The ~~V~~vitamin B12 concentration in Turkish adult population: ~~their~~ association with ~~prediabetes resistance and d~~Diabetes and ~~mellitus~~ prediabetes

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This study was ~~-~~designed to reveal the vit~~-amin~~ B12 and folate concentrations in different age groups, and determine the prevalence~~s~~ of deficiency~~ies~~. Also investigating the ~~the~~ relation of vit~~-amin~~ B2 ~~levels~~ deficiency with ~~prediabetes and~~ diabetes ~~mellitus~~and prediabetes.

Material Methods: A cross-sectional, population-based survey, 'TURDEP-II' included 9719 randomly sampled adults aged ≥~~-~~20 years. The study ~~group was~~participants were grouped into those with serum vit~~-~~B12 levels below 200 pg/mL and those with normal reference intervals (200-900 pg/mL). Serum vitamin B12 was ~~-~~measured by E170, and the routine biochemical parameters were determined with Roche Modular autoanalyzer.

Results: The mean vit-B12 levels was 302.8 ±191.9 pg/ml. Of 9719 participants, 2477 ~~of 9719~~ (25.5%) subjects had vit~~-amin~~ B12 levels below 200 pg~~-~~/ml (~~,~~24.76% ~~of them were~~in men and~~ale, 25~~26.8~~-~~% ~~were~~ in ~~female~~women, p=0.01). When ~~the vitamin B12~~clinical and~~, folate, fasting glucose, HOMA-IR, BMI, insulin, lipid~~laboratory parameters were compared between groups; in vit-D deficiency group, the mean age (p=0.001), ~~weight,~~ BMI (p=0.016) and~~,~~ waist (p=0.01), and serum levels ~~hsCRP ,~~ triglycerides (p<0.001) were significantly higher; but HDL-c (p<0.001), LDL-c (p=0.001) and folate levels (p=0.021) were significantly lower than in the vit-B12 sufficient group~~, fasting blood glucose levels, and HbA1c % were significantly different between both groups (p<0.001)~~. The deficiency rate of urban and rural areas were 24.5% and 26.5%, respectively. When the study ~~the~~ participants~~vitamin B12 levels~~ were stratified ~~according to~~by 5~~-~~year~~-~~ age ~~groups~~intervals, the deficiency rate increased

significantly by age (p<0.001). The vit-amin B12 deficiency rate in the subjects aged 20-24-34 years was 24.4%, where asand in those over 65 years waswere 3029.8% (p<0.001). and deficiency rate increased significantly according the age. (p=0.000). The vVit-amin B12 deficiency rate waswere also associated investigated forwith prediabetes, prediabetes, general and central obesity, and hypertension. and Accordingly, 2934.27% of newly diagnosed and 18-% of previously known diabetesic patients had vit-amin B12 deficiency. The deficiency rate wasdid not 25.1 % in prediabeticdiffer between subjecpatients with or without prediabetes, general, and central obesity or hypertension.

Conclusion: Vit-amin B12 might help protect against chronic diseases including atherosclerosis, prediabetes and diabetes especially in geriatric population. Accordingly, fortifying foods with vit-amin B12 is of great importance in terms of preventive medicine.