

# MISUSE PLASTICS AND ENJOY CANCER

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In India, about 10,000 tonnes of plastic waste is generated per day, ~ 9% of the total waste generated.

Disposal of plastic waste causes environmental pollution. They are carcinogenic to human being.

Causes injuries, stress, tumour formation, alters metabolic function and immune responses in aquatic animals.

Causes bioaccumulation in food chain/web.

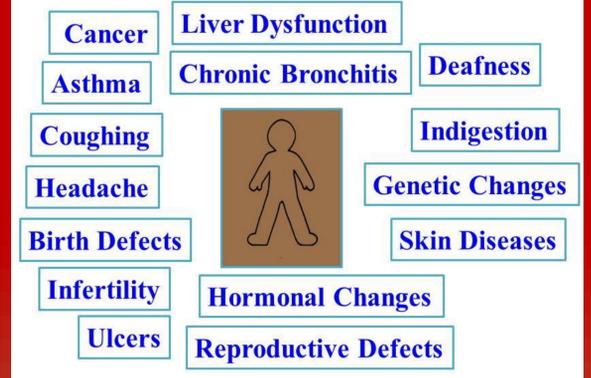


Nayandanahalli



Bellandur

CAUSES



Sl.No.	Types	Scientific name	Usage
1	PETE	Polyethylene Terephthalate	Water bottles, PET bottles etc.
2	HDPE	High-Density Polyethylene	Milk/Detergent bags, Carry bags, Container etc.
3	PVC	Polyvinyl Chloride	Cables, Pipes, Floorings etc.
4	LDPE	Low-Density Polyethylene	Carry bags, Films
5	PP	Polypropylene	Medicine bottles, Cereal liners, Packaging films etc.
6	PS	Polystyrene or Styrofoam	Foam packaging, Tea cups, Ice cream cups etc
7	Others	All other resins and multi-materials like ABS (Acrylonitrile butadiene styrene), PPO (Polyphenylene oxide), PC (Polycarbonate), PBT (Poly butylenes Terephthalate) etc	Thermoset plastics, Multilayer & Laminated plastics, PUF, Bakelite, Polycarbonate, Melamine, Nylon etc.

- Plastics are cheap, durable, corrosion-resistant materials, with high thermal and electrical insulation properties.
- Plastics are lightweight and buoyant, easily carried away by wind/water and transported to long distances.
- Plastic fragments <5 mm are called microplastics that are formed by the mechanical and chemical deterioration of larger plastic materials.
- Plastic litter can persist for extended periods of time.

#### CAUSES OR SOURCES OF PLASTIC POLLUTION:

- Rapid urbanization and development has led to increasing plastic waste generation,
- From sewage sludge,
- From Waste Water Treatment Plants (WWTPs),
- Runoff from urban, agricultural and industrial areas.

#### ENVIRONMENTAL IMPACTS:

- Problems due to ingesting plastic debris by aquatic organisms,
- Entanglement leading to suffocation, starvation or other injury leading to death of injured animals,
- Introduction/transport of invasive alien species,
- Release of toxicants,
- Transfer of toxic substances to the food chain,
- Release of heavy metals like lead and cadmium,
- Land becomes infertile,
- Absorbing toxic chemicals and degrading to micro-plastics,
- Toxic chemicals leaches out into the soil and water and pollutes the water bodies,
- Act as a vector for waterborne pathogens,
- Toxic emissions like Carbon Monoxide, Chlorine, Hydrochloric Acid, Dioxin, Furans, Amines, Nitrides, Styrene, Benzene, 1, 3- butadiene, CCl<sub>4</sub>, and Acetaldehyde results on burning of plastics waste.
- Harmful gases such as Carbon Monoxide, Formaldehyde etc. are released during product manufacturing.
- Degradation of plastics leads to the release of methane which is a major contributor green house effect.

#### SALIENT FEATURES OF PLASTIC WASTE MANAGEMENT RULES, 2016:

- Carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness;
- Carry bags shall either be in natural shade or made using pigments prescribed by the Bureau of Indian Standards (BIS),
- Carry bags made of recycled plastics shall not be used for packaging food stuff
- Carry bag or products made of recycled plastic shall not be used for storing, carrying, dispensing or packaging food stuff
- Sachets using plastic material shall not be used for storing, packing or selling gutkha, tobacco and pan masala.
- Recycling of plastic waste shall conform to the Indian Standard: IS 14534:1998 titled as Guidelines for Recycling of Plastics, as amended from time to time;
- Plastic material, in any form including Vinyl Acetate - Maleic Acid - Vinyl Chloride Copolymer, shall not be used in any package for packaging gutkha, pan masala and tobacco in all forms.

#### REFERENCES

- <https://www.earthday.org/earthday/>
- <https://ecologycenter.org/factsheets/adverse-health-effects-of-plastics/>
- <http://cepb.nic.in/plastic-waste-rules/>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2873021/>
- [http://www.terin.org/sites/default/files/2018-06/plastic-waste-management\\_0.pdf](http://www.terin.org/sites/default/files/2018-06/plastic-waste-management_0.pdf)
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Plastic causes environmental pollution - air, water, land and also gives cancer to humans

#### STEPS TO REDUCE PLASTIC CONSUMPTION

- Use paper or cloth bags instead of plastic bags for shopping,
- Avoid using plastic straws for drinks,
- Use reusable bottles and cups
- Use cardboard boxes for storing things,
- Do not promote the use of plastic cups, plates or spoons, especially the disposable single-use ones,
- Discourage the use of disposable plastic containers for packaging food materials,
- Buy food in glass or metal containers,
- Avoid storing foods in plastic containers
- Do not give plastic toys to your children
- Use natural fibre clothing, bedding and furniture
- Avoid all PVC and Styrene products
- Creating public awareness is very important,
- Controlling waste generation at the source,
- Finding out alternatives for plastics,
- Finding out alternatives methods for recycling of plastics,
- Establishing more plastic recycling facilities.

SAVE MOTHER EARTH  
SAY NO TO PLASTICS

World Earth Day 2018  
Theme: End Plastic Pollution

Refuse  
Reduce  
Reuse  
Recycle  
Responsible  
PLASTICS

