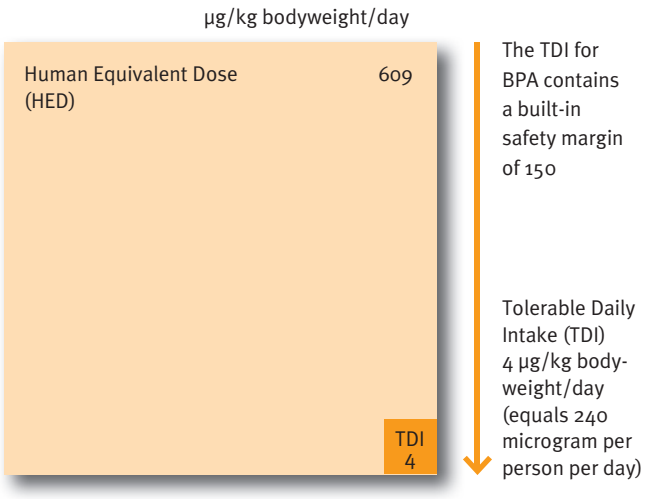
How much BPA
does a typical person take in through a normal diet?

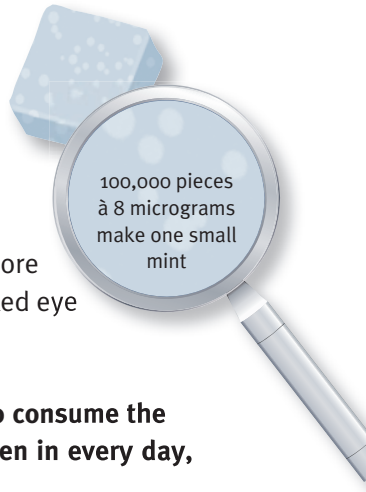
Bisphenol A (BPA) has been approved for use as monomer for the production of plastics articles in food contact such as polycarbonate and epoxy resin since 1990. Epoxy resins are widely used in food can linings to extend shelf life and protect food from contamination and spoilage. In the most recent European Food Safety Authority's (EFSA) assessment the authority concludes that BPA poses no health risk to consumers of any age group (including unborn children, infants and adolescents) at current exposure levels.[1]

How safe is safe? Very safe – because of a built-in safety margin

EFSA applied high Margins of Safety in the derivation of the safety level of Bisphenol A, the so called Tolerable Daily Intake (TDI). Based on the Human Equivalent Dose (lowest dose of BPA causing a small effect in animals translated into human organism taking into account kinetic and metabolistic differences) applied by EFSA, an additional safety factor of 150 is applied, to account for any potential uncertainties. From that basis the TDI is derived at 4 microgram/kg bodyweight/day.



How small is 8 micrograms?



If a small mint (weighing 800 milligrams) was broken into pieces each of which weighs 8 micrograms, you would have more than 100,000 tiny pieces, the naked eye could barely see.

It would take about 274 years to consume the entire mint if one piece was taken in every day, 365 days a year.

To reach the level of BPA considered safe for a daily lifelong intake one single person weighing 60 kg would have to consume **about 1450 cans of beverages**[3] **every day.**

[1] http://www.efsa.europa.eu/en/press/news/150121
[2] http://onlinelibrary.wiley.com/doi/10.2903/j.efsa.2015.3978/epdf, executive summary page 22
[3] http://onlinelibrary.wiley.com/doi/10.2903/j.efsa.2015.3978/epdf, exposure page 28

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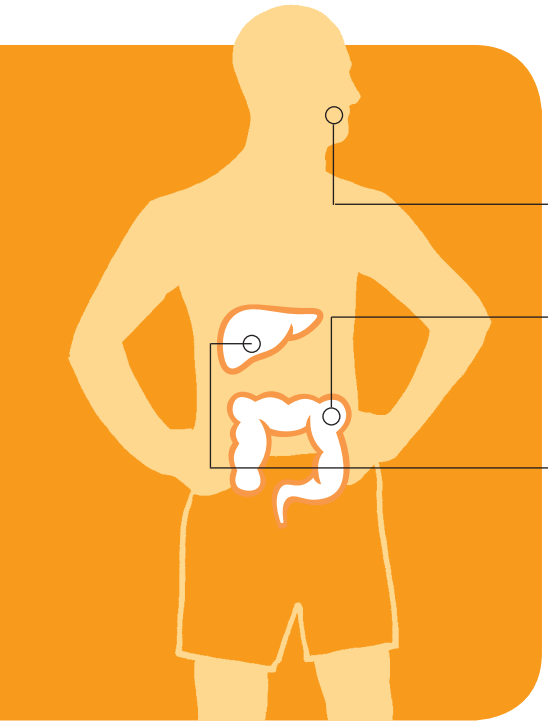
What happens to BPA inside the human body?



We know a great deal about how BPA is processed by the human body from extensive studies on lab animals and some studies with human volunteers.

The trace amount of BPA that may be taken in through the normal daily diet is far below a level that could cause health effects.

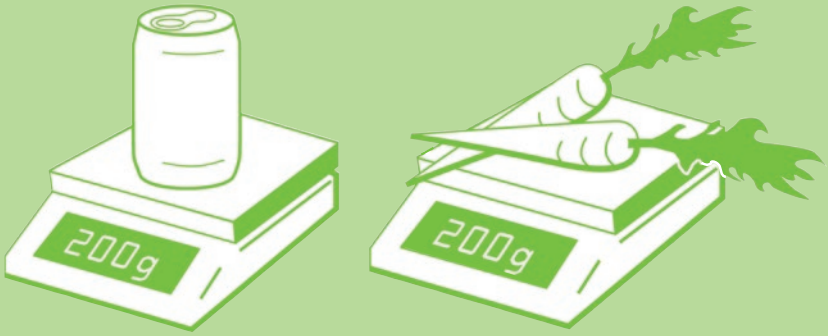
When ingested, BPA is absorbed through the intestinal wall. Most of the BPA that is taken in is converted in the intestine to an inactive kind of sugar with no known biological activity.

Any trace amount of BPA that remains is then converted in the liver to the same inactive substance before entering the bloodstream. The inactive sugarcompound is eliminated through urine within 24 hours. In clinical studies when volunteers were exposed to much higher levels of BPA than typical, no free BPA could be detected in the bloodstream.

Consuming “external” estrogens is part of the normal diet.

We regularly consume naturally occurring estrogen-like substances, called “phytoestrogens”, as part of our diet through vegetables like soy beans, carrots, garlic or coffee. Only in a laboratory it is possible to produce very low estrogen-like activity by exposure to very high levels of BPA which can never be reached in normal daily life.
Even more: **It is virtually impossible for consumers to be exposed to the amount of BPA established as safe limit by European and international authorities via food.**

Comparing ingestion of estrogen-like compounds in food and beverages of 200 g



0,1 microgram 0.04 % of the safe daily intake for a 60 kg person[4]

800 microgram[5]

The estrogen-like potency of BPA is similar to that of naturally occurring estrogen-like substances.
Carrots contain about 8000 times more estrogen-like compounds than the same amount of beverages from epoxy-coated cans.

[4] http://onlinelibrary.wiley.com/doi/10.2903/j.efsa.2015.3978/epdf, exposure page 28
[5] A. Cassidy, BNF Nutrition Bulletin Vol 24, Spring 1999

More information on BPA:

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