

## A Review : Hazards Of Polythene On Health

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### Introduction

Plastic is a kind of material that is commonly known and used in everyday life. Generally, there are two kinds of commercial plastics, thermoplastic and thermosetting plastic. Thermoplastics can be reheated, melted, and molded into different shapes, while thermosetting plastic will degrade and turn into other substances if reheated after molding. According to American Chemistry Council (2007) plastic is a very useful material that brings us convenience and makes many things possible. One of the well-known facts is its cheap price. Making packaging will cost 89% more to the consumers without the use of plastics. Indian plastic industry market is one of the leading sectors in the country.

The history of the plastic industry in India dates back to 1957 with the production of polystyrene. Since then, the industry has made substantial progress and has grown rapidly. The industry is present across the country and has more than 2,000 exporters. It employs more than 4 million people in the country and constitutes 30,000 processing units; among these, 85-90% belong to small and medium enterprises. India manufactures various products such as plastics and linoleum, houseware products, cordage, fishnets, floorcoverings, medical items, packaging items, plastic films, pipes, raw material, etc. The country majorly exports plastic raw materials, films, sheets, woven sacks, fabrics, and tarpaulin. The Government of India intends to take the plastic industry from a current level of Rs. 3 lakh crores (US\$ 37.8 billion) of economic activity to Rs. 10 lakh crores (US\$ 126 billion) in 4-5 years. (online information)

Plastic has changed our everyday life. We are involved with plastic made products in various ways. Plastic plays an important part in our life. Plastics are used widely everywhere in our life. Plastic makes our life easier and better. They are composed of a network of molecular monomers bound together to form macromolecules of infinite use in human society. Day by day peoples are becoming more and more dependent on the use of plastics because of the characteristics of plastic such as inert, durability, flexibility and versatility and so on. The durability of plastics and their potential for diverse applications, including widespread use of disposable items, were anticipated, but the problems associated with waste management and plastic debris were not (Yarsley & Couzens 1945).

Plastic is lightweight. Without plastics, 3.98 times more material by weight would be needed for packaging; for every seven trucks needed to deliver paper to grocery stores, only one truck is needed to carry same number of plastic grocery bags. That means during transportation, a big amount of oil is saved and also less greenhouse gases will be released. Plastics may be easy and convenient for everyday use. However, overlook on negative impacts of plastic on health of living organism as well as on environment is a burning problem. In view of use of plastic, it is more important to focus on misuse and improper disposal of plastic. Thus, the present review paper focussing on hazards impact of plastic on health prior to animal, human being and environment.

#### **Methodology:**

Using secondary data published as a research paper, official report available as online or offline mode for reviewing Hazards of plastic on animal, human being and environment health.

#### **Result and discussion:**

Effects of Polythene Wastes on Environment and Animal. Plastic is one of the major toxic pollutants of present time. Being composed of toxic chemicals and most importantly a non biodegradable substance, plastic pollutes earth and leads to serious environment pollution such as soil pollution, water pollution, and air pollution. The Polythene waste problem rapidly growth by the way of mismanaged. According to report by the united Nation Environment programme, around 300 million tonnes of plastic waste is generated every year. (Okunola A Alabi, et al 2021) studies show that Indiscriminate disposal of wastes from plastics and plastic products can lead to environmental pollution which is entanglement and death of aquatic organisms , sewage system blockage in towns and cities especially in developing countries, resulting in creating conducive environment for breeding mosquitoes and other disease causing vectors and production of foul smells, reduction in water percolation and normal agricultural soils aeration thus causing reduced productivity in such lands and in ( Forrest, A.K., and Hindell, M. 2018.) studies reported that 10000 marine animals and wild birds die by eating the plastic bags in the streets, open spaces and grasslands or drums, garbage or those attached to the plants were exposed to the disease. As well as plastics are the common floating debris material and the most pervasive form of waste along this waterway as well as its surrounding environment, hanging on trees and littering open spaces, presenting a threat to humans, animals and aquatic life.(Wiseman, M.; Vurayayi, 2012) There is no safe way to dispose plastic waste and waste causes serious damage to environment during its production process, during its usage and during its disposal process.

#### **Effects of Polythene Wastes on Human health**



It is generally believed that plastic polymers are responsible for the suspected health risks like irritation in eye, vision failure, breathing difficulties, respiratory problem, liver dysfunction, cancer, skin diseases, lings problem, headache, dizziness, birth effect, reproductive, cardiovascular, genotoxic, gastrointestinal. (Okunola A Alabi, etal 2021). Besides, Infants and children may be especially vulnerable to the toxic effects of phthalates given their increased dosage per unit body surface area, immature metabolic system capability and developing endocrine and reproductive system.

### Conclusions

Hazards of polythene is huge problem to nature on a universal scale, from the individual level to the level of populations. The study reveals that the negative consequences of plastic on human health, animal and environment as a result of exposure to toxic chemicals used in the production of plastics. . There is no safe way to dispose plastic waste and waste causes serious damage to environment during its production process, usage and during its disposal process so, there is need for better education awareness about polythene waste, reuse, recycle and disposal also the government and health agencies should take stern steps about sustainable production use and disposal of polythene

### References

- Alabi OA, Ologboniaye KI, Awosolu O Alalade OE(2019) Public and Environmental Health Effect of Plastic Wastes Disposal : A Review.
- Michigan Technological University. (2004). Life Cycle Analysis of a Plastic Bag. [Online] Available: <http://techalive.mtu.edu/meec/module14/Conclusions.htm>
- Stevens, E. (2001). Green Plastics: An Introduction to the New Science of Biodegradable Plastics. Princeton, NJ: Princeton University Press
- Barnes, D.K.A., Galgani, F., Thompson, R.C., and Barlaz, M. 2009. Accumulation and fragmentation of plastic debris in global environments. *Philosophical Transactions of the Royal Society* 364: 1985-1998.
- Forrest, A.K., and Hindell, M. 2018. Ingestion of plastic by fish destined for human consumption in remote South Pacific islands. *Australian Journal of Maritime and Ocean Affairs* 10 (2): 81-97.
- Keswani, A., Oliver, D.M., Gutierrez, T., and Quilliam, R.S. 2016. Microbial hitchhikers on marine plastic debris: Human exposure risks at bathing waters and beach environments. *Marine Environmental Research* 118: 10-19.

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United Nations Environment Programme (UNEP). 2019. Legal limits on single-use plastics and microplastics: a global review of national laws and regulations. Nairobi: UNEP.

Worm, B., Lotze, H.K., Jubinville, I., Wilcox, C., and Jambeck, J. 2017. Plastic as a Persistent Marine Pollutant. *Annual Review of Environment and Resources* 42: 1-26.

Wiseman, M.; Vurayayi, M.R. The incidence of plastic debris along Tyume river in Alice, South Africa. *Int. J. Asian Stud.* 2012, 2, 1801–1814.