Inhibitory (passive) avoidance

Features:

- Can be used for both active and passive avoidance testing
- Designed for testing in rats

Specifications:

Dimensions (HxWxD)	Black compartment: 30cm X 20cm X 20 cm White compartment: 30cm X 20cm X 20 cm Stimulator apparatus: 28 cm X 21 cm X 8 cm
Current intensity	0.1-10 mA
Frequency	1-100 HZ
Power Requirements	220 V, 50/60 HZ

Definition:

One of the most common animal tests in memory research is the inhibition to imitate activities or learned habits. The term “passive avoidance” is usually employed to describe experiments in which the animal learns to avoid a noxious event by suppressing a particular behavior. Animals experience different sensitivity to the foot-shock punishment applied in the dark area, immediately after the first trial the animal is returned to the lighted area to evaluate if the task has been acquired. A criteria is established to determine the learning of the test, usually requiring the animal to remain in the lighted area for a period of 30–60 s. In this way, all the animals have a similar degree of learning independently of the amount of trials needed to attain it. The animals are placed in the lighted compartment and after they entered with the four paws into the dark area, the door is closed and a mild foot-shock is delivered. Immediately after the shock they are placed back in the lighted area for another trial. Training would continue this way until the animal remains in the lighted area for a certain period of time (30 or 60 s), a time at which the training is considered to be acquired by all the animals. The number of trials to attain criteria are counted as an indication of the speed of acquisition. Retention of the test is measured 24 or 48 hours later. The animals are placed in the lighted area, the door opened and the latency to step with the four paws into the dark area is recorded. A cut-off latency of 180 or 300 s is usually imposed. this procedure is useful to determine the effect of drugs on acquisition as amnesic drugs significantly increase the number of trials to reach the criterion. Saline-treated animals generally need 1–2 trials to reach criterion while animals under diazepam or scopolamine need 3–6 trials. Once the animals have been trained to a predetermined criteria (i.e., 30 s. avoidance) any effect of the drug on the retention trial can be associated to drug effects on consolidation rather on the acquisition process. Alternatively, drugs could be administered before the test session in order to determine the effect of the drug on retrieval processes. Brain lesions differentially affect acquisition or retention and this task has also been used to demonstrate the effect of grafts on recovery of function.