

# West Nile Virus

**Fight the Bite**



**What it is and How to Protect Our Community**

# West Nile Virus (WNV)

“A Mosquito-borne virus which can cause mild to severe illness in humans and mammals.”

# How WNV is transmitted

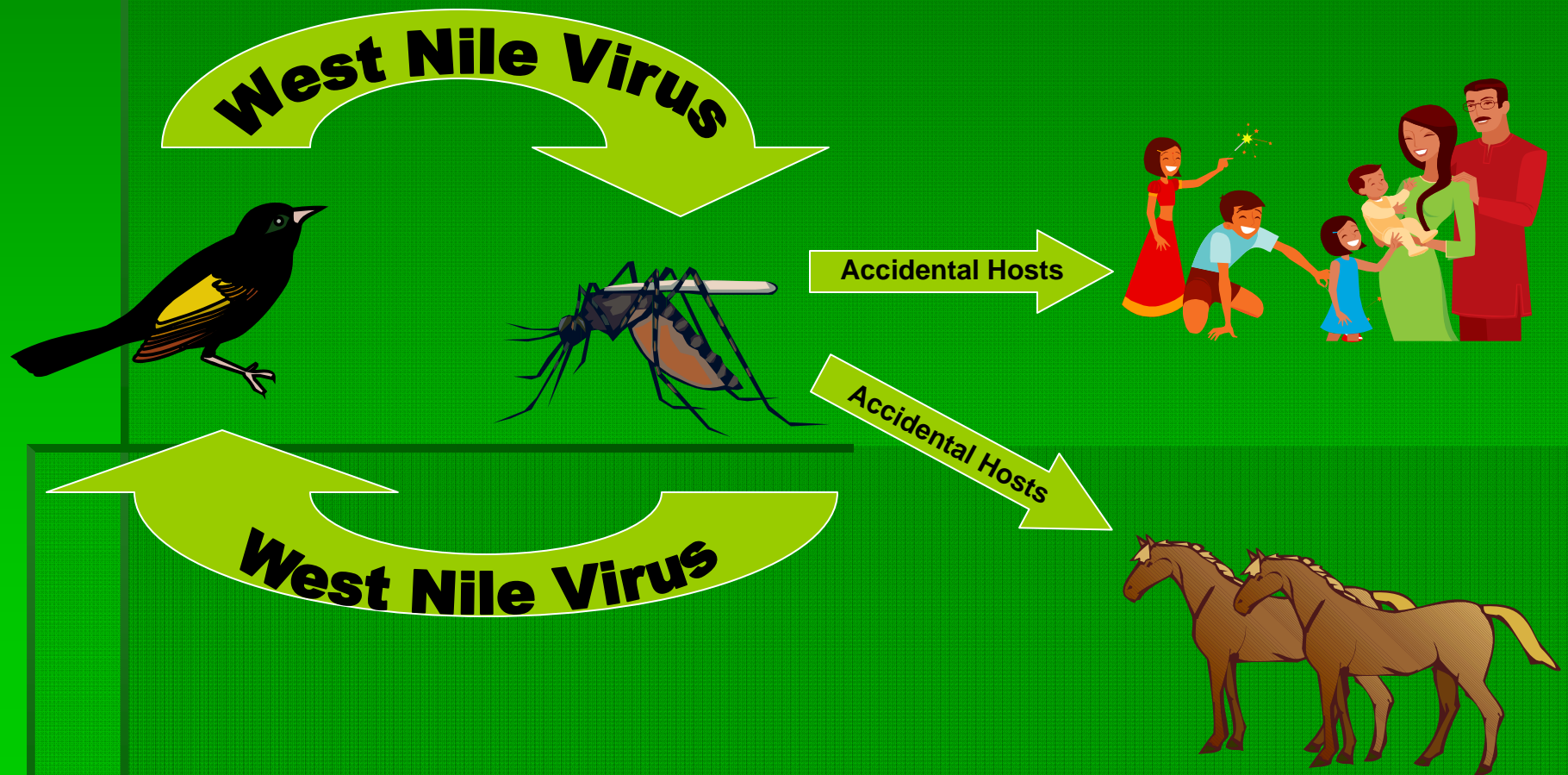
1<sup>st</sup> - Birds are primary hosts

2<sup>nd</sup> - Mosquitoes become infected when they bite infected birds

3<sup>rd</sup> - Infected mosquitoes bite and infect

- Non-infected birds
- Humans
- Mammals

# West Nile Virus Transmission Cycle



# WNV Transmission

- Most Common
  - Infected mosquito bite\*\*
- Rare Transmissions
  - Donated blood (donated blood is now screened for WNV)
  - Mother of unborn child
  - From organ transplant

\*\* transmission is not dependant on # of bites

# Not Everyone Exposed Will Get Sick

- A small percentage of people exposed become ill or experience symptoms
- There is no way to know who will develop a mild or severe illness
- Most people bitten by an infected mosquito will never experience symptoms

# WNV Mild Symptoms

Approximately 20% of people infected with WNV may develop mild symptoms\*

Such as:

- Fever
- Vomiting
- Fatigue
- Rash
- Eye pain
- Swollen glands
- Body aches
- Other flu-like symptoms

\* Mild symptoms may last days to years

# Signs of Serious Illness

The following symptoms are rare occurring in less than 1% of INFECTED people

- Flaccid Paralysis
- Over 50 years of age have an increased rate of mortality
- Develop a neuroinvasive illness (central nervous system infection)

# Neuroinvasive Illness

Illnesses that affect the brain, such as meningitis and encephalitis

- Neuroinvasive symptoms are
  - Change in or loss of consciousness
  - Severe headaches and neck pains
  - Loss of balance to paralysis
  - Possibility of death

# WNV Treatments

- Currently there are no proven treatments other than supportive care and rehabilitation services.
- Development of a human vaccine is in progress

# Preventing WNV

- Eliminate mosquito breeding sites
- Use effective mosquito repellants that contain: DEET, Picaridin, oil of lemon eucalyptus (PMD), or IR3535 (biopesticide)
- Wear protective clothing while outdoors (long pants and long sleeves)
- Reduce outdoor activity from dusk to dawn when mosquitoes are most active
- Vaccinate horses annually

# What You Can Do

- **Reduce the living habitats of mosquitoes and eliminate standing water in:**
  - flowerpots
  - pet food and water dishes
  - tin cans, plastic containers, ceramic pots
  - swimming pool covers and other plastic covers
  - buckets, barrels, cans, toys
  - check/repair screened windows and doors for holes

# What You Can Do, cont.

Establish a variety of approaches to reduce mosquito population:

- Empty/circulate containers holding water at least 3X per week
- Use larvicides containing BTI, a natural bacteria harmless to animals, where standing water is hard to circulate or eliminate
- Unclog rain gutters and discard old tires
- Cut and remove shrubs, bushes, and plants that offer mosquitoes a place to hide from the sun

# Pima County Integrated Pest Management System (IPMS)

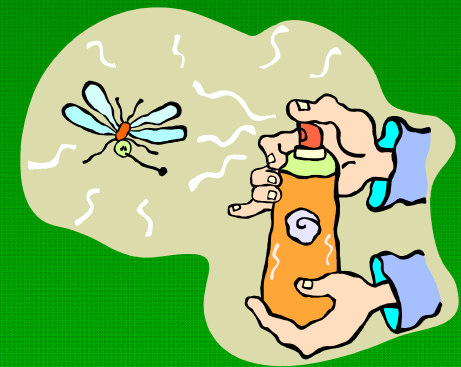
- Most important: Eliminate breeding sites through community education
- Actively trap and test mosquitoes for WNV to track the progress of the virus
- Adulticiding and Larvacides to control mosquito populations

**None of the components of IPMS will be successful if used alone**

# Reducing Mosquitoes

- Options for killing mosquito larvae:

- mosquito dunks w/ BTI
- mineral oil
- other available larvicides
- drain standing water

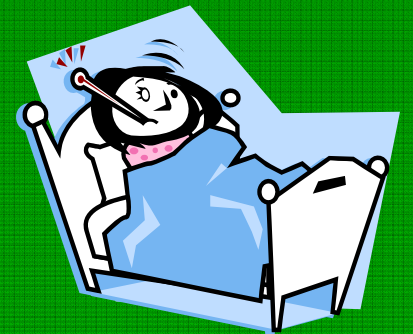


- Options for reducing adult mosquitoes:

- flying insect aerosols (adulticides)
- natural predators (bats)

# Enhanced Surveillance Testing Humans for WNV

- Symptoms can occur 5 to 15 days after a WNV infected mosquito bites a person
- Testing for WNV requires a blood test
- AZ State lab and commercial labs can test for WNV



# Enviromental Threat Reduction



- Keep gardens, trees, and bushes well groomed; groom from ground level to 3ft up
- Report unattended pools (green pools)
- Help neighbors who cannot maintain their property



# Mosquito Proof Your Home

- Assess property for threats of mosquito infestations (standing water, excessive weeds or growth)
- Drop larvicide in swimming pools, fountains, ponds, birdbaths
  - Larvicide may be obtained from home improvement stores
- Repair window and door screens
- Unclog rain gutters and discard old tires



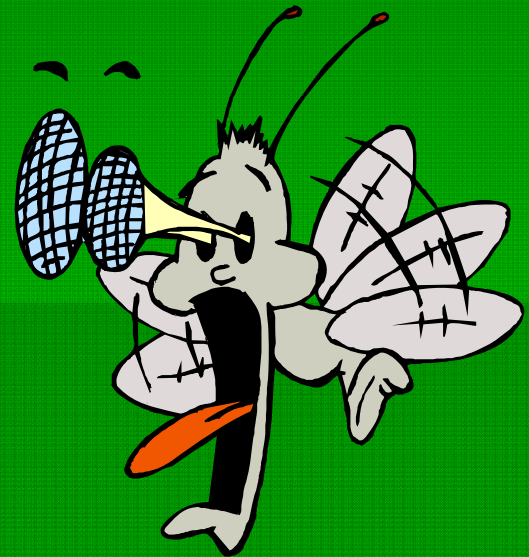
# To Learn More on WNV

## Additional information

[www.westnileaz.com](http://www.westnileaz.com)

[www.cdc.gov/westnile](http://www.cdc.gov/westnile)

[www.pimahealth.org](http://www.pimahealth.org)



# Report the Problem

Call in complaints of standing water or  
mosquito infestations:

**West Nile Virus Hotline: (520)243-7999**



**[www.pimahealth.org](http://www.pimahealth.org)**

**Pima County Health Department**

**(520)243-7770**

# Standing Water is our #1 Threat



- Mosquitoes need water to breed and grow.
- Anything that can hold water for up to 1 week or more can produce hundreds of mosquitoes.

**Get rid of places where water collects and mosquitoes won't have a chance!**