

Can malaria be eradicated?

Video transcript

Can malaria be eliminated?

Oliver Billker

Can we eradicate malaria? Yes I think so but we, who's we, I can't do it, scientists can't do it on their own, it will require everyone to work together.

John Adams

Eradication of malaria is the goal we should all have. Getting there will be a long and difficult process.

Chris Plowe

I do think it's possible to eradicate malaria and that is the right goal, I think that's what we should be aiming for.

Julian Rayner

I think it's definitely possible to eradicate malaria. I think one shouldn't be in the malaria research business if you weren't actively trying to put yourself out of a job by eradicating this disease once and for all.

Martin Donnelly

I think the eradication of malaria is an admirable goal and I think it's really enthused the malaria control community so I think it's something really to aspire to.

Chris Plowe

Malaria used to be a big problem in Europe, all the way up into England. It used to be a problem in the United States, Washington DC was a terribly malarious area and even up into New England, New York, Massachusetts, there was a lot of malaria. It's now completely gone so we can eliminate malaria.

Why is eradication a challenge?

Chris Plowe

The challenge is the parts of the world where there's not a very strong healthcare system, where there's poverty, where there's civil unrest and with today's tools, which require a relatively intact healthcare system to diagnose malaria, to treat people, distribute bed nets, get people using nets, spraying homes - that can be done in a relatively stable place where you've got a decent economy that can support that kind of activity. Where you've got a healthcare system, people are coming to the clinic and being treated. In the central parts of Africa where there are civil wars, where there are hard to reach populations it's going to be very challenging and as long as you don't do it everywhere, the minute you

let off pressure where you have removed malaria it's going to come flowing back out from the areas where you haven't got it.

Julian Rayner

It's also challenging because malaria is not just a single disease. It's a disease caused by several different *Plasmodium* parasites and the way that we would be able to eliminate each of those parasites will all be slightly different. So if we boil down the question and say is it possible to eliminate *Plasmodium Falciparum*, which is the parasite species that causes all of the symptoms and pathology of malaria, again I think the answer is yes but the factor is that we don't yet have all the tools to do so. We don't have any effective way to block transmission of the parasite from humans to mosquitoes so that's one weapon in our arsenal that we definitely need. We don't have any effective vaccine and that's also definitely a weapon we need in our arsenal, we need a way to prevent malaria that doesn't rely on treating symptoms, treating the disease every time someone catches it.

Chris Plowe

If we had a really good vaccine, you could deliver in a single shot and it lasted for five years, that's something you can actually take into an area of some instability, you could send in teams of vaccinators. We have a lot of precedent for that we have eradicated Smallpox from the world by doing exactly that sort of thing. Where there were civil wars going on they declared a truce for Smallpox vaccination days, the teams would immunise people on both sides of the war and then got out and they started shooting again but now there is no more Smallpox and so if we had some amazing new tools, like new vaccines, like a drug you could deliver once and it would prevent malaria for a whole year, and that may sound like a crazy thing but in fact that has been tried. There is an injection of malaria drugs that was tested in the 1960's that prevented malaria for over a year and so with some new tools I actually think we do have a chance of eradicating malaria.

Will a vaccine be the solution?

Oliver Billker

I think we should not give up on that vaccine idea, because it would be a really, really powerful tool to have.

John Adams

A vaccine by itself is not going to work; a drug by itself will not work; bed nets alone will not work, draining marshy areas will not work, but the combination of those efforts, and sustained efforts is what is required to eventually eradicate malaria, but it's a goal which is an admirable goal and should be something which we strive for. How quickly we get there is an open question.

Stefan Kappe

I do not think you can eradicate malaria without a vaccine. No infectious disease has been eradicated without a vaccine; only vaccines have accomplished that. So I think all the other efforts to control malaria – you can control the mosquitoes with bed nets and you can protect people from getting bitten, you can spray insecticide. All this helps to control malaria, but it will never eradicate the disease and also

using drugs will never eradicate the disease, for the simple reason that most of the drugs kill the parasite when it is in the blood stream, but it doesn't necessarily prevent transmission between mosquitoes and humans and back to mosquitoes, so that's one of the reasons why I think we need a vaccine to eradicate the disease. So I'm not saying that only vaccines can eradicate, but there will be no eradication without an effective vaccine.

Chris Plowe

Every time we've had a success with elimination or eradication it's been with a vaccine as the primary tool. Now having said that there was a global eradication campaign attempted in the 1950's and 60's, ultimately it failed to eradicate malaria from the whole world but where it succeeded in eliminating malaria from countries and regions it was by using a combination of tools. We don't have a vaccine yet and we didn't then, but using spraying, using drug treatment, using drug prevention, using surveillance, using tracing people and going back and seeing who else in their family might be infected, so I think we need a vaccine and everything else if we're going to eradicate malaria.