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The Relationship Between Body Fat Distribution and
Nonalcoholic Fatty Liver in Adults With Type 1 Diabetes.
Diabetes Care 2021;44 : 1706-1713 COMMENT

FinnDiane Study Grp

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RESPONSE TO COMMENT ON PARENTE ET AL.

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We would like to thank Dr. de Vries and colleagues (1) for the interest and comments on our article in which we showed that the visceral adipose tissue, but not the peripheral or total fat tissue, is associated with nonalcoholic fatty liver (NAFL) when assessed by MRI in adults with type 1 diabetes (2). Furthermore, we showed that waist-to-height ratio (WHtR) has a stronger association with NAFL than BMI in this population.

de Vries et al. (1) performed a study including 150 adults with type 1 diabetes aiming to find out which anthropometric measure could better identify individuals with NAFL in their cohort. The Dutch study used the elastography controlled attenuation parameter for the diagnosis of NAFL, which is not as accurate as MRI, although it is a reliable method with the advantage of being more accessible than MRI. The higher prevalence of NAFL in the Dutch cohort, 34% vs. 11% in our cohort, may be due to the differences between the two imaging methods used for the NAFL diagnosis. However, the Dutch cohort had a higher prevalence of individuals with central obesity (WHtR ≥ 0.5) than the Finnish cohort (85% vs. 50.4%, respectively), which may also explain

the higher prevalence of NAFL in their population.

Despite some minor differences between the two studies, de Vries et al. (1) found results similar to ours concerning the stronger association between WHtR and NAFL compared with the association between BMI and NAFL in adults with type 1 diabetes. Moreover, they found that waist circumference (WC) is also better than BMI and as good as WHtR at identifying NAFL in their population. Indeed, in our previous publication, we showed that WHtR and WC are the two anthropometric measures that best estimate the visceral fat tissue in adults with type 1 diabetes (3). One advantage of WHtR compared with WC to define central obesity is the use of the same threshold (≥ 0.5) for both sexes.

In conclusion, the similar findings of both studies in two different cohorts underscore the relevance of central obesity beyond general obesity, often related to individuals with type 2 diabetes and underestimated in individuals with type 1 diabetes. Moreover, both studies show that simple clinical measures may help to identify adults with type 1 diabetes and NAFL. However, prospective studies are needed to

address whether the WHtR or WC is a cost-effective tool for screening of individuals at higher risk of NAFL and for endorsing its use for referral to imaging evaluation. Importantly, since central obesity has been associated with NAFL and other complications in adults with type 1 diabetes (4,5), clinical trials addressing the treatment of central obesity in people with type 1 diabetes are warranted.

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Duality of Interest. E.B.P. reports receiving lecture honoraria from Eli Lilly, Abbott, AstraZeneca, Sanofi, and Boehringer Ingelheim and is an advisory board member of Sanofi. D.G. has received lecture or advisory honoraria from AstraZeneca, Boehringer Ingelheim, Fresenius, GE Healthcare, and Novo Nordisk and support to attend medical meetings from CVRx and Sanofi. P.-H.G. reports receiving lecture honoraria from Astellas, AstraZeneca,

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Boehringer Ingelheim, Eli Lilly, Elo Water, Medscape, MSD, Mundipharma, Novo Nordisk, PeerVoice, Sanofi, and SCI-Arc and being an advisory board member of AbbVie, Astellas Pharma, AstraZeneca, Bayer, Boehringer Ingelheim, Eli Lilly, Medscape, MSD, Mundipharma, Novo Nordisk, and Sanofi. No other potential conflicts of interest relevant to this article were reported.

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