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## January 2017 (Issue 2) : Safe Use of Microwave

Aga Khan University Hospital, Karachi

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## SAFE USE OF MICROWAVE

### HOW DOES A MICROWAVE COOK

Microwave ovens operate by producing electromagnetic radiation that causes water molecules in food to vibrate. This vibration produces the heat that cooks food.

The radiations are reflected within the oven's metal interior and can pass through glass, paper and plastics and can also be absorbed by food.

These are non-ionizing and do not have the same risks as x-rays or other types of ionizing radiation.

### INJURY RISK

Most injuries from microwave ovens are the result of heat-related burns from hot containers, overheated foods or exploding liquids.

There have been very rare instances of radiation injury due to exposure to large amounts of microwave radiation leaking through openings such as gaps in the microwave oven seals.

The Food and Drug Regulatory Authority (FDA) make it mandatory for manufacturers to comply with specific FDA safety standards. These standards require any radiation given off by ovens to be well below the level known to cause injury.

### SAFETY TIPS

Always read and follow the manufacturer's instructions for use. Directions in the user manual provide recommended operating procedures and safety precautions.

### USE MICROWAVE SAFE CONTAINERS

Use cookware specially manufactured for use in the microwave oven. Do not use metal pans or aluminum foil because microwaves reflect off them, causing food to cook unevenly and possibly damaging the oven. FDA recommends using glass, ceramic and plastic containers labeled for microwave oven use.

### AVOID SUPER HEATED WATER

Water that exceeds boiling temperature without signs of boiling is called super-heated water. The microwave heating of water can achieve super- heated water temperature due to

prolonged heating or an error in settings. This water can result in serious burns if it touches human skin.

### CHECK FOR DAMAGE TO MACHINE

Regularly check for any damage to the microwave door, hinges or sealing. As per FDA recommendations if the door is not properly closing or some other damage is suspected, the machine should not be used. FDA recommends avoiding usage of those microwaves which seem to operate or stay on when the door is open. This could be due to a fault in the door sensing switch.

### HOW TO REPORT PROBLEMS

If your microwave shows signs of leakage or damage, or you suspect a radiation problem, you can contact the oven manufacturer.

You also can report any suspected radiation-related problems or injuries directly to the FDA by completing and mailing the Accidental Radiation Occurrence Report form, available at:

<http://www.fda.gov/downloads/AboutFDA/ReportsManualsForms/Forms/UCM236066.pdf>



<http://www.fda.gov/forconsumers/consumerupdates/ucm048953>

