

# GREEN TOBACCO SICKNESS

## What you need to know

**Green tobacco sickness (GTS)** is a potential risk to those working with the green tobacco plant. It is a sickness that is not well documented and is often underreported because many of those who experience GTS are not able to interpret their ailment or its cause.

GTS is a form of nicotine poisoning, that may be contracted by handling wet, fresh, green tobacco leaves. The nicotine from the plant mixes with the moisture on the leaves, and then upon contact, the nicotine is absorbed through the worker's skin, causing acute nicotine poisoning and its associated symptoms.

### **SYMPTOMS**

The characteristic symptoms of GTS are nausea, vomiting, weakness, dizziness, stomach cramps, difficulty breathing, paleness, excessive sweating, headache, and fluctuations in blood pressure and heart rate. These symptoms are similar to those caused by heat stress and pesticide exposure, and as a result, GTS is often misdiagnosed.

These symptoms may present themselves in as little as one hour after starting work and can last from 12 to 48 hours. This sickness is usually non-life-threatening, and only severe cases require medical attention due to extreme dehydration from fluid loss associated with vomiting. GTS is debilitating, resulting in discomfort and lost productivity.

• **WHAT YOU NEED TO KNOW** continued on back



# Prevention Is Our Intention

## TIPS TO AVOID GTS

- Educate yourself and others regarding the causes and symptoms of GTS.
- Wear long sleeve shirts, gloves and/or raingear to minimize skin exposure to the green plant. However, be careful to not overheat.
- Periodically change wet or tobacco-soaked clothes. If possible, harvest for less than seven hours a day.
- When possible, work in cooler, drier conditions. Wait to work until leaves have dried.
- Take breaks periodically because incidence of GTS increases with amount of physical exertion.
- Wash your hands and body with warm soapy water after working with green tobacco.

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#### HOW IT WORKS

Nicotine, found in tobacco plants, is soluble in water, causing it to be drawn out onto the surface of the leaves by rain, dew or perspiration. From there, the nicotine is absorbed through the skin, where it passes directly into the bloodstream and is distributed throughout the body. The nicotine alters part of the brain, causing reflex vomiting, and excites nerves in the gastrointestinal tract that bring about nausea and abdominal cramping.

#### RISK FACTORS

Some risk factors identified for GTS are age, environmental conditions, personal tobacco use and type of labor performed.

Laborers working in hot, wet conditions are more likely to develop GTS because the wetness and high humidity causes nicotine to reside on the surfaces of the leaves while the high ambient temperature increases skin absorption.

Some tasks involved in growing tobacco leave workers at a greater risk of developing GTS. Harvesting tobacco involves the most risk, followed by barning. If harvesting is done by hand, the workers hold cut leaves close to their body, where the nicotine-laden sap oozing

from the severed stems soaks their clothing, allowing the nicotine to reside on their skin for long periods of time.

Direct or prolonged contact of nicotine with the skin increases the workers' risk of contracting the illness. Additionally, cuts and abrasions associated with manual tobacco labor provide another direct route of nicotine entry into the bloodstream.

#### TREATMENT

There are several nonprescription medications available that are used to treat GTS. Before taking any medication talk to a doctor or pharmacist.

GTS can be altogether avoided with the proper precaution, but first one must know that the crop they are working with can cause them harm. This knowledge is the best means of prevention. Please educate those who work with tobacco, because they should know about this potential job hazard.



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#### SOURCES:

McBride, Jeffrey, et al. "Green Tobacco Sickness." *Tobacco Control*. 7 (1998): 294-8. Ballard, Terri, et al. "Green Tobacco Sickness: Occupational nicotine poisoning in tobacco workers." *Archives of Environmental Health*. 50 (1995): 384-9.

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