

# Louseborne Relapsing Fever in Europe

[Announcer] This program is presented by the Centers for Disease Control and Prevention.

[Peter Drotman] Hello, this is Dr. Peter Drotman, editor-in-chief of the Emerging Infectious Diseases Journal. Today I'm talking with Dr. David O. Freedman, who is an associate editor of EID and he is also Professor of Medicine and Epidemiology at the University of Alabama at Birmingham, where he is director of the UAB Traveler's Health Clinic. And we'll be discussing two reports of louseborne relapsing fever, both of which are in EID. The first is in the January 2016 issue and it's entitled *Louseborne Relapsing Fever in Young Migrants, Sicily, Italy, July-September 2015*, and the other is in the February 2016 issue, titled *Louseborne Relapsing Fever among East African Refugees, Italy 2015*. Welcome, David.

[David O. Freedman] Thanks for having me today, Peter.

[Peter Drotman] So let's start with the basics. So, what is louseborne relapsing fever, how is it spread, what is the vector?

[David O. Freedman] The louseborne relapsing fever is quite an old disease, and was actually quite prevalent in Europe, especially after World War I and World War II because it is transmitted by body louse, so the lice get infected, and the lice jump from person to person and when they bite a new person, the *Borellia* bacteria—*Borellia recurrentis*—which is the agent, this is a spirochete, like a number of other organisms that we know, such as Lyme disease, etc. are also caused by spirochetes, and these spirochetes get in the blood, so it's a systemic infection spread through the body and cause a clinical illness with quite a high fever, can have neurologic symptoms, can have a rash with it as well.

[Peter Drotman] So you said that this was a problem in Europe during the war years, both World War I, I believe, World War II, as well. But apparently it came under control. Where has the disease been for the last fifty years?

[David O. Freedman] Yes, there are small foci around the world, but really the main problem, and speaks to the papers that have just been published in EID, the main problems have been in the horn of Africa, and so really Ethiopia, Somalia, Eritrea have been the foci and have had quite high rates of this disease, which presents—I didn't mention earlier—with, it's called relapsing fever because you get a high fever, and then it goes away for a day or two, and comes back again as a high fever. And really, what's happened here in the events reported in the journal is that the migrants that are now coming, as we all know in large numbers in Europe, many of them are coming from the horn of Africa. They're following a route from the horn of Africa through Kenya, through Uganda, through Libya, and then they are in coming in boats, as we've seen, to Italy. So the main hopping-off point to Europe for this groups of migrants from the horn of Africa is to either Sicily or an island called Lampedusa, which is the closest point in Europe to Africa and actually belongs to Italy, so once you make it to Lampedusa, you're within the European Union, and this is the focus of the reports that have appeared in the EID journal.

[Peter Drotman] So how big of a public health concern is this?

[David O. Freedman] I think for the migrants, it's quite a public health concern. Up until now, at European centers, 27 to 30 cases have been reported, and as more migrants come, it's going to continue to be transmitted amongst the migrants. They are infecting each other, in fact, on the way, either in refugee camps in Libya on the way or in the very, very crowded conditions they're now living in in Europe. In many cases some of these refugees are still—are living in tent camps in parts of Europe or in very, very crowded apartment buildings and dwellings in Europe, so you can see if it's a louseborne disease, that it's very easy if you're sleeping ten or twenty to a room, to transmit it one to the other. It is a disease of sanitation, however, and I think that the average member of the population in Europe is at no risk, and that's really the focus of all the assessments so far, so you know, unless you get near enough to have close physical contact with somebody that is carrying body lice, there's really no risk, and even if somebody is out in the community, as I said, you really have to have pretty close contact with them in order to get infected. So, public health risk to the general population of Europe is really minimal to none.

[Peter Drotman] But it would seem to have been of enough concern that the European Center for Disease Control, based up in Stockholm, has recently issued a report on this.

[David O. Freedman] Yes, the ECDC in Stockholm produces rapid risk assessments, really on any current concern that might be out there in Europe and of course the publicity with these cases have been generating were enough to do in this case. So I think this is more of a report of reassurance, but also to remind public health officials and clinicians within Europe to make the diagnosis properly in these individuals. Very easy to treat, a single dose of doxycycline will treat this so it's a shame for somebody to suffer-- have adverse outcomes for lack of treatment. You know, I think the other issue that was highlighted in the report appearing in the February issue is that there has been local transmission and this is the first time local transmission was reported within Europe, probably in decades. But again, the local transmission meant that several occupants of one of these very crowded apartment buildings that the refugees are going to—this occurred in Turin, Italy—two of the occupants of the building who had not been back in Africa—part of a refugee community—but had not been back in Africa themselves in four years came down with relapsing fever, clearly brought in, you know, with the lice of the new arrivals that were being crowded into this particular building.

[Peter Drotman] So with the observation that this has moved from refugee camp and adverse conditions in Africa to Europe, do we need to be concerned here in North America?

[David O. Freedman] I wouldn't think so, we are getting, of course, refugees from that part of the world, not as many from the horn of Africa as would be going to Europe, but really, it's a disease of sanitation and usually these folks, before they come to the U.S., are screened and even quarantined for a number of days. So this disease has an incubation period, so it's really unlikely that somebody would arrive with relapsing fever in the U.S. It could, of course, happen but

again, they would have to have their lice—not just they, but their lice—would have to have intimate contact with somebody else to infect them. I think the other thing to keep in mind is that the situation in Europe is that these folks are arriving on their own, on boats, over land, etc., from refugee camps. To get to the United States, they have to fly, and probably they are being prepared in a number of ways prior to their flights or are probably not going to be able to get on the plane together with their lice.

[Peter Drotman] Okay, that's somewhat reassuring, thank you for that news. And what, if anything, are the informations you're dispensing in your travel health clinic—in your daily practice?

[David O. Freedman] That's very interesting. For travelers going to the horn of Africa, it's been very well known how bad the lice problem is in the horn of Africa so we certainly tell folks to avoid close contact with people under unsanitary conditions. There's some evidence that a drug called Ivermectin, if you take it prophylactically, can actually prevent you from being infested with lice. There are also a number of powders that you can use to keep the lice off. That would really only be for refugee workers, though, people that would be working in camps, in places like Kenya, Somalia, Eritrea, not for your typical tourist travelers. As far as precautions for people traveling to Europe, really I don't think anything changes at all, and travelers to Europe, unless they are specifically going to be working with this population, really have nothing to be concerned about.

[Peter Drotman] Well, thank you David. Today I've been talking with Dr. David Freidman about articles reporting louseborne relapsing fever among recent refugees and migrants to Europe. You can read both of the reports online now at [cdc.gov/eid](http://cdc.gov/eid).

I'm Dr. Peter Drotman, editor-in-chief of Emerging Infectious Diseases.

*[Announcer] For the most accurate health information, visit [www.cdc.gov](http://www.cdc.gov) or call 1-800-CDC-INFO.*