

Chronobiological potential of skin structural transformations: specific aspect of study

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In the course of conducted investigations, it has been revealed that skin cover of young (under 1 year) foxes, keeping in conditions of industrial complex and being in optimum conditions of life activity, by index of resiliency module surpasses the same foxes from natural biocenoses. Relative lengthening and durability limit when straining are much higher at foxes from natural populations than at animals, being in conditions of limited biodynamics. Environmental conditions influence greatly on structural forming of skin by reaching 3-years age, and it is accompanied by perceptible deterioration of its biomechanical potencies at mature foxes of cage keeping regime. The increase of such indices as durability limit when straining and resiliency module has been observed at the same time at the same foxes from natural populations with deterioration of parameters of relative skin lengthening. Thus, skin cover of mature foxes from natural populations by its biomechanical characteristics surpasses the same at foxes, keeping in conditions of prolonged hypokinetics. Young (under 1 year) wild minks excel their analogues, keeping in a cage, in an index of relative lengthening and yield in figures expressions of resiliency module, while the differences in durability limit when straining aren't found. In later age periods (3 years and older) representatives of natural biocenoses show high indexes of relative lengthening and essential deterioration of resiliency module and durability limit when straining as compared with minks in a cage. Therefore, skin cover of wild minks surpasses skin cover of cage animals in elastic – deformable characteristics. It has been noticed during study of age dynamics of biomechanical indexes of skin cover, that natural increase of indexes of relative lengthening and durability limit when straining under 3-years age is observed at cage foxes and their further deterioration according to age, while resiliency module decreases with age naturally. Representatives of natural biocenoses demonstrate analogous picture on alteration of relative lengthening and coinciding with it dynamics of resiliency module, while durability limit when straining increases with age naturally. Deformable indexes of cage minks reduce with age, but durability characteristics increase. Representatives of wild fauna show decrease of relative lengthening and durability limit when straining and simultaneous increase of resiliency module. At the same time, morph – metric research of the material hasn't revealed correlation of biomechanical parameters of skin with such indexes as the whole total thickness of derma and relative representation of its layers, although young cage foxes and minks surpass their wild coevals in intensity of growing process and it requires elaboration of complex chronobiological approach for revealing more compact system of informative signs and examination of their distribution in area.

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