

	<b>BIOMEDICAL RESEARCH ON TRACE ELEMENTS</b> Japan Society for Biomedical Research on Trace Elements
<a href="#">Available Issues</a>   <a href="#">Japanese</a>	
Author: <input type="text"/> <a href="#">ADVANCED</a>	Volume <input type="text"/> Page <input type="text"/>
Keyword: <input type="text"/> <input type="button" value="Search"/>	<input type="text"/> <input type="text"/> <input type="button" value="Go"/>



[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1880-1404

PRINT ISSN : 0916-717X

## Biomedical Research on Trace Elements

Vol. 15 (2004) , No. 4 358-360

[\[Image PDF \(272K\)\]](#) [\[References\]](#)

### The effects of nicotinic acid on testicular atrophy caused by di (2-ethylhexyl) phthalate(DEHP) and metal concentrations in the atrophic testes

[Shigeru Suna](#)<sup>1)</sup>, [Fumihiko Jitsunari](#)<sup>1)</sup> and [Fumiyuki Asakawa](#)<sup>2)</sup>

1) Hygiene and Public Health, Faculty of Medicine, Kagawa University

2) Human-Environmental Science Research Laboratory, College of Life Science, Kurashiki University of Science and the Arts

(Accepted: September 24, 2004)

#### Abstract:

Di-(2-ethylhexyl) phthalate (DEHP) is the most common plasticizer for plastics such as polyvinyl chloride. However, recent studies have demonstrated toxic effects of DEHP on the testes and liver in rodents. In this study, the effects of nicotinic acid on the testicular toxicity of DEHP and metal concentrations in the atrophic testes were examined in 4-week-old SD rats. The rats were fed a diet containing 1% (w/w) DEHP and water supplemented with 0.5% (w/w) nicotinic acid for a week. In rats given the DEHP diet, testicular atrophy accompanied by aspermatogenesis developed. By co-administration of nicotinic acid, testicular atrophy by DEHP was definitely inhibited. However, hypertrophy in the liver was not prevented. In the atrophic testes, zinc was slightly decreased, while iron, copper and calcium were higher than those in normal testes. Strong negative correlations were found between testicular weight and testicular iron, copper, and calcium concentrations.

**Key words:** [di-\(2-ethylhexyl\) phthalate \(DEHP\)](#), [testicular atrophy](#), [testicular metal concentrations](#), [nicotinic acid](#), [rat](#)

[\[Image PDF \(272K\)\]](#) [\[References\]](#)

Download Meta of Article [\[Help\]](#)

[RIS](#)

To cite this article:

Shigeru Suna, Fumihiko Jitsunari and Fumiyuki Asakawa, "The effects of nicotinic acid on testicular atrophy caused by di (2-ethylhexyl) phthalate(DEHP) and metal concentrations in the atrophic testes", Biomedical Research on Trace Elements, Vol. **15**, pp.358-360 (2004) .

---

JOI JST.JSTAGE/brte/15.358

Copyright (c) 2005 by Japan Society for Biomedical Research on Trace Elements

---



---

[Japan Science and Technology Information Aggregator, Electronic](#)

