

Créatine, créatinekinase et aldolase du triceps sural durant la croissance du Rat,
par A. JAAFAR et G. MARÉCHAL. (*Laboratoire de physiologie générale, UCL, FYMU, B-1200
Bruxelles.*)

Translated from French

Creatine, Creatinekinase, and Triceps Surae Aldolase during Rat Growth,

by A. JAAFAR and G. MARÉCHAL. (Laboratory of General Physiology, UCL, FYMU, B-1200
Brussels.)

Total creatine (Cr, sum of creatine and phosphocreatine) increases from 5.3 $\mu\text{Mol} / \text{g}$ at birth to 40.8 $\mu\text{mol} / \text{g}$ at the age of 50 days (Wistar rats, females). However, this increase is not proportional to that of muscle weight. It is faster during the first 12 days (1.2 $\mu\text{mol} \cdot \text{g}^{-1} \cdot \text{day}^{-1}$ on average) than during the next 38 days (0.55 $\mu\text{mol} \cdot \text{g}^{-1} \cdot \text{day}^{-1}$). The total creatine does not change until the 60th day, then it decreases, reaching 34.4 $\mu\text{Mol} / \text{g}$ at 90 days, a value that will decrease only very slowly with the age of the rat. Creatine kinase (CPK), the only active enzyme on creatine, increases from birth (95 IU / g) to 50 days of age (2,251 IU / g), three times faster than creatine. Moreover, the temporal course is quite different from that of creatine: the CPK does not increase much during the first days after birth, but begins towards the 3rd day a fast growth (78 $\text{U} \cdot \text{g}^{-1} \cdot \text{day}^{-1}$) which brings it to its adult value from the age of 25 days. However, it continues to increase slowly from 25 to 59 days (at 10 $\text{IU} \cdot \text{g}^{-1} \cdot \text{day}^{-1}$) and then decreases towards the adult value, reached around the 90th day (1894 IU / g). As for glycolytic aldolase, its activity increases steadily from 8 days (3.8 IU / g) to 60 days (63.2 IU / g) and then returns to 42.8 IU / g at 90 days of age. The three parameters studied therefore evolve differently during growth.