



# Understanding Kitchen Grease Fires: What's the Risk?

## RISK ALERT

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### How Grease Fires Start

The National Fire Protection Association reports that cooking is the leading cause of home fires, and that about one of every seven of these fires starts with fat or grease. A study of home cooking fires by the Consumer Product Safety Commission showed that 43% of stovetop fires were caused by the ignition of the cooking oil. One fire department's study revealed that grease cooking fires typically started when home cooks put oil or fat on the stove to heat and forgot to turn off the stove (30% of grease fires); were distracted by children, pets, phone calls, etc., left oil to heat unattended (23%); used too high a heat (20%); added food to, or removed it from, a pan of hot oil (10%); turned on the stove unintentionally under a pan of oil or grease (10%); or failed to clean up grease from the stove top (the grease ignited when the stove was later used) (7%).

Most kitchen fires occur during unattended cooking. Cooking with grease, oil, or fat increases the risk, as these flammable liquids overheat quickly, ignite easily, spread and splatter unpredictably, and burn quickly and persistently. While these fires typically start in or on a cooking appliance such as a stove or deep-fat fryer, they often flare up, splashing and spattering burning grease that can easily ignite cabinets, walls, and other materials. What starts as a small stove-top fire can quickly grow large enough to destroy an entire building.

### Keep the Kitchen Clean

- Keep the kitchen clean. Clean grease spills and residues from work surfaces, floors, walls, wiring, etc.
- Keep pots, pans, cooking equipment, and appliances scrupulously clean and dry, inside and out. Greasy build-up on the outside of cooking vessels can catch fire.
- On a regular basis, clean all grease from as much of the hood and ducts as can be reached. Change or clean filters as needed. Engage a professional as needed.
- Keep combustible and flammable materials away from fryers, grills, ovens, stoves, etc. where they might be splashed with hot oil or even fall into the hot fat from nearby shelves.

### Use Appliances Safely

- Select appliances that are for home use, and keep them clean and in good repair. Follow manufacturers' instructions for installation, use, and servicing.
- Be sure that there is sufficient clearance around fryers and other hot appliances to allow them to cool quickly.
- Keep cooking temperatures within the safe range recommended by manufacturers. Note that different types of oil may require different cooking temperatures.
- Turn off all cooking equipment and appliances after use.

### Stay Safe While Cooking

- Never leave cooking food unattended.* If you must leave the kitchen, turn off the stove *and* remove the pan from the hot burner.
- Use only fresh, high-quality cooking oils or fats. Change the cooking oil often.
- Use only enough oil as needed; allow room in the pot for the food which is to be added. Overfilling the pot or pan increases the risk that the oil will overflow and ignite.
- If the oil starts to boil, turn off the heat and, *if possible*, carefully remove the pan from the hot burner.
- Keep children and pets away from the cooking area.
- Never cook when sleepy, ill, or when under the influence of alcohol, drugs, or medication.

### Be Prepared to Respond

- Have an appropriate portable fire extinguisher at the ready, and be sure that it is inspected and serviced as appropriate, and kept fully charged. Type K extinguishers are best for grease fires; ABC extinguishers are good for other general uses.
- Be sure to have enough working smoke alarms; test these and change the batteries twice per year.

### What to Do If a Grease Fire Starts

- If the fire is a small one that is contained within a pan on top of the stove, quickly but carefully *slide a lid or metal cookie sheet on to the pot* to smother the flames. *Turn off the heat. Leave the lid on until the pan is completely cool.*
- Do not turn on the exhaust fan, as this could draw burning oil into the ventilation system. After the fire is out, use the exhaust to clear the smoke.
- If the oil has overflowed the pan, or if the fire has spread outside the pan, cover the pan if you can, *get everyone out of the building, and call 911.* Close the doors behind you as you exit. Activate a fire alarm if one is available.
- If your clothes catch on fire; *STOP, DROP, and ROLL.*
- Never discharge a portable extinguisher into a grease fire.* The force of the spray will splatter burning grease.
- Never try to carry a burning pan of oil;* burning oil will spill, spreading the fire wherever it falls.
- Never try to extinguish the fire with water.* Water, which is heavier than oil, will sink to the bottom of the hot pan where it will vaporize, expanding rapidly and forcing the burning oil up and out of the pot with explosive force.
- Never try to smother the fire with flour or sugar;* these are highly explosive and will form uncontrollable fireballs.
- Baking soda may be used to smother a *very small* grease fire if a large amount is applied immediately, but it will probably be faster to smother the fire with a lid.
- A fire blanket may be used to smother a small fire.