

NMA/AGSM/2022/BMS/001 - Instant Noodles Induce Early Vaginal Opening and Irregular Oestrous Cycle on Young Female Wistar Rats

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Abstract

Background: With the trending concern on the effect of junk foods, especially instant noodles in young children, the present study sought to evaluate the pubertal and oestrous changes in young female Wistar rats fed with Instant Noodles' different products/brands.

Methodology: Forty-two (42) healthy female Wistar rats, aged 22 to 28 days, weighing between 30-50 grams, were used. Rats were grouped into seven (7) groups of six (6) in each group. The groups include control (1), Tummy Tummy (2), Tummy Tummy + spice (3), Supreme (4), Supreme + spice (5), Indomie (6), Indomie + spice (7). Instant noodles and animal feeds were given at the proportion of 70%: 30% for eight (8) weeks, at a dose of 0.001 kg/body weight/day.

Result: All the test groups showed a significant reduction in the mean onset of Vaginal Opening compared to the control. Alteration in the different phases of the oestrous cycle of test groups resulted in the oestrous cycle abnormalities. Significant increase in the levels of serum LH, and FSH but no changes in serum estradiol and progesterone in test groups. There was a significant reduction in mean Percentage weight gain in all groups compared to the control. There were also alterations in the cytohistology of the test animals compared to the control.

Conclusion: This result suggests that instant noodles induce early vaginal opening and irregular oestrous cycles in young female Wistar rats, probably by disrupting the hypothalamic-pituitary-gonadal axis. From the results, it can be concluded that instant noodles influence female reproductive functions.

Keywords: Noodles Induced Early Vaginal Opening; Irregular Oestrous Cycle; Female Wistar Rats.

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