Toxic Middle East!!

For decades, cancer has been representing a significant threat to human health. Medicine has succeeded in finding cure for some types of cancer. Yet, many others remain untreatable. Moreover, awareness campaigns are being conducted by institutions developed to fight against this disease and help treat its victims.

MEFOSA would like to be part of awareness campaigns dedicated to help prevent the incidence of cancer among different target populations. Recently, scientific findings have identified carcinogenic compounds to which mostly children are exposed through contact surfaces with food, food itself, and even toys! Such evidence raises concern around children health and safety. Moreover, one of the food safety components is risk communication. Therefore, MEFOSA's primary target is to promote food safety issues and contribute to developing food safety programs and activities in order to help limit the incidence of cancer among children and adults.

Below is a description of the different carcinogenic factors:

Bisphenol A

Bisphenol-A is a chemical found in many products, mainly in linings for canned food and infant formula, and as a hardener in plastic baby bottles and toys. Studies issued recently reported subtle effects of low doses of BPA in laboratory animals. So far, BPA is not proven to harm children or adults. Yet, these newer studies lead federal health officials to question the safety of BPA.

The National Toxicology Program suspects that BPA has an effect on the brain, behavior and prostate gland, in developing fetuses, infants and children. Other studies have found an association between increased exposure to BPA and increased incidence of diabetes and cardiovascular disease. Yet, there is no sufficient evidence that supports whether the health problems were actually caused by BPA. Therefore, further research is warranted in order to determine the health effects of BPA.

In the meantime, domestic preventive measures are ought to be taken in order to minimize early life exposure to BPA at home:

- Removing scratched or damaged bottles and cups, as they might liberate small amounts of BPA into the food or liquid they contain.
- Being careful when heating formula, as very hot liquids might release BPA into the infant formula.
- Checking labels to make sure that only microwave-safe products are put in the microwave, and dishwasher-safe products are placed in the dishwasher, to avoid leakage.

Moreover, the Natural Resources Defense Council (NRDC) filed a lawsuit against the U.S. Food and Drug Administration (FDA) since it failed to ban the use of BPA in food containers and food packaging, thereby exposing consumers to BPA through food contamination. This unnecessary risk can be avoided by simply banning the use of BPA in any material that comes in contact with food. Plus, this would not complicate the process of producing the BPA-containing materials since alternatives to BPA have already been developed and are available in the market.

Pesticides in fruits and vegetables and ADHD

One type of pesticide residues, the Organophosphates, seems to have toxic effects on the nervous system. Exposure to these chemicals has been associated with behavioral and cognitive problems in children. Previous studies were conducted on communities of farm workers and other high-risk populations, and one recent study examined the effects of exposure in the population at large. The results showed that the main source of pesticide residues reaching children is believed to be food, especially commercially grown produce like Strawberries, Blueberries, green beans, peaches, and broccoli that contain significant levels of organophosphates.

As preventive measures to avoid or minimize the exposure of children to organophosphates, buying organic fruits and vegetables rather than conventional ones is recommended as organic production excludes the use of pesticides thereby resulting in organic foods with considerably lower levels of pesticides compared to their conventional counterparts.

Moreover, to further reduce the exposure to pesticides, washing and peeling fruits and vegetables and eating a diet with varied constituents (relying on moderate intake of fruits and vegetables) will be helpful and effective.

Exposure to cancer risk

Substances such as formaldehyde, benzene and radon are dangerous chemicals with potent carcinogenic effect.

- Formaldehyde is used in particle board, foam insulation, carpet and draperies, furniture, permanent press fabrics and toiletries. Exposure to formaldehyde increases the risk of Hodgkin's lymphoma and other types of cancer.
- Benzene is listed as a known human carcinogen by the United States Environmental Protection Agency.
- Radon forms naturally and can collect in homes. It is the second leading cause of lung cancer in the United States, smoking being the first one. Therefore, it would be recommended to verify once in a while the radon levels at home.

To decrease the spread of these carcinogens and the exposure to them, the following procedures could be incorporated into our everyday life:
- Removing shoes before entering the home to avoid contaminating the house with the toxic chemicals such as pesticides caught from outside.
- Filtering tap water.
- Using stainless steel, glass or BPA-free plastic water bottles.
- Using ceramic or glass containers instead of plastic ones when microwaving food, as using plastic containers will increase the contamination of food with toxic substances.
- Reducing consumption of conventionally grown, and meat or dairy products from cows raised with antibiotics and growth hormone as these synthetic materials can be potential carriers for the substances mentioned above.
- Minimizing consumption of processed meats, which are a rich source of carcinogenic compounds.

Such simple practices can be integrated in each individual's daily lifestyle and thereby contributing to limiting the exposure to the dangerous chemicals.

MEFOSA's aim is to promote preventive strategies in order to limit the spread of the toxic compounds presented above. As already explained, food safety is an issue of concern since it represents a causative factor promoting the incidence of cancer. Another example illustrating this idea is the Aflatoxins' presence in food thought to be an active agent responsible for inducing kidney cancer among consumers. Hence, the production of safe food would be an effective prevention against some types of cancer.

MEFOSA can help food manufacturers and industries improve their sanitation and hygiene practices, along with strengthening their food safety system in the aim of ensuring the production of high quality goods that comply with the international standards of food safety. The exposure to toxic substances from food is thereby minimized and controlled.

Moreover, cases of economic fraud have been occurring recently resulting in increased incidence of cancer. One illustrating instance is the addition of melamine to milk; a scandal that shocked the Chinese population and all consumers worldwide. Melamine has proven to be carcinogenic, and have been deemed unhealthy to human consumption. Nevertheless, milk manufacturers did not hesitate to add it to their product to increase the yield and cheat on consumers, even if the quality of milk would be compromised. Consequently, a higher exposure among consumers, children and adults, resulted in considerably higher risk of cancer.

As shown above, economic fraud is an illegal activity that could endanger consumers when food products are concerned. Therefore, policies and regulations fighting economic fraud should be issued and implemented in order to limit the population exposure to cancer risk.