World Nutrition Journal |eISSN 2580-7013

ABSTRACT

How to understand bisphenol A (BPA) information correctly: Is it safe for human health

Akhmad Zainal Abidin

Institut Teknologi Bandung

Nutri Symposium 2024: Nutrition advancement in healthcare from conception to well-aged perfection: Unveiling nutrition's impact - Speaker

Received: 4 October 2024
Accepted: 7 October 2024
Published: 18 October 2024

Link to DOI
10.25220/WNJ.V08.S1.0016

Citation: Abidin A Z. How to understand bisphenol A (BPA) information correctly: Is it safe for human health. World Nutrition Journal.2024 October 18, 8(S1): 17.

Website
http://www.worldnutrijournal.org/

Bisphenol A (BPA) is a synthetic chemical widely used in consumer products like polycarbonate plastics and epoxy resins. This presentation examines the sources, prevalence, and health impacts of BPA, alongside regulatory measures to mitigate its risks. BPA, not naturally occurring, enters the environment via industrial waste and consumer product degradation. Research has detected BPA in water, air, soil, and food products. Findings reveal BPA concentrations in food items, with a case study from Nigeria showing varying levels in canned and fresh foods. The synthesis and degradation of polycarbonate plastics identify UV light and high temperatures as factors contributing to BPA release. BPA migration from packaging into food and beverages depends on storage conditions, such as temperature and duration. Health concerns highlight BPA's role as an endocrine disruptor, potentially leading to various diseases. While BPA can be metabolized and excreted, some may accumulate due to metabolic issues. Regulatory measures, particularly in the European Union, have evolved to address BPA risks. Actions include bans on BPA in certain products and strict migration limits for food contact materials. The European Food Safety Authority (EFSA) recently lowered the tolerable daily intake (TDI) for BPA to 0.2 ng/kg body weight, significantly below previous limits, reflecting heightened health concerns. Recommendations include regular updates to food packaging safety regulations based on the latest research. Collaborative scientific efforts are crucial to developing effective, evidence-based regulations that protect public health without unfairly benefiting specific industry players.

Keywords: bisphenol A (BPA), polycarbonate degradation, chemical migration, food safety regulations

Corresponding author:
Akhmad Zainal Abidin
Institut Teknologi Bandung
Email : mitraiqro@yahoo.com