The West Nile virus outbreak has taken a toll throughout the United States this year. The virus has been especially prevalent in the coastal areas.

As of October 9, 2012, the Center for Disease Control and Prevention had reported cases of West Nile virus (WNV) infections in people, birds, or mosquitoes in 48 states. Thus far, a total of 4,249 cases of WNV disease have been reported in people, including 168 deaths. This is the highest number of cases reported to the CDC through the second week in October since 2003. Almost 70 percent of the cases have been reported from eight states (Texas, California, Louisiana, Mississippi, South Dakota, Michigan, Oklahoma, and Illinois), and over a third of all cases have been reported from Texas.

**Why so many cases?** A reasonable explanation is to blame the abnormally mild winter and abnormally high spring rains. With high rains come more places for mosquitoes to breed. You have an immunological cohort of immigrant birds (a carrier of WNV) that are flying through that have not been exposed to the virus before. You also have a largely immunologically naïve human population being subjected to it for the first time. Most of these cases generally occur in the last couple weeks of August and the first couple weeks of October, and a majority of these are happening in the lower United States.

**How does West Nile Virus spread?** The WNV is most often spread by the bite of an infected mosquito. In rare cases, WNV has been dispersed through blood transfusion, organ transplants, breastfeeding and even during pregnancy from mother to baby. It can NOT be spread by casual contact such as touching.

**It is Cyclical.** There is definitely a cyclical nature to WNV, all related to the bird population. The disease is transmitted bird to bird by different mosquitoes. When mosquitoes bite birds, the birds get infected, and when the birds become exposed, they transmit the disease to other birds, like herd immunity. But when the birds become immune to the virus, it does not have the ability to spread. After this year, most of the birds will become immune to WNV, so it is quite likely that it will go down next year. But when new birds are born, an outbreak is more likely. Humans who come down with WNV are accidental or secondary hosts.
Weather plays an important role in the cycle of WNV, though it is not as simple as more rain/standing water = more mosquitoes = more WNV. Actually, more than people realize, WNV is related to lack of rain. There is an inverse relationship between rainfall and West Nile cases. The mosquito (Culex pipiens) that carries WNV loves thick and soupy organic water. So it is counterintuitive, but when it doesn’t rain much is when you have a lot of cases of West Nile.

What can I do to prevent mosquito bites? When you are outdoors, 1) use insect repellents containing an ESA registered active ingredient, follow label directions, and 2) wear long sleeves and pants at dusk and dawn. Prevent mosquitoes from coming indoors by using good screens on window and doors. Eliminate standing water where mosquitoes can lay eggs. Support community-based mosquito control system.

For more information, refer to:
http://www.cdc.gov/ncidod/dvbid/westnile/index.htm
http://www.mosquito.org/