

WEEK 18- Microplastics, Packaging, effect on body..

Resources:

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View YouTube video - what are microplastics & how are they harming our oceans <https://youtube.com/watch?v=tG4AYagBz9Q&feature=share>

View YouTube video - the human health impacts of micro-and nanoplastics. <https://youtu.be/RoO1p4QIBAE>

See this website for- 8 ways to avoid microplastics (& why it's important)

<https://get-green-now.com/ways-to-avoid-microplastics/>

Discussions included:

Microplastics are small fragments of plastic waste <0.2"long

Brief history of plastic manufacture- 1907 Bakelite (formaldehyde & ethanol); 1920 Polymers, 1933-45 Polyethylene, polystyrene, nylons; 1990s High density polyethylene thermoplastic aka HDPE-which is NOT biodegradable but can be recycled.

The 7 types of plastic currently are:

1. PET – Polyethylene Terephthalate used for food packaging.
2. HDPE (see above) used for household products/non food.
3. PVC-Polyvinyl Chloride not recyclable.
4. LDPE-Low Density Polyethylene.
5. PP- Polypropylene used for microwave containers, coffee cups, medicine bottles
6. PS-Polystyrene used for takeaway containers, cutlery, cups. Is a weak material & breaks down easily.

7. PC-Polycarbonate, some containing Bisphenol (BPA), used for baby bottles, car parts, sunglasses..

Microbeads. In 2018, UK gov 'leading' a world ban on microbeads... ie rinse off cosmetics, personal care products, toothpaste, soaps, showergel. Over 100K microbeads in 1 shower! UK manufacturers in this country banned production of-however many countries did not ban production, and imports do not appear to be scrutinised...

We consume average over 50K of microbeads every year, more in bottled water than fresh. [does the filter contain plastic?] It's in the air we breathe, the shellfish we consume, the milk from plastic bottles, the root system of vegetables, and trees.

Decomposition takes up to 450 years.

Marine death of habitat, and species, nanoplastics affect fish brains & behaviour. Immune, endocrine & reproductive systems all affected...how then are we affected?

No concrete conclusions-a hesitation, although the scientific community is discussing, and have seen that nanoplastics cross within the fetal environment. Nanoplastics have been found in the human body (lungs, liver, spleen, kidney tissue). Microplastic is excreted, proportions unknown from that consumed.

Is DNA affected? What will we evolve into?

RECYCLING WASTE PLASTIC

Types 1 – 7 require different recycling. Council waste systems in this country have different systems for disposal...the plastic that can't be recycled is sometimes shipped abroad e.g. Indonesia where it is burnt, or dumped, assuming it gets that far.

PET- only clear material can be recycled, black packaging cannot be as the machines cannot detect dark coloured dyed plastic. Is collected by councils.

HDPE- is recyclable but isn't biodegradable. Is collected by councils.

PVC-isn't recyclable but can be reused or repurposed.

LDPE- not commonly recycled-check with council.

P- can be recycled until it breaks down. Is collected by councils.

PS- isn't widely recycled, it's single use & often contaminated with food or drink.

PC /BPA- check with local council first.

[not the end of the story.....]