



THE CENTER FOR

BIRD & EXOTIC ANIMAL MEDICINE

THE DANGERS OF TEFLON PANS

In two to five minutes on a conventional stovetop, cookware coated with Teflon and other non-stick surfaces can exceed temperatures at which the coating breaks apart and emits toxic particles and gases linked to hundreds, perhaps thousands, of pet bird deaths and an unknown number of human illnesses each year, according to tests commissioned by Environmental Working Group (EWG).

In new tests conducted by a university food safety professor, a generic non-stick frying pan preheated on a conventional, electric stovetop burner reached 736°F in three minutes and 20 seconds, with temperatures still rising when the tests were terminated. A Teflon pan reached 721°F in just five minutes under the same test conditions, as measured by a commercially available infrared thermometer. DuPont studies show that the Teflon offgases toxic particulates at 446°F. At 680°F Teflon pans release at least six toxic gases, including two carcinogens, two global pollutants and MFA, a chemical lethal to humans at low doses. At temperatures that DuPont scientists claim are reached on stovetop drip pans (1000°F), non-stick coatings break down to a chemical warfare agent known as PFIB, and a chemical analog of the WWII nerve gas phosgene.

For the past 50 years, DuPont has claimed that their Teflon coatings do not emit hazardous chemicals through normal use. In a recent press release, DuPont wrote that "significant decomposition of the coating will occur only when temperatures exceed about 660 degrees F (340 degrees C). These temperatures alone are well above the normal cooking range." These new tests show that cookware exceeds these temperatures and turns toxic through the common act of preheating a pan, on a burner set on high. In cases of "Teflon toxicosis," as the bird poisonings are called, the lungs of exposed birds hemorrhage and fill with fluid, leading to suffocation. DuPont acknowledges that the fumes can also sicken people, a condition called "polymer fume fever." DuPont has never studied the incidence of the fever among users of the billions of non-stick pots and pans sold around the world. Neither has the company studied the long-term effects from the sickness, or the extent to which Teflon exposures lead to human illnesses believed erroneously to be the common flu.

The government has not assessed the safety of non-stick cookware. According to a Food and Drug Administration (FDA) food safety scientist: "You won't find a regulation anywhere on the books that specifically addresses cookwares," although the FDA approved Teflon for contact with food in 1960 based on a food frying study that found higher levels of Teflon chemicals in hamburger cooked on heat-aged and old pans. At the time, FDA judged these levels to be of little health significance. Of the 6.9 million bird-owning households in the US that claim an estimated 19 million pet birds, many don't know that Teflon poses an acute hazard to birds. Most non-stick cookware carries no warning label. DuPont publicly acknowledges that Teflon can kill birds, but the company-produced public service brochure on bird safety discusses the hazards of ceiling fans, mirrors, toilets, and cats before mentioning the dangers of Teflon fumes. As a result of the new data showing that non-stick surfaces reach toxic temperatures in

a matter of minutes, EWG has petitioned the Consumer Product Safety Commission (CPSC) to require that cookware and heated appliances bearing non-stick coatings must carry a label warning of the acute hazard the coating poses to pet birds. Additionally, we recommend that bird owners completely avoid cookware and heated appliances with non-stick coatings. Alternative cookware includes stainless steel and cast iron, neither of which offgases persistent pollutants that kill birds.

Teflon kills birds

Avian veterinarians have known for decades that Teflon-coated and other non-stick cookware can produce fumes that are highly toxic to birds. As early as 1986, a Chicago-area expert on Teflon toxicosis called the phenomenon a leading cause of death among birds, and estimated that hundreds of birds are killed by the fumes and particles emitted from Teflon-coated products each year. Although an accurate national accounting of deaths is not available, in a single year this Chicago veterinarian documented 296 bird deaths in 105 cases involving non-stick cookware.

Under ordinary cooking scenarios, Teflon kills birds. A review of the literature and bird owners' accounts of personal experience with Teflon toxicosis shows that Teflon can be lethal at normal cooking temperatures, with no human lapses in judgment or wakefulness.

Bird deaths have been documented during or immediately after the following normal cooking scenarios:

New Teflon-lined Amana oven was used to bake biscuits at 325°F; all the owner's baby parrots died. Four stovetop burners, underlined with Teflon-coated drip pans, were preheated in preparation for Thanksgiving dinner; 14 birds died within 15 minutes. Nonstick cookie sheet was placed under oven broiler to catch the drippings; 107 chicks died. Self-cleaning feature on the oven was used; a \$2,000 bird died. Set of Teflon pans, including egg poaching pan, were attributed to seven bird deaths over seven years. Water burned off a hot pan; more than 55 birds died.

Electric skillet at 300°F and space heater were used simultaneously; pet bird died. Toaster oven with a non-stick coating was used to prepare food at a normal temperature; bird survived but suffered respiratory distress. Water being heated for hot cocoa boiled off completely; pet bird died. Grill plate on gas stove used to prepare food at normal temperatures; two birds died on two separate occasions.

DuPont claims that its coating remains intact indefinitely at 500°F. Experiences of consumers whose birds have died from fumes generated at lower temperatures show that this is not the case. In one case researchers at the University of Missouri documented the death of about 1,000 broiler chicks exposed to offgas products from coated heat lamps at 396°F.

DuPont also claims that human illness will be produced only in cases involved gross overheating, or burning the food to an inedible state. Yet DuPont's own scientists have concluded that polymer fume fever in humans is possible at 662°F, a temperature easily exceeded when a pan is preheated on a burner or placed beneath a broiler, or in a self-cleaning oven.

Written by: Environmental Working Group