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شبكة المعلومات الجامعية

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التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

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Ain Shams University
Faculty of Specific Education
Home Economics Department

Effect Of Some Rich Sources Of Phytoestrogens Feeding On Developmental Indications And Sex Hormones Status In Experimental Animals

By

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A Thesis Submitted for Partial Fulfilment of the Requirements

Of Ph.D. Degree in Home Economic Dept., Cairo, Egypt

(Nutrition & Food Science)

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2020

اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ *خَلَقَ
الْإِنْسَانَ مِنْ عَلَقٍ *اقْرَأْ وَرَبُّكَ
الْأَكْرَمُ *الَّذِي عَلَّمَ بِالْقَلَمِ *عَلَّمَ
الْإِنْسَانَ مَا لَمْ يَعْلَمْ ﴾ العلق: 1 - 5

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A Thesis Submitted for Partial Fulfilment of the Requirements of
Ph.D. Degree in Home Economic Dept., (Nutrition & Food Science)

ABSTRACT:

Background: Phytoestrogens are double-edged sword, broadly dietary chemical substances of plant origin that are structurally and functionally similar to 17-β-oestradiol (E2). This structural similarity to E2 enables phytoestrogens to cause (anti) oestrogenic effects by binding to the oestrogen receptors, and the question of whether phytoestrogens are beneficial or harmful to human health remains conflicted. ***Aims and Objective****:* Doubts concerning phytoestrogens have increased recently, when exposure early of phytoestrogens, including infants, adolescents, and puberty. Moreover, the question of whether potential of adverse effects on sex hormones, developmental and reproductive on male and female in this work. ***Material and Methods****:* Ninety Six (96) pre-weanling male and female albino rats of Sprague-Dawely strain (30 - 40g), postnatal day (PND) 21 *ds*. The rats were divided into two main groups for four weeks (short term) first main group (negative control) divided into two groups male (8 rats/ group), female (8 rats/ group) were fed on basal diet AIN-93G /4wks, Then according to Ain-93M (Mature) for 8 weeks (long term), and the second main group (Treated groups) divided into two groups male (40 rat/group), female (40 rat/group) were fed soy infant formula (Isomil) for four weeks, Iso Nu "1" was fed since onset trail until two weeks, and Iso Nu "2" feeding two last weeks(short term). After that AIN-93M supplemented with soybean 15%, 30%, flax seeds 7.5%, and sesame seeds 30% were modified and corrected for protein, fat, carbohydrate and fiber contributed by all seeds instead of corn starch. And divide equally into treatment 8 subgroups of equal mean weights (10 rats/ group) (long term), daily feed intake, and weight gain for rat was calculated, then section of liver, testis in male and liver, ovary and uterine in female.

Results*:** There were a significantly different ($p<0.05$) in "BWG, FI, and FER" in treated groups and their negative controls male or female groups during 12weeks, and revealed that some morphological changes in testis male groups as hypertrophy and atrophy, meanwhile, there were no significantly changes ($p<0.05$) in section of liver in male or female groups. On the other hand, there were a significant different ($p<0.05$) in F-testosterone, FSH, LH, SBHG, PROG, and thyroid gland (T4, TSH) not differ in T3 in male or female groups. Histological were appeared significantly change in section testis, ovary and uterine in treatment groups. ***Conclusion: In spite of, phytoestrogens are common in infant and adult foods especially foods made from soybeans and products, flaxseed, sesame rich on isoflavones and lignan which have adverse effects on reproductive health, sex hormones and development, so i should be increased research's on effects of phytoestrogens toxicity on pituitary dysfunction or endocrine disruptors "ECD", and the right age for exposure to phytoestrogens fractions "isoflavonis, liganan, coumestans"

Key words: phytoestrogens-adverse effects- soybean- flaxseeds- sesame seeds- sex hormones- developmental-reductive- short-term- long-term.

Editor By/ Researcher:-

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