

## Development of Tonic Immobility reaction in broiler chicks

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Tonic immobility (TI), a state of reduced responsiveness induced by physical restraint which operates as a potential response to fear, was studied in broiler chicks. Only studies related to poultry TI reactions focused on laying hens were available in the literature. It was remarkable to note that the weight of the chick increased up to 2,300 g from 40 g in a 5 week period, with a major increase in the 3rd week. This may be due to TI and it is now receiving more attention in broiler chicks. Thus, the aim of the present study was to investigate the development of the TI reaction in broiler chicks. A total of 36 broiler chicks (18 numbers of each sex) were examined to note the duration of TI reaction at 19, 23, 27, 31 and 33 days old by the modified procedure of Jones and Faure's method for laying hens (1981). A TI reaction was induced by placing the bird on its back, and restraining the bird while covering its eyes with the hands for 20 seconds in a box (180 X 250 cm) in an independent room. Time was measured for the chicks to escape from the box and recorded as the duration of the TI reaction. Durations of minimum and maximum acceptable TI reaction were set at 20 and 400 seconds, respectively. The measurement was repeated for the chicks with TI reaction below 20 seconds. The results showed that the TI reaction tend to be lower in females compared to that of males, and was also significantly reduced as age increased in both sexes ( $P < 0.05$ ). The results also indicated that a modified method can be used to induce the TI reaction in broiler chicks.

**Keywords:** tonic immobility reaction, age, sex, broiler chicks