

LETTERS TO THE EDITOR

Diabetes Morbidity in a Sociologically Defined Group of the General Public
(Master Bakers of a City)

Investigation of Carbohydrate Metabolism

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These studies regarding the morbidity of diabetes and subclinical diabetes are part of an investigation carried out on a sociologically defined group of the general public particularly liable to develop diabetes, i.e. self-employed bakers of a city [1]. More detailed results will be published elsewhere [2].

Of 496 members of the bakers guild, 75.6% were investigated by glucose tolerance tests (oral glucose

substitution in decades of male subjects of the city resulted in a corrected percentage of 7.3% for manifest and 9.7% for subclinical diabetes. 81.6% of all bakers were found to have a normal carbohydrate tolerance.

As expected, manifest diabetes increases with advancing age, reaching a maximum in the 6th and 7th decades. The group of bakers with subclinical diabetes was found to be similar. Cases within the lower borderline limit with slight impairment of carbohydrate tolerance amounted to 1/3 of the group; no regular distribution in the age decades can be noted.

Table. Result of CHO-load in the 4 groups of patients, divided according to age

Group	Result	Decade, age				VII 60-69	VIII 70-79	Total
		III 20-29	IV 30-39	V 40-49	VI 50-59			
		Broca-Index						
		1.2	1.13	1.13	1.17	1.16	1.16	
A	I	4	11	6	7	2	1	31
o. GTT 100 g and	IIa	—	2	1	1	4	—	8
i.v. GTT 25 g	IIb	—	2	3	7	2	1	15
Glucose	III	—	—	1	4	2	—	7
B	I	2	5	5	8	5	1	26
o. GTT 50 g	IIa	—	1	1	—	3	—	5
i.v. GTT 25 g	IIb	—	3	—	—	3	—	6
Glucose	III	—	1	—	2	4	1	8
C	I	—	10	3	3	2	—	18
i.v. GTT 25 g	IIa	—	—	—	—	—	—	—
Glucose	IIb	—	—	—	1	—	—	1
	III	—	—	—	2	2	—	4
D	I	38	85	31	43	28	6	231
BS 120 min after	IIa	—	—	—	—	—	—	—
usual breakfast	IIb	—	2	—	—	1	1	4
	III	—	2	2	3	4	—	11
total	I	44	111 (90%)	45 (85%)	61 (75%)	37 (60%)	8 (73%)	306 (81.6%)
normal	IIa	—	3 (2.4%)	2 (4%)	1 (1%)	7 (11%)	—	13 (3.5%)
border line cases	IIb	—	7 (6.0%)	3 (6%)	8 (10%)	6 (10%)	2 (18%)	26 (6.9%)
diabetic	III	—	3 (2.4%)	3 (6%)	11 (14%)	12 (19%)	1 (9%)	30 (8.0%)
Number n =		44	124	53	81	62	11	375

test, intravenous glucose tolerance test, postprandial blood sugar estimations). The classification was made in accordance with the suggestion of the European Diabetes Epidemiology Study Group. The following figures were arrived at: a strikingly high percentage of 8% for manifest diabetes, the ratio of known to unknown diabetes being 3:2 and for subclinical diabetes 10.4%. Mathematical alignment with the age distri-

All members of the total group were found to be overweight after the age of 30, reaching a maximum weight of +17% according to Broca between the age of 50-69. The Broca Index is graduated, being +12% in bakers with normal carbohydrate tolerance and up to 26% in manifest diabetics. The complete group had a consanguine family history of diabetes of nearly 30%, in bakers with normal glucose tolerance 26%

and manifest diabetics 48%. Up to now such high percentages were found only in relatives of diabetics. The frequent combination of the genetic diabetic factor and the diabetes-promoting factor of gross overweight explains the high frequency of 17% diabetes mellitus (subclinical and manifest) among the 20 to 79 year old bakers of this group. Data given in the literature about the frequency of subclinical diabetes vary between 0.8% [3] and 25% [5]. However, the method of investigation used here was different, as were the subjects investigated and the criteria used in the evaluation of the data. An accurate comparison cannot therefore be made. The figure for subclinical diabetes lies about midway between the frequencies reported above, and is, for example, similar to that found by Malins [4].

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