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A82-40713

REMES, P.

**The effect of hypoxic and hypobaric exercises on
the blood-brain barrier in rats**

A82-40713

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A82-40713 # The effect of hypoxic and hypobaric exercises on the blood-brain barrier in rats. E Dux, F Joo (Magyar Tudományos Akadémia, Biofizikai Intézet and Biológiai Központ, Szeged, Hungary), L Dux, A Gecse, A Ottlecz, Zs Mezei, G Telegdy (Szegedi Orvostudományi Egyetem, Szeged, Hungary), L Bognar, P Remes, and J Hideg (Hungarian People's Army, Medical Corps, Hungary) (*International Union of Physiological Sciences, Annual Meeting, 2nd, Budapest, Hungary, July 13-19, 1980*) *Physiologist, Supplement*, vol 23, Dec 1980 (1982), p S-105 to S-107 10 refs

The effect of intermittent hypoxic and hypobaric environments on the ultrastructure of the blood-brain barrier in rats is studied, and the ability of the isolated brain capillaries of the pups from the previously exposed rats, as well as adult male rats, to synthesize prostacyclin and prostaglandin (PG) is determined. Results show that in pregnant rats, hypoxic exercises enhance the transport processes through the endothelial cells, as shown by an increased number of pinocytotic vesicles and a contraction of the nuclei of endothelial cells. Progesterone treatment prevents these alterations, and also normalizes the changes in the PGF₂ and PGE₂ synthesizing ability of the pups of hypoxic exercised rats. In adult male rats, no ultrastructural changes and milder alterations of PG synthesis are found.

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