

# Kenyans are choosing oral products with the higher cancer risk

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## Introduction

A new report titled "Review of the risks and toxicants of smokeless tobacco, areca nut and khat products available in Kenya" by researchers from the University of Nairobi has found that Kenyans are consuming more harmful oral stimulants over low-risk alternatives. The use of traditional chewing tobacco, snuff, khat and products containing areca nut (pan, gutkha) can potentially expose users to cancer-causing toxicants and risk contamination with illicit drugs and harmful chemicals.

By comparison, this research shows that comparatively, nicotine replacement therapies (NRTs) and modern oral products (MOPs) initially developed to help tobacco smokers quit smoking are less harmful and expose users to minute traces of some of the chemicals found in smokeless tobacco, areca nut and khat products.



## Tobacco use in Kenya

- 10.2% of Kenyan adults smoke. Smoking rates are much higher among men (19.9%) than women (0.9%).
- The major health risks reported from tobacco products include cancers of the upper respiratory and digestive tracts, and particular throat cancers. There are also reported increases in the risk of pancreatic cancer, gastric cancer and cardiovascular diseases.

## Key findings

- The use of traditional chewing tobacco, snuff, khat and products containing areca nut (pan, gutkha) are potentially high risk to the physical health of Kenyans. Khat also carries physical and mental health, social and economic risks.
- The majority of these products are locally grown and produced, unregulated and unbranded with little or no quality control in terms of levels of toxicants or psychoactive ingredients.
- The risks of oral cancer for these products range from extremely low or negligible to high. For example, gutkha and khaini are imported from India into Kenya and are high risk for oral cancer.
- Comparatively, tobacco-free nicotine products like NRTs (e.g. nicotine pouches, sprays and gums) and MOPs (e.g. nicotine pouches) have a potentially lower health risk, although they're not as commonly used in Kenya.
- More research is needed concerning the levels of toxicants in Kenyan products.

## Smokeless tobacco, areca nut and khat

- Khat, chewing tobacco, snuff, pan, and gutkha are the main smokeless products used in Kenya, with approximately 4.1% of adults using khat and 3.6% using the other products combined. These products are most popular amongst adults.
- Very few cigarettes smokers also use smokeless tobacco products, just 0.7% of men and 0.1% of women.
- According to World Health Organisation's International Agency for Research on Cancer, there are 28 carcinogens or toxicants in smokeless tobacco products. There are no "lists" of toxicants for areca nut or khat products, but areca nut contains a possible human carcinogen.



## Contamination with illicit drugs

Several different samples of local chewing tobaccos have been found to be contaminated with heroin and marijuana. There is anecdotal evidence that local oral tobacco products can also contain cocaine or marijuana. Khat can have similar effects to amphetamines. Regular consumption of khat may be associated with various mental and physical health, social and economic risks affecting both consumers and their families. In North-Eastern Kenya, for example, khat chewers can spend a significant family income on khat.



### Tobacco-free nicotine products

- NRTs were developed to help people quit smoking by replacing the nicotine that would otherwise be obtained from cigarettes or other tobacco products. They include patches, gums, sprays and lozenges.
- NRT products have been shown to be safe with no evidence of lung, gastrointestinal or oral cancer. Smoking while using NRT also does not increase the overall nicotine intake.
- MOPs are tobacco-free nicotine pouches that emulate the simplicity and pharmacological quality of NRT lozenges and gum.
- The nicotine level in MOPs can be as low as NRT but can also more closely replicate the nicotine levels found in cigarettes. NRTs have 2-4mg nicotine per piece where MOPs have 4-12mg per pouch.
- When tested for 22 toxicants, only 2 are detectable in MOPS compared with 11 in the snus and at a lower level.
- Levels of toxicants in the NRT products were comparable to those in MOPs.

### ...and their advantages

- The most well-known group of carcinogenic toxicants found in smokeless tobacco products (nitrosamines) are not detectable in tobacco-free nicotine products. They are also not found in khat or areca nut products.
- Levels of the known human carcinogen, toxic airborne contaminants Benzo[a]pyrene is undetectable in NRT gum, lozenges and modern nicotine products, but high levels can be found in tobacco-based products. There have been no reports of levels of Benzo[a]pyrene in areca nut products or khat.
- There are several toxic metals in tobacco leaf including known carcinogens: cadmium, arsenic, beryllium, chromium and nickel; and probable carcinogens: lead and mercury. Modern nicotine products only have traces of chromium. They have fewer traces of toxicants in metals than NRT lozenges (chromium and nickel) and NRT gum (cadmium, chromium, nickel and lead). Khat and areca nut contain various levels of metal toxicants.
- Aflatoxins are not found in NRTs or MOPs, whereas they can be detected in areca nut and some types of snuff.
- Radionuclides, a class one human carcinogen are not found in MOPs or NRTs but can be present in STPs and traditional tobacco products.

## Case study: Sweden

- Swedish-style nicotine pouches (snus) has a low health risk.
- It has low levels of carcinogens and other toxicants compared with many products used in Africa.
- In Sweden, the near-universal use of snus by tobacco users is responsible for their low risk of oral and other cancers.
- The US Food and Drug Administration has acknowledged the reduced risk of snus, applying the following label to select products: "Using General Snus instead of cigarettes puts you at a lower risk of mouth cancer, heart disease, lung cancer, stroke, emphysema, and chronic bronchitis."
- MOPs have the potential to have even lower risk profiles than Swedish snus, which has been found to have the lowest global risk profile of STPs based on epidemiological studies.



## Recommendations

- Carry out an in-depth review of quantities and types of imported and locally produced smokeless tobacco, areca nut and khat products in Kenya.
- Study the ingredients and perform toxicant and alkaloid analyses for all smokeless tobacco, areca nut, khat, tobacco-free nicotine products on the Kenyan market.
- Initiate case-control studies to determine the health risks from the use of these products.
- Lobby for the government to regulate all smokeless tobacco, areca nut and khat products.
- Monitor for the presence of other drugs in local products to confirm anecdotal reports spiking with illegal drugs such as heroin, cocaine etc.
- Undertake a study on the effects of smokeless tobacco, areca nut and khat products on the exposed non users and affected such as family members and the community.
- Undertake an environmental in-depth study of the effects of smokeless tobacco, areca nut and khat products growth and production, distribution and consumption.