increase in the activities of some pineal enzymes (e.g., succinate dehydrogenase and monoamine oxidase) and also other pineal ultrastructural changes (e.g. hypertrophy and hyperplasia of pineocytes) in response to cold exposure. However, no attempt was made in these studies to correlate the above changes with possible alteration in reproductive functions. The activity of monoamine oxidase (MAO) is of interest, since it is involved in the metabolism of serotonin, a pineal indole which is strongly antigonadotropic when administered to the male rat[19-21]. It has been reported that most of the serotonin produced in the pineal is metabolized by MAO[22]. It is possible, therefore, that an increase in metabolism of serotonin by virtue of increased activity of MAO in the cold-exposed rats might account, at least in part, for the failure of cold temperature to affect the testes of these animals[5,6] as reported previously[23].

Résumé. La diminution du poids des testicules et l'arrêt de la spermatogenèse furent observés chez des hamsters exposés au froid et maintenus dans un cycle alternant de 14 h de lumière et 10 h d'obscurité. En enlevant la glande pinéale, ces changements organiques ne se sont pas produits.

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Sherrington was Right About the Trapezius Muscle Innervation

In 1898 SHERRINGTON[1] reported that the Trapezius muscle of the monkey received motor innervation from the upper cervical spinal nerves in addition to motor innervation from the XI cranial nerve. This cervical spinal innervation was confirmed by STRAUS and HOWELL[2] through the electrical stimulation of the cut peripheral cervical nerve stumps which produced 'weak, though definite action' in the Trapezius muscle. Then CORBIN and HARRISON[3] reported that stimulation of the peripheral stumps of the upper 5 cervical nerves never produced a 'visible' contraction. They concluded that the entire motor supply was through the XI cranial nerve and the sensory proprioception was by way of the cervical nerves.

None of the above investigators used electromyography, the most sensitive and positive means of detecting the contraction of a muscle. Using as an experimental animal 7 squirrel monkeys, *Saimiri sciureus*, chosen because they are primates, reasonably inexpensive, and relatively easy to handle, an electromyographic investigation was undertaken to clarify the motor innervation to the Trapezius.

Bipolar fine-wire electrodes[4] were inserted into the superior, middle, and inferior positions of the Trapezius muscles 28 to 56 days following a surgical procedure in which the XI cranial nerve was severed proximal to its communication with the second cervival spinal nerve. Electrical stimulation of the cervical spinal nerves 2, 3, and 4 revealed electromyographic evidence of muscle contraction but not a visible gross contraction of the Trapezius muscle. Subsequent histochemical procedures[5] for phosphorylase activity revealed innervated as well as denervated fibres in the 3 portions of the muscle.

Both the electromyographic and histochemical evidence allow the following conclusions to be drawn: 1. The cervical spinal nerves, 2, 3, and 4 do contribute a small number of motor fibres to the Trapezius muscle. 2. While the entire Trapezius receives motor innervation from the cervical spinal nerves 2, 3, and 4, the superior portion receives a greater proportion of this cervical motor innervation.

Once again SHERRINGTON has demonstrated his ability to stand the test of time and modern instrumentation. His conclusions with regard to the Trapezius innervation are sound despite the occasional reports to the contrary.

Zusammenfassung. Beim Eichhörnchen, *Saimiri sciureus* wurde elektromyographisch gezeigt, dass die Nerven in der Region der Nackenwirbelsäule den Trapeziusmuskel mit innervieren. Der obere Anteil dieser über den Trapezius verteilten Bewegungsinnervationen enthält stärkere Beteiligung durch die Nackenbewegungsinnervation.

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