

# **Introduction to an Interim Report from the Study Group on Health Effects of Endocrine Disrupting Chemicals**

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## **1. Background**

The Study Group on Health Effects of Endocrine Disrupting Chemicals was established in April 1998 under the Director General of the Environmental Health Bureau of the Ministry of Health and Welfare. The purpose of the Study Group is to identify the issue of endocrine disrupting chemicals (hereinafter referred to endocrine disruptors) and to discuss approaches toward this issue.

The Study Group has held six sessions to date. During these sessions, the Group reviewed effects on human health. Also, the Group invited experts from foreign countries and international organizations such as WHO and OECD, and introduced approaches of these organizations and foreign governments toward these chemicals. The Study Group compiled and published an interim report in the session held on November 9<sup>th</sup>, 1998 on the basis of findings and understanding obtained through the previous sessions.

## **2. Outline of the interim report**

The report consists of four sections and an appendix. The four sections are individually titled “Introduction,” “Examining Endocrine Disruptors,” “Strategy for Resolving the Problems of Endocrine Disruptors,” and “Conclusion.”

### **(1) Introduction**

This section describes the background of problems of endocrine disruptors and what are points of these problems. The section also outlines the circumstances under which the report was compiled.

The descriptions include:

- Indications that certain types of chemicals may have endocrine disrupting actions at trace levels and may badly affect human health.

- Needs to take action, based on a tiered program, because many problems remain to be resolved scientifically.

## (2) Examining Endocrine Disruptors

This section gives basic information required to understand human health effects of endocrine disruptors, such as hormonal actions in the human body and the definition of endocrine disruptors by the International Programme on Chemical Safety/the World Health Organization (IPCS/WHO). The section also discusses expected action mechanisms of endocrine disruptors defined here and gives information on human health effects, based on domestic and international documents and reports.

The IPCS defines an endocrine disruptor as “an exogenous substance or mixture that alters function(s) of the endocrine system and causes adverse health effects in an intact organism, or its progeny, or (sub) populations.”

The information on human health effects given here includes effects on the female reproductive system and mammary glands such as uterine cancer, endometriosis, and breast cancer; effects on the male reproductive system such as decreased sperm counts, prostate cancer, testicular cancer, and hypospadias; and effects on the thyroid system.

Based on currently available findings and documents, the following evaluations are given:

- 1) There have been no reports on definite causal relationships between endocrine disruptors and health effects on humans, excluding instances caused by diethylstilbestrol (DES) which was administered for possible pharmacological actions on the endocrine system.
- 2) It is possible to take temporary measures for exposure levels in everyday life, if appropriate risk assessment and exposure evaluation are conducted. However, in order to resolve endocrine disruptor problems, it is imperative that the assumptions given below be established through assessments and evaluations.
  - ① No hormonal control can be easily disrupted, although the fetal period is though to be vulnerable.
  - ② No unexpected synergistic effects are caused by multiple chemicals.
  - ③ No unknown modes of activities exist at low dose levels.

### (3) Strategy for Resolving Problems of Endocrine Disruptors

This section shows approaches for endocrine disruptors which are being conducted at home and abroad, and discusses basic policies to resolve problems and research/studies to be performed to help secure human health.

The basic policies include concepts of chemical safety, the development of the information management/provision system, the promotion of international cooperation, and the promotion of comprehensive research. Target problems for research are divided into two groups: ① problems which require research to obtain needed data; ② problems which are expected to be resolved with the promotion of state-of-the-art science.

### (4) Conclusion

As a conclusion of the report, this section indicates three matters we should keep in mind, when placing in practice measures required to resolve endocrine disruptor problems.

The matters are:

- 1) There are various questions to be deliberated in endocrine disruptor problems.
- 2) Endocrine disruptors are an issue to be handled globally.
- 3) Endocrine disruptor problems may extend to multiple generations.

### (5) Appendix

This section reports the results of studies which were conducted on three chemicals used as ingredients of plastic containers for food use, and indicates plans for future research/studies. Based on available study findings, the Study Group has so far determined that it is not necessary to take immediate action including “prohibition of use,” but that it is necessary to continuously conduct more research/studies.

The three chemicals are:

- 1) Polycarbonate (bisphenole A)
- 2) Polystyrene (styrene monomer, dimmer, and trimmer)
- 3) Polyvinyl chloride (phthalates)