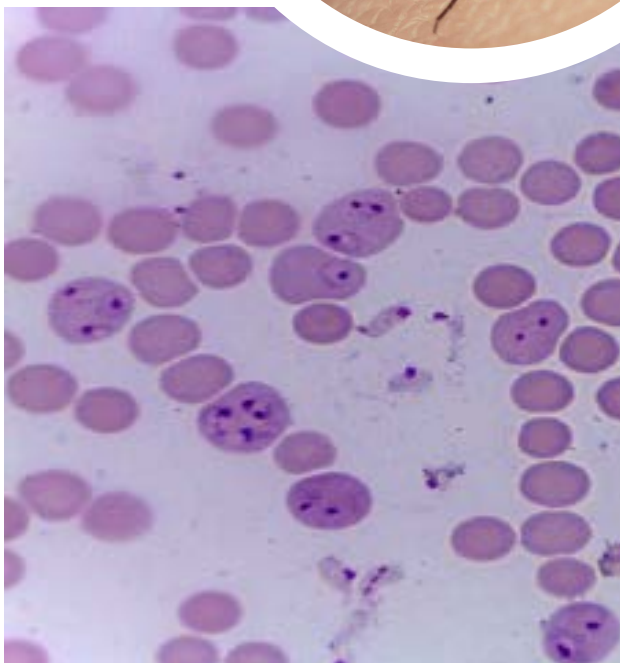
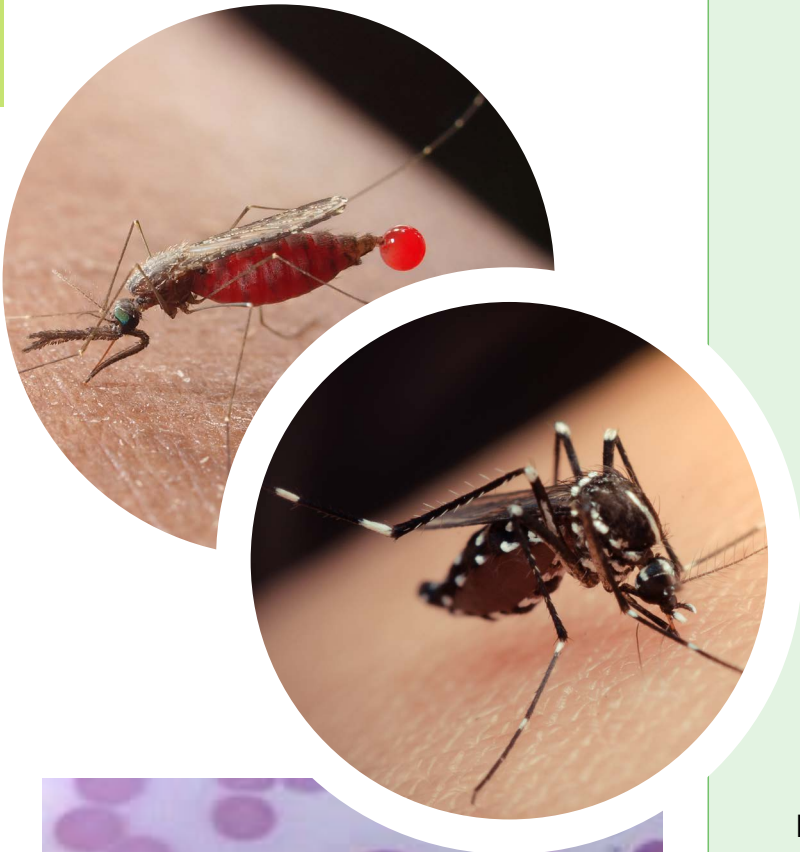
Source: (WHO, 2021a)

Sub-Saharan countries that accounted for 55% of malaria cases globally in 2020

Country	Cases	Deaths
Nigeria	26.8%	31.9%
Democratic Republic of Congo	12%	13.2%
Uganda	5.4%	3.5%
Mozambique	4.2%	3.8%
Angola	3.4%	2.6%
Burkina Faso	3.4%	3.2%
Total	55.2%	58.2%

How malaria is contracted

Malaria is carried by female Anopheles mosquitoes that have been infected by Plasmodium parasites (WHO, 2021a). The mosquito can transmit malaria if it is infected by the Plasmodium parasite or if it bites someone with malaria, becomes infected, and then bites someone else.



Plasmodium falciparum

156

**Plasmodium
parasite species**



5

**can cause malaria
in humans**



2

**pose a
serious risk**



**P. falciparum
and P. vivax**



Plasmodium falciparum

Plasmodium falciparum causes severe malaria and is the deadliest and the most prevalent worldwide (WHO, 2021a; CDC, 2020)



Of the ± 460 Anopheles mosquito species, ± 70 transmit P. falciparum malaria (Sinka et al., 2010)



Anopheles gambiae, which is a common mosquito species in Africa can transmit up to 100 P. falciparum spores in a single bite. (Beier et al., 1991)

Breeding patterns of malaria-carrying mosquitoes

Depend on 3 factors



Temperature



Rainfall



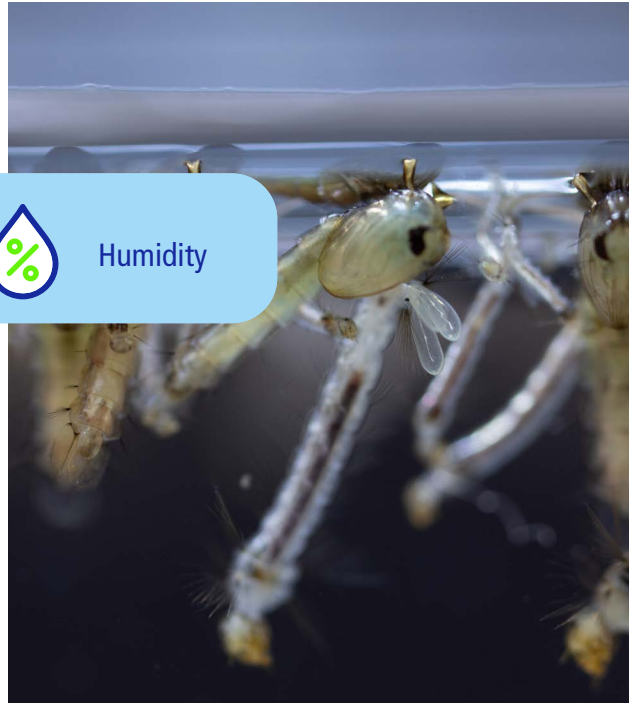
Humidity



Malaria is seasonal in countries with distinctly different temperature and rainfall ranges during summer and winter.



Malaria is perennial in countries that experience year-round relatively high temperatures and humidity. (Mattah et al., 2017)



Breeding conditions in sub-Saharan Africa's tropical and subtropical climates are often favourable for *Anopheles gambiae* year-round. (CDC, 2020)

Mosquitoes need water to breed; some lay their eggs in water bodies and others in places where water collects. (Mattah et al., 2017)

Factors that encourage breeding

Insufficient and ineffective funding of public health care and facilities, and lack of access to basic services such as clean water and sanitation, encourages the breeding of malaria-carrying mosquitoes (CDC, 2020).

Access to effective health care and essential services are critically important interventions to eradicate malaria. In 2016, when the WHO gave Europe its malaria-free status, it was noted that political and financial commitment had made a huge contribution to eradicating the disease (Rimler, 2016). This commitment included strengthening public health infrastructure and taking measures to eliminate favourable conditions for mosquito breeding (Rimler, 2016), by ensuring that everyone had access to basic clean water and sanitation services (Díaz, 2019).



PHOTO CREDIT: ©MARIA CIERNA, SLOVAK REPUBLIC/UNDP

A mother and child recover from malaria in a hospital in Burundi

**Malaria
is both**

**a cause
and an outcome
of poverty**

(African Union (AU) and the New Partnership for Africa's Development's (NEPAD) High Level Panel of Experts)

Direct costs of malaria
= $\pm 1.3\%$ of Africa's
gross domestic product
(GDP) = US\$12 billion

More recently,
countries affected by
malaria have up to
five times lower GDP

(AU and NEPAD, 2018)

Despite these findings, the AU takes a narrow view, failing to discuss or take into account the root cause for malaria and drivers of poverty in these countries. It also strongly supports the release of genetically modified and gene drive mosquitoes in Africa.



Find out more

Fact Sheets

Malaria: What drives it?

Current and false solutions to the malaria challenge in Africa

Briefing Paper

The financialisation of malaria in Africa: Burkina Faso, rogue capital & GM/gene drive mosquitoes

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