Hubungan antara Konsumsi Buah Citrus dan Sayur Merah-Oranye dengan Proporsi Glukosa Darah Puasa Terganggu pada Wanita Usia Subur Suku Minangkabau dan Sunda = The Relationship between Consumption of Citrus Fruit and Red-Orange Vegetables on the Proportion of Impaired Fasting Blood Glucose in Women of Reproductive Age from Minangkabau and Sundanese Tribes

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Abstrak

Latar Belakang Glukosa darah puasa terganggu (GDPT) sebagai salah satu kondisi prediabetes berhubungan dengan konsumsi buah dan sayur karena pengaruh kandungan serat dan antioksidan terhadap kesehatan pankreas dan metabolisme glukosa darah. Penelitian mengenai hubungan konsumsi buah citrus dan sayur merah-oranye dengan GDPT pada wanita usia subur (WUS) masih terbatas. Metode Penelitian analisis sekunder dari dataset penelitian potong lintang berjudul ‘Hubungan Asupan dan Status Gizi dengan Jumlah Mikrobiota dan Marker Metabolik pada Wanita Suku Minangkabau dan Sunda’ ini melibatkan 360 WUS yang dipilih melalui Population Proportional Sampling. Konsumsi buah citrus (jeruk) dan sayur merah-oranye (wortel dan tomat) diperoleh dari wawancara ahli gizi terlatih menggunakan Semi-Quantitative Food Frequency Questionnaire. Setelah berpuasa 12-14 jam, 10 ml darah WUS diambil dari vena fossa cubiti dan dimasukkan vacutainer EDTA. Glukosa darah puasa diukur menggunakan kolorimetri enzimatik dengan glukosa oksidase-fenol aminofenazon. Hasil Rerata usia WUS 36 tahun, mengonsumsi buah citrus saja 14,4%, sayur merah-oranye saja 21,4%, keduanya 57,8%, dan tidak keduanya 6,38%. Setelah dikontrol dengan aktivitas fisik dan indeks massa tubuh, konsumsi sayur merah-oranye berhubungan bermakna dengan kejadian GDPT yaitu sebagai faktor protektif. (OR=0,403, p=0,043). Konsumsi buah citrus tidak berhubungan bermakna dengan kejadian GDPT (p=0,138). Konsumsi keduanya tidak berhubungan bermakna dengan kejadian GDPT (p=0,655). Kesimpulan Konsumsi sayur merah-oranye mampu menurunkan risiko GDPT secara bermakna pada populasi WUS suku Minangkabau dan Sunda. Edukasi gizi disarankan untuk meningkatkan konsumsi sayuran tersebut dalam pola makan harian beraneka ragam. .....Introduction Impaired fasting blood glucose (IFBG) as a prediabetes condition is associated with fruit and vegetable consumption because of the influence of fiber and antioxidant content on pancreatic health and blood glucose metabolism. Research on the relationship between consumption of citrus fruit and red-orange vegetables with IFBG in women of reproductive age (WRA) is still limited. Method This secondary analysis of research dataset entitled 'Relationship of Intake and Nutritional Status with the Number of Microbiota and Metabolic Markers in Minangkabau and Sundanese Women' involved 360 WRA who were selected using the Population Proportional Sampling. Consumption of citrus fruits (oranges) and red-orange vegetables (carrots and tomatoes) was obtained from interviews with trained nutritionists using Semi-Quantitative Food Frequency Questionnaire. After the subject fasted for 12- 14 hours, 10 ml of blood was taken from the cubital fossa vein, placed in EDTA vacutainer. Fasting blood glucose was measured using enzymatic colorimetry with glucose oxidase-phenol aminophenazone. Results The average age of WUS was 36 years, 14.4% consumed only citrus fruit, 21.4% only consumed red-orange vegetables, 57.8% both, and 6.38% neither. After controlling for physical activity and body mass index, consumption of red-orange

vegetables was significantly related to the incidence of GDPT, namely as a protective factor. (OR=0.403, P=0.043). Consumption of citrus fruit was not significantly related to the incidence of GDPT (P=0.138). Consumption of both was not significantly related to the incidence of GDPT (P=0.655). Conclusion Consumption of red-orange vegetables can significantly reduce the risk of GDPT in the Minangkabau and Sundanese WRA populations. Nutrition education is recommended to increase consumption of these vegetables in their daily diverse diet.