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Mosquitoes bite, and some are bitten more often than others. The consequences of the zika epidemic affect women, and poor pregnant women are most severely affected

## Zika – more than just bad luck

In Uganda, mosquito-borne diseases are nothing new – in a lush forest called Zika, research on mosquito-borne viruses has been undertaken since the 1930s. In 1947, researchers isolated a flavivirus that was named after this forest (1). Zika means «overgrown» (2), and this virus has indeed existed in the shadows for nearly 70 years – until now.

In February 2016, the World Health Organization declared the zika epidemic to be a public health emergency of international concern, and it has been estimated that millions of new cases will occur if the virus continues to spread at the current rate (1). For a pregnant woman, a zika infection can be disastrous. Preliminary results from an ongoing study in Brazil indicate fetal abnormalities in nearly one-third of all pregnant women at an early stage of infection, including eye abnormalities, brain injuries and intrauterine death (3).

The health authorities in a number of South American countries have recommended women to delay pregnancy until 2018 (4). In this way, they invest individual women with the responsibility for avoiding the birth of further children with defects. Apparently, this responsibility is not shared by the potential fathers, since men are not encompassed by this call – even though the zika virus is also sexually transmitted (1).

Unfortunately, women in South America do not have sufficient control over their own fertility to be able to shoulder this responsibility alone. Around 23 million women in South America and the Caribbean have insufficient access to contraception (5). In Brazil one child in every five is born to a teenage girl (6), equivalent to more than half a million births each year. Only very few of these pregnancies are planned – in countries with poor welfare schemes, becoming a teenage mother is an extremely unfavourable prospect. The recommendations from the authorities are therefore unlikely to make much of a difference in terms of the number of pregnancies.

On the other hand, we may envisage a growing number of unsafe abortions. Abortion is illegal in large parts of South America. In Brazil, abortion carries a maximum penalty of 1–3 years' imprisonment, while El Salvador equates abortion with murder, and the woman risks a 30-year prison sentence (7). Few good-quality studies of abortion in South America are available, because of a significant likelihood of underreporting. The rate of unsafe abortions, however, was estimated in 2008 to be on a par with that of sub-

Saharan Africa, i.e. 31 per 1000 women of fertile age per year (8). The organisation Women on the Web sends abortion-inducing drugs by mail to women who have been infected by the zika virus, but in Brazil these shipments are now being stopped (9). The women are left with even less safe alternatives.

Unsafe abortions may lead to complications, including death (7). The rate of complications is higher among women in the lower social strata, consistent with the fact that their abortions are more frequently performed by non-doctors (10). Unfortunately, poor pregnant women also face a greater risk of infection by the zika virus: the authorities recommend covering the entire body with clothing, eliminating water puddles, using mosquito repellents and preferably staying at altitudes above 2 200 metres. Some can walk from their cool house to their cool car and drive up to a relative living at a higher altitude. Others must stay in the slums, where mosquitoes thrive. Where garbage is not collected, many water puddles form, and where there is no air conditioning, there is a lot of exposed skin.

The situation of women in South America is not entirely different from the situation of women in the USA and Europe during the rubella epidemic in the 1960s (11). Before the introduction of the vaccine in 1978, rubella was a dread disease for pregnant women. Deaf-blindness, mental retardation and microcephaly could result if the mother was infected during her first trimester. The rubella epidemic in 1964–65 started in Europe and spread to the USA. It came in the wake of the thalidomide scandal, and there was already an increased awareness of fetal abnormalities. The rubella epidemic struck white, middle-class nuclear families, and resourceful families were able to find doctors who were willing to perform an abortion, although this was illegal at the time (12). This also came to have an impact on the ongoing debate over the abortion issue (13). Society accepted that if these women deemed themselves incapable of caring for a disabled child, they should not be forced to do so (14).

Whether or not this will happen in South America remains to be seen. For the time being, the women are left alone with the responsibility, including for the disabled children that are born. «Zika» is also a Brazilian slang term for bad luck or trouble (15). For the individual, that's exactly what it is – bad luck. At the general level, however, this bad luck has been systemised.

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