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Guinea Worm Disease Reaches All-Time Low: Only 13* Human Cases Reported in 2022

Jan. 24, 2023



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- **Provisional figure marks a 13% reduction from record low reported in 2021**
- **Infections in animals, key to eradication, decline 21% from previous year**
- **Democratic Republic of the Congo certified as free of Guinea worm**
- **'We are heartened that eradication can be achieved soon,' former President Carter says**

ATLANTA (Tuesday, January 24, 2023) — Only 13 human cases of Guinea worm disease were reported worldwide in 2022, pushing the disease closer to eradication, The Carter Center announced Tuesday.

The provisional figure is the lowest annual case total ever reported. When The Carter Center assumed leadership of the global Guinea Worm Eradication Program in 1986, about 3.5 million human cases occurred annually in 21 countries in Africa and Asia.

The record low case count delighted former U.S. President Jimmy Carter, who co-founded [The Carter Center](#) in 1982 with his wife, former First Lady Rosalynn Carter.

“Rosalynn and I are pleased with this continued advance toward eradicating Guinea worm disease,” President Carter said. “Our partners, especially those in the affected villages, work with us daily to rid the

world of this scourge. We are heartened that eradication can be achieved soon.”

The 13* cases in 2022 mark a 13% decline from 2021, when 15 cases were reported. (*All figures are provisional until officially confirmed, typically in March.) Guinea worm is poised to become the second human disease in history to be eradicated, following smallpox, and the first without a medicine or vaccine. Community-based and innovative behavior change and local mobilization are the key drivers of success.

[Guinea Worm Eradication Program](#) Director Adam Weiss said: “We continue to study ways to defeat and prevent this infection. Community members, ministries of health, and our partners are working with us to implement interventions that are effective, including research to find innovative solutions. We won’t stop until the last Guinea worm is gone.”

Case and Infection Numbers by Country

During 2022, six human cases of Guinea worm disease were reported in Chad. Five human cases were reported in South Sudan, one in Ethiopia, and one in the Central African Republic, which remains under investigation (cases can be imported from endemic to non-endemic countries).

Guinea worm infections in animals were down 21%: Chad reported infections in 605 animals, Mali reported 41, Cameroon 27, Angola seven, Ethiopia three, and South Sudan one. The worms that infect animals are the same species (*D. medinensis*) as those that infect humans; therefore, eradication requires stopping infections in both. Case and infection details can be found in the latest issue of the CDC-WHO-Carter Center publication [Guinea Worm Wrap-Up](#).

Summit Energizes Campaign

At a March 2022 summit hosted by The Carter Center and the United Arab Emirates’ Reaching the Last Mile and in collaboration with the World Health Organization, representatives of impacted countries and organizations renewed their commitment to eradicating Guinea worm disease by 2030. They signed the [Abu Dhabi Declaration on the Eradication of Guinea Worm Disease](#), pledging to commit resources, energy, and policy initiatives to make Guinea worm only the second human disease ever to be eradicated, after smallpox in 1980.

Following the summit, the Democratic Republic of the Congo sought and received certification from the World Health Organization that it had eliminated Guinea worm disease. The DRC had not reported a case of the disease since 1958.

Learn more about outcomes from the summit: [Blog | Abu Dhabi Summit Energizes Guinea Worm Campaign \(cartercenter.org\)](#)

With the certification of the DRC, the WHO has now certified 200 countries, areas, and territories, including 188 WHO member states, as free of dracunculiasis transmission. Globally, only six countries

remain to be certified, including five endemic countries (Angola, Chad, Ethiopia, Mali, South Sudan) and one formerly endemic country (Sudan, which is now in the precertification stage).

“I am glad to start my new position with such good news,” Dr. Ibrahima Socé Fall, the newly appointed director of the WHO’s Department of Control of Neglected Tropical Diseases, said in a press release in December. “We now need to focus on certification of Sudan as the next milestone on the way towards global eradication of Guinea worm disease.”

Guinea Worm is a Neglected Tropical Disease

The Carter Center announcement comes in advance of the fourth annual [World Neglected Tropical Diseases Day](#), this Monday, Jan. 30. Neglected tropical diseases (NTDs) are a group of 20 preventable and treatable diseases, including Guinea worm, that affect more than 1.7 billion people around the world. NTDs cause disability and disfigurement, and some can be fatal. They create cycles of poverty and cost developing nations billions of dollars in direct costs and lost productivity. Since 1986, the Center has been a pioneer in the eradication, elimination, and better control of NTDs, including Guinea worm, river blindness, trachoma, and lymphatic filariasis.

World NTD Day, conceived by the UAE, is described as a catalyst to translate awareness into action, secure increased resources for NTDs, facilitate political leadership and ownership of NTD programs in affected countries, and measure progress of the WHO-endorsed [2030 NTD Road Map](#). Hundreds of partners mark World NTD Day, promoting action to #BeatNTDs.

Community Involvement

Community and family members in endemic places are responsible for the day-to-day work of maintaining community awareness and education about Guinea worm, along with monitoring for infections, filtering drinking water, and protecting water sources from contamination.

“Committed communities are the key ingredient to making this program work,” said Dr. Kashef Ijaz, vice president of Carter Center health programs. “There is no medicine or vaccine for Guinea worm, so success depends on people in every household taking diligent care to filter their water and do the other things needed to prevent infection.”

People in endemic countries helpfully reported hundreds of thousands of possible Guinea worms in 2022, and health workers promptly investigated all such rumors, which are key to finding actual cases and infections.

“It’s vitally important that every rumor be investigated promptly,” said Dr. Donald R. Hopkins, the Carter Center’s special advisor for Guinea worm eradication. “Almost all reports turn out to be something else, but we must be sure in order to prevent water sources from becoming contaminated and putting more

people at risk. Community members are this program's eyes and ears in the villages.”

About Guinea Worm Disease

Guinea worm disease is usually contracted when people consume water contaminated with tiny crustaceans (called copepods) that eat Guinea worm (*Dracunculus medinensis*) larvae. The larvae develop into adults within the human host. After about a year, a meter-long pregnant female worm emerges slowly through a painful blister in the skin, often of the legs or feet. A sufferer may seek relief by dipping the affected limb in water. However, contact with water stimulates the emerging worm to release its larvae and start the cycle anew. Guinea worm disease incapacitates people for weeks or months, reducing individuals' ability to care for themselves, work, grow food for their families, or attend school.

Robust Research Agenda and Guinea Worm Interventions

Without a vaccine or medicine, the ancient parasitic disease is being eradicated mainly through community-based interventions to educate people and change their behavior.

Tethering dogs to keep them out of water and not allowing them to eat potentially contaminated fish entrails are key factors in improving Guinea worm infection figures in animals, particularly in Chad and Ethiopia. Those who catch, sell, and consume fish and other aquatic animals are encouraged to burn or bury discarded entrails to keep dogs from consuming Guinea worm-contaminated copepods the entrails might contain.

Other interventions to stop transmission include community-based health education, the use of filters (donated by Vestergaard's LifeStraw[®]) for all drinking water, prevention of people and animals with emerging Guinea worms from entering water sources, and targeted use of the larvicide ABATE[®] (donated by BASF) in stagnant water sources. To boost surveillance, all endemic countries offer cash rewards for reporting potential cases and animal infections.

Scientists from the countries, The Carter Center, and other institutions continue to conduct intensive research and trial of new interventions in the quest to eradicate the disease.

Eradication a Monumental Challenge

Eradication means a disease has been eliminated worldwide, with no natural possibility of return. The final cases are most challenging, requiring persistence, ingenuity, and enormous amounts of resources to operate in difficult, remote, and often insecure areas. Only one human disease has ever been eradicated; that was smallpox, in 1980. For a disease to be declared eradicated, every country in the world must be certified free of human and animal infection, even countries where transmission is never known to have taken place. To date, the WHO has certified 200 countries free of Guinea worm; only six have not been certified. After three consecutive years of indigenous transmission, Angola was added to the list of endemic countries in 2020; however, the country reported zero human infections in 2021 and

2022. Cameroon was certified by the WHO as Guinea worm-free in 2007; that country reported one case in 2019 and one in 2020 (both likely imported from Chad) but is not endemic because it has not had three years of indigenous transmission. The Democratic Republic of the Congo was certified in 2022; it had not reported a case since the 1950s.

Key Implementing Partners' Roles

The Carter Center works closely with national ministries of health, the WHO, the U.S. Centers for Disease Control and Prevention (CDC), UNICEF, and many other vital partners. The Carter Center provides technical and financial assistance to national Guinea worm programs to help interrupt transmission of the disease. For remaining endemic countries, when transmission is interrupted, the Center continues assisting surveillance and helps them prepare for official evaluation by the International Commission for the Certification of Dracunculiasis Eradication and certification by the WHO. The WHO also provides technical and financial support to improve surveillance, particularly in cross-border areas, including countries that have already been certified to help them maintain Guinea worm-free status. The CDC provides technical assistance and verifies that worm specimens truly are Guinea worms.

Partnerships

Many generous foundations, corporations, governments, and individuals have made the work to eradicate Guinea worm disease possible, including major support from the Bill & Melinda Gates Foundation; the United Kingdom's Foreign, Commonwealth & Development Office; the Children's Investment Fund Foundation; John and Kathleen Schreiber; and Alwaleed Philanthropies. Major support from the United Arab Emirates began with His Highness Sheikh Zayed bin Sultan Al Nahyan, founder of the UAE, continued under His Highness the late Sheikh Khalifa bin Zayed Al Nahyan, and has grown under His Highness Sheikh Mohamed bin Zayed Al Nahyan, president of the UAE, through his Reaching the Last Mile (RLM) initiative. BASF has donated ABATE[®] larvicide (temephos) since 1990, and Vestergaard's LifeStraw[®] has donated personal pipe filters and household cloth filters since 1999. The DuPont Corporation and Precision Fabrics Group donated nylon filter cloth early in the campaign. The government of Japan has supported the Guinea Worm Eradication Program since 1992 and recently awarded it the Hideyo Noguchi Africa Prize in appreciation of the campaign.

Guinea Worm Eradication Challenge Fund Extended

In its first three years, the Carter Center's Challenge Fund for Guinea Worm Eradication — which matches, dollar for dollar, new funds raised for the Guinea Worm Eradication Program — has brought together diverse funding partners with contributions totaling over \$14 million. In July 2022, the Challenge Fund was extended for a fourth year, availing \$10 million of new Carter Center matching funds for new support from partners granting \$100,000 or more.

Translations

[La dracunculose tombe à un niveau le plus bas : seulement 13* cas humains signalés en 2022](#)

[A doença do verme da guiné atinge o nível histórico mais baixo: Apenas 13* Casos Humanos Relatados em 2022](#)

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Contact: Emily Staub, Emily.Staub@CarterCenter.org

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One Copenhill | 453 John Lewis Freedom Parkway NE | Atlanta, GA 30307
(404) 420-5100 | info@cartercenter.org
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