

Advice to the General Public

Purchase Herbal Medicines from Licensed Chinese Herbal Medicine Retailers

- This can ensure the herbal medicines are from reputable suppliers and minimise the risk of acquiring counterfeit or herbal medicines that are improperly processed.

Retailer Licence in Chinese Herbal Medicines



Follow Instructions from Chinese Medicine Practitioners on the use of Herbal Medicines

- Before consuming any herbal medicines, one should consult a Chinese medicine practitioner (CMP) and follow instructions on decoction, and consume at the suggested time and dosage.
- Do not purchase extra doses of herbal medicines than actually needed, nor save the leftovers for later-on consumption with self-prescribed formulae.

Store Herbal Medicines Properly

- Store the herbal medicines at a dry and cool place. For individual herbal medicines that are susceptible to mould infestation, store according to the specific instructions given by the CMP or Chm retailer.

Do Not Consume Herbal Medicines with Quality Changes

- If any changes in quality are noticed, stop consuming and discard the concerned herbal medicines immediately. Even if the mouldy and their adjacent parts are removed, it cannot be guaranteed that the aflatoxins, which are invisible to naked eyes, are eliminated.



Semen Platycladi (mouldy)



Nidus Vespae (mouldy)

HERBAL MEDICINES

AND

AFLATOXINS



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HERBAL MEDICINES AND AFLATOXINS

Mycotoxins are a group of naturally occurring toxic compounds produced by certain fungi (mould). Aflatoxins, the most common and toxic among them, are mainly produced by fungi of the *Aspergillus* species.



The Ubiquitous *Aspergillus*

- Aspergillus species are ubiquitous in nature and can grow on certain herbs. Warm and humid conditions are in favour of their reproduction. Therefore, herbs poorly handled could be contaminated by aflatoxins during cultivation and storage.



Aflatoxins Cannot Be Eliminated

- Aflatoxins are colourless, tasteless, odourless and heat-resistant. It is almost impossible to eliminate aflatoxin once the herbs are contaminated by them.



Adverse Effects on Human Health

Among the various aflatoxins identified, aflatoxins B1, B2, G1 and G2 have relatively greater impact on human health. Acute exposure to a high dose of aflatoxins may result in acute liver failure and rhabdomyolysis.

Long term exposure to aflatoxins can affect multiple organ systems, especially the liver and kidneys. Aflatoxins can also pass through the placenta and impair fetal growth.



Aflatoxins Cause Cancers

- It is most noteworthy that aflatoxins have been classified as Group 1 Carcinogens by the International Agency for Research on Cancer (IARC), along with tobacco, alcohol, asbestos and ionizing radiation. Long term intake of aflatoxin can result in liver cancer and the risk is even higher in people infected with hepatitis B virus.



Advice to the Industry

Procure Herbal Medicines from Reputable Suppliers

- To ensure the quality, Chinese herbal medicine (Chm) wholesalers should procure from reputable suppliers while Chm retailers should do so from licensed Chm wholesalers.
- Do not purchase herbal medicines of doubtful source or quality.
- All imported herbal medicines must conform with the regulatory requirements of their places of origin. When in doubt, the supplier should be asked to provide relevant documentary proof of the quality for the concerned herbal medicines.



Store and Handle Herbal Medicines Properly

- Concerning storage facilities for herbal medicines that are susceptible to mould infestation, the temperature and humidity should be strictly controlled. Appropriate shading and sealing measures should also be adopted.
- All herbal medicines that are accepted upon inspection should be promptly stored with proper record so that the stock can be dispatched according to the "first-in, first-out" principle.



Inspect Regularly

- Check the herbal medicines regularly for rotting, mildew, infestation by insects, oil leakage, decolourisation, loss of smell, decomposition due to humidity (deliquescence), stickiness etc.
- The checking frequency should be increased in humid days or when there is abnormal weather.

If any changes in quality are detected, dispatch should be suspended and the concerned herbal medicines should be handled properly.