facilitatory effect of the elimination of reticular influences (cerveau isolé) on this phenomenon (MANCIA et al.[6]). It is possible that descendent cortical (and may be also reticular) influences are not only inhibitory but also activating, acting against the intrinsic tendency of specific systems to 'habituation' – reduction of the reaction to stimuli monotonously repeated for a long time.

Zusammenfassung. Bei Ratten wurde mittels «Spreading Depression» eine funktionelle Dekortikation erzeugt. Habituation und Deshabituation akustischer fortgeleiteter Potentiale (evoked responses) im Colliculus caudalis bleiben erhalten. Auch die reversible Abnahme der «evoked responses» während der Orientierungsreaktion bleibt erhalten.

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In vitro Release of Free Fatty Acids by Adipose Tissue in Young and Old Nephrotic Rats[1]

Following the demonstration of *in vitro* free fatty acid (FFA) release by the epididymal fat pad of the rat[2,3], this preparation has been used extensively to study some of the factors influencing fatty acid release from the adipose tissue. In a previous communication it was reported that the release of FFA from adipose tissue is more active in young rats than in older ones[4]). The present paper reports the results of similar studies performed on nephrotic rats and compares the findings with those obtained in normal animals.

Materials and Methods. As in the previous study[4], the male, albino rats of the Wistar strain used in these investigations, were divided into three groups. Young, rapidly growing animals weighing less than 100 g with an approximate age of 30 days (Group 1), nature rats weighing 200–300 g, with an approximate age of 3–4 months (Group 2), and older animals, weighing 350–475 g with an age-range of 4–6 months (Group 3). The experimental procedure, incubation and chemical determinations were the same as previously reported[4].

Nephrosis was produced by intraperitoneal administration of 0.5 ml (in Group 1 animals) or 0.1 ml (in Group 2 or 3 animals) of anti-kidney serum produced in rabbits. The animals were sacrificed 2 weeks after the administration of anti-kidney serum. In case of Groups 2 and 3 about half of the animals were sacrificed 8 and 13 weeks, respectively after the initial injection. No difference could be observed between the animals that were sacrificed two weeks after anti-kidney serum and the ones used several weeks after the injection. In the case of Group 1 rats no more than 2 weeks could elapse between injection and the performance of the experiments, since more time would have placed them into the next group. The presence of proteinuria and hematuria were used as criteria for nephrosis.

Results. Figure 1 compares release of FFA from the epididymal fat pad of nephrotic rats in the different groups. If release of FFA per weight of adipose tissue is considered, Group 2 animals released less FFA than did young rats. This difference is statistically highly signi-

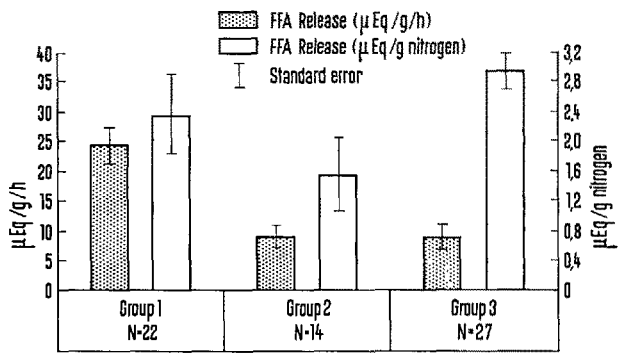

Fig. 1. FFA Release by epididymal fat pads of nephrotic rats.

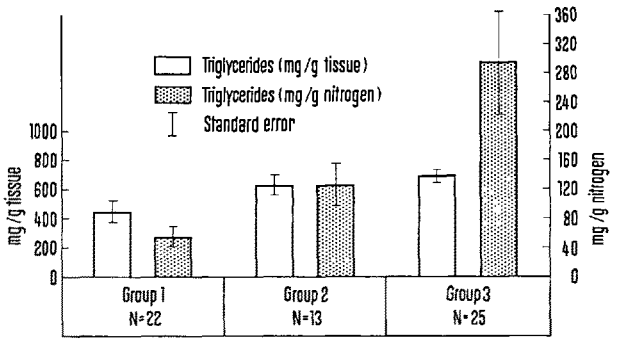

Fig. 2. Triglyceride content of epididymal fat pads in nephrotic rats.

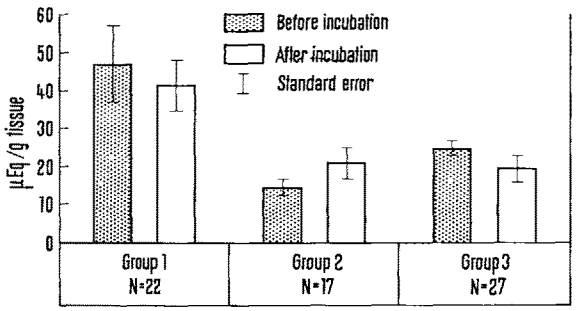

Fig. 3. FFA Content of epididymal fat pads of nephrotic rats.

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ficant ($p < 0.01$). Release by Group 3 animals was not different from Group 2 rats. If however, release is expressed per gram of tissue nitrogen, the statistical significance of the differences disappear.

Table I indicates that the presence of epinephrine did not change the release significantly in Groups 1 and 2, and it increased release in Group 3. Occosional increases were noted in all groups but they failed to occur consistently enough in Groups 1 and 2, reach statistical significance.

The triglyceride content per weight of adipose tissue of Group 1 rats was lower than that of Group 2 and 3 animals. No significant differences existed between the latter two groups (Figure 2). Differences in triglyceride content among the groups became more marked when expressed per gram of tissue nitrogen.

Tab. I. Release of FFA by epidymal adipose tissue of nephrotic rats in the absence and presence of epinephrine (μEq/g/h)

	Group 1	Group 2	Group 3
Weight in g	<100	200–300	350–475
Age, days	30	90–120	120–180
Release without epinephrine	19.78 ± 3.56[a] N = 22	7.67 ± 1.53[a] N = 14	7.92 ± 1.25[a] N = 27
Release with epinephrine	30.4 ± 4.82[a] N = 22	12.26 ± 2.35[a] N = 14	12.42 ± 1.13[a] N = 27

[a] S.E.

Tab. II Release of FFA by different adipose tissues of nephrotic rats (μEq/g/h)

	Group 1	Group 2	Group 3
Weight in g	<100	200–300	350–475
Age, days	30	90–120	120–180
Epididymal adipose tissue	24.05 ± 2.96[a] N = 22	7.67 ± 1.53[a] N = 14	7.92 ± 1.25[a] N = 27
Mesenteric adipose tissue	17.69 ± 2.24[a] N = 21	7.21 ± 1.44[a] N = 12	8.59 ± 0.85[a] N = 25
Perirenal adipose tissue	–	10.99 ± 1.89[a] N = 13	9.27 ± 1.02[a] N = 25

[a] S.E.

The FFA content of epididymal adipose tissue was higher in the Group 1 animals than in Group 2 or 3 rats (Figure 3). No consistant difference was found in adipose tissues FFA level after incubation in any of the three groups.

In Table II the release of FFA by epididymal, mesenteric and perirenal adipose tissue is compared in nephrotic rats of different ages (not enough perirenal adipose tissue was found in Group 1 rats to perform the analyses). Group 1 rats released the most FFA both from epididymal and mesenteric adipose tissues. No difference was noted between Groups 2 and 3 in any tissue.

Discussion. The findings that the release of FFA by the epididymal adipose tissue of nephrotic rats is different in young and old rats is similar to results reported previously in normal rats[4]. No significant differences were found between normal and nephrotic rats in this respect. The presence of epinephrine caused a more consistant increase in release by all Groups of rats using normal animals than using nephrotic ones.

Adipose tissue triglyceride content of nephrotic rats was significantly higher in Group 1 and lower in Group 3 than in normal animals. The cause of this difference is presently not known. The diminished triglyceride content in the adipose tissue of Group 3 rats is in agreement with MALMENDIER's finding[5] that grown nephrotic rats have less total body fat than have normals of the same weight.

The lack of difference in release of FFA by the adipose tissue between normal and nephrotic rats seems to be in accord with the current view[5,6], that the primary change in causing nephrotic hyperlipemia is an increased lipid output by the liver and not by the adipose tissue.

Zusammenfassung. Bei nephrotischen Ratten verschiedenen Alters wurde *in vitro* die Abgabe freier Fettsäuren aus dem Fettgewebe untersucht. Bei jungen Tieren war letztere am grössten, der Fettgehalt des Gewebes am niedrigsten. Diese Resultate stimmen mit an normalen Tieren gewonnenen überein und stützen die Ansicht, dass die nephrotische Lipämie nicht durch Mobilisation des Depotfettes entsteht.

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Altered Vascular Reactivity of Rats with Adrenal-Regeneration Hypertension[1]

Since the description of hypertension developing in rats subjected to adrenal enucleation following contralateral nephrectomy and adrenalectomy (AR–HT)[2] efforts have been made to determine the possible hormonal influence at work[3] and to define the state of adrenal steroid secretion[4]. The nature of the vascular lesions in AR–HT have been studied[5] and their prevention[6], to-

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