

UNDERNUTRITION DURING EITHER THE PRE- OR POST-WEANING PERIODS DOES NOT AFFECT LONGEVITY IN MICE

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Undernutrition of rodents during a lengthy period of adult life can lead an increase in their lifespan by about 50%. However, it remains uncertain whether undernutrition during gestation and/or the suckling period can also affect a rodents life span. We have now investigated whether a short period of undernutrition of mice either before or immediately after the weaning period could modulate the length of their lifespan. Quackenbush mice were undernourished for 40 days by standardised procedures either from conception until weaning (G-L-W+ group) or from weaning (day 19) till 60-days-of-age (G+L+W-group) and compared to well fed controls (G→+L+W+ group). All mice in the two “undernourished” groups were allowed to feed ad libitum at the end of their designated periods of diet restriction. During the course of the experiment some mice became seriously ill and were required to be killed before their “natural” death. All other mice were allowed to live their normal life span which was recorded. Of those mice that died of natural causes it was found that about 90% died between about 300 to 700 (average 552-570; median 556-595) days of age irrespective of group. Any differences between groups were not statistically significant. It was also found that there were no significant differences between groups in the numbers of mice that survived beyond the 90th percentile of maximum life span. Our results provided no evidence that a short period of undernutrition of mice either before or immediately after weaning has a significant effect on their life span.