

IMPORTING PRIMATES BRINGS DISEASE RISKS TO HUMANS

Imported primates pose three major biosecurity risks: They can amplify antibiotic resistance, carry infections that evade detection during quarantine, and introduce dangerous pathogens into the U.S.



Drug Resistance Is Being Amplified

Primates in breeding and research facilities are often repeatedly dosed with antibiotics in an attempt to control chronic diarrhea and other bacterial infections. Over time, this process selects for bacteria resistant to antibiotics that physicians rely on to treat serious infections in humans, including drugs that the World Health Organization classifies as “critically important” for human medicine. These antibiotic-resistant bacteria can then spread among animals and workers.

Imported primates are introducing antibiotic-resistant bacteria into the U.S.

- Imported macaques commonly carry *Shigella*, a bacterium that naturally infects humans and other primates. Antibiotic-resistant strains have been documented in laboratory primates, while surveillance by the Centers for Disease Control and Prevention (CDC) shows that extensively drug-resistant (XDR) *Shigella* infections in humans continue to rise. No oral treatment approved by the U.S. Food and Drug Administration is available for XDR *Shigella* infections.
- One of the rarest antibiotic-resistant bacteria ever identified in the U.S., vancomycin-resistant *Staphylococcus aureus* (VRSA), was detected in a national primate center in 2023. The original source was macaques imported from Mauritius.

Infections Are Routine and Often Missed

Imported primates frequently carry infectious diseases that escape detection during CDC-mandated quarantine. Many pathogens remain latent or asymptomatic, allowing infected animals to pass through screening, enter research facilities, and expose workers before infection is recognized.

Tuberculosis (TB), which remains the world’s deadliest disease, illustrates this failure.

- Monkeys from Asian and African facilities have repeatedly passed importer screening requirements and later developed active TB.
- Latent infection allows animals to test negative during quarantine while still carrying the disease.
- Once active disease develops, exposure has already occurred.



High-Consequence Pathogens Are Entering the U.S.

Imported primates continue to introduce pathogens with the potential to cause severe or fatal disease in humans, including pathogens classified among the highest biological threats because of their lethality and potential use in bioterrorism.

Herpes B virus, which can cause fatal infection in humans, has been identified in imported macaques entering the U.S.

- Macaques naturally carry the virus, usually without showing signs of illness.
- Infected monkeys can shed the virus unpredictably through saliva, blood, urine, and feces, creating opportunities for workers to be exposed.

Melioidosis, caused by the Tier 1 Select Agent *Burkholderia pseudomallei*, has entered the U.S. through imported primates.

- Nearly 60% of monkeys imported into the U.S. originate from regions where the bacterium is endemic.
- Infected monkeys can carry and shed the bacteria into the environment before developing clinical signs.

BEFORE QUARANTINE

Public Exposure (Pennsylvania, 2022)

Exposure can occur before monkeys reach quarantine. In 2022, a truck carrying 100 newly imported monkeys from Mauritius crashed in Pennsylvania and some monkeys escaped. A member of the public who stopped to help came into contact with a monkey's saliva and later required treatment for exposure to Herpes B. This case demonstrates that the public can be exposed during routine transport, before infection risks are fully known.

DURING QUARANTINE

Melioidosis Cases (2021)

Shipments of macaques imported from Cambodia to Texas were linked to multiple cases of melioidosis. While one infected macaque was identified during CDC-mandated quarantine, other infected animals passed screening and were released. Additional cases were discovered months later, demonstrating that infected macaques may appear healthy and that quarantine testing can miss infected animals.

AFTER QUARANTINE

TB Infection Led to Worker Exposure (Michigan, 2023)

Four wild-caught macaques imported from Mauritius passed TB screening, which consists of three negative tests during CDC-mandated quarantine. The animals were then transported from Florida to Northern Biomedical Research in Michigan. Months later, they developed active TB and two laboratory staff members were exposed and infected.