

# Researchers see link between hunter-gatherer cannabis use, fewer parasites

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Washington State University researchers have found that the more hunter-gatherers smoke cannabis, the less they are infected by intestinal worms. The link suggests that they may unconsciously be, in effect, smoking medical marijuana.

Ed Hagen, a WSU Vancouver anthropologist, explored cannabis use among the Aka foragers to see if people away from the cultural and media influences of Western civilization might use plant toxins medicinally.

"In the same way we have a taste for salt, we might have a taste for psychoactive plant toxins, because these things kill parasites," he said.

In an earlier study, Hagen found that the heavier tobacco smokers among

the Aka also had fewer helminths, parasitic [intestinal worms](#).

He cautions, however, that the studies have their limits. While nicotine has been seen killing worms in livestock, that hasn't been directly demonstrated in humans. Cannabis kills worms in a petri dish, but researchers have not shown it killing worms in animals, Hagen said.

The Aka are a "pygmy" people of the Congo basin. As one of the world's last groups of hunter-gatherers, they offer anthropologists a window into a way of life accounting for some 99 percent of human history. They might also offer an alternative hypothesis to explain human drug use.

The prevailing explanation is that recreational drugs "hijack the pleasure centers of the brain," making people feel good. But they also trigger mechanisms that tell us we're consuming something toxic, tasting bitter and making us feel sick.

"So we thought, 'Why would so many people around the world be using plant toxins in this very 'recreational' way?'" said Hagen. "If you look at non-human animals, they do the same thing, and what a lot of biologists think is they're doing it to kill parasites."

The issue is significant on at least two fronts, write Hagen and his colleagues, with substance abuse and intestinal helminth infection being "two of the developing world's great health problems." Their study appears in the *American Journal of Human Biology*.

Researchers are unsure when the Aka might have first smoked cannabis or when it arrived on the continent. It may have come with traders from the Indian subcontinent around the first century A.D., but Hagen and his colleagues say it might not have been smoked until European colonization in the 17th Century.

Hagen surveyed almost all of the nearly 400 adult Aka along the Lobaye River in the Central African Republic and found roughly 70 percent of the men and 6 percent of the women used cannabis. The polling was supported by bioassays of the men that found high enough levels of THCA, a metabolic byproduct of cannabis's active ingredient, to indicate that 68 percent of them had recently smoked.

Stool samples collected from the men to gauge their worm burden found some 95 percent of them were infected with helminths. But those who consumed cannabis had a significantly lower rate of infection. A year after being treated with a commercial antihelminthic, the [cannabis users](#) were reinfected with fewer worms.

While the Aka deliberately consume a tea of a local plant, motunga, to fight parasitic infections, they do not think of cannabis or tobacco as medicine, Hagen said. This suggests they are unconsciously using [cannabis](#) to ward off parasites, he said.

**More information:** High prevalence of cannabis use among Aka foragers of the Congo Basin and its possible relationship to helminthiasis, *American Journal of Human Biology*, DOI: 10.1002/ajhb.22740

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