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DIETARY INTAKE IN HIV-INFECTED MEN WITH LIPODYSTROPHY: RELATIONSHIPS WITH BODY COMPOSITION AND METABOLIC PARAMETERS

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BACKGROUND: Antiretroviral therapy (ART) is associated with lipodystrophy (LD), insulin resistance, diabetes, dyslipidemia and increased cardiovascular risk. Whether dietary intake influences these parameters is unclear.

AIMS: We examined the dietary intake of 106 lipoatrophic, non-diabetic men receiving ART. Dietary intakes were determined at baseline using 3-day, food frequency questionnaires and compared to baseline body composition (DEXA), visceral adipose tissue (VAT; single-slice abdominal L4 computed tomography) and fasting glucose, insulin, insulin resistance (HOMA), lipids, adiponectin and leptin.

RESULTS: After exclusion of energy under-reporters (n=22, 20%), no significant relationship was found between overall diet composition (%dietary fat and %carbohydrate [expressed as % of energy intake]) and body mass index (BMI), %total body fat, limb fat mass, %limb fat or VAT (all P>0.3). In contrast, there was a strong, positive correlation between saturated fat intake (both absolute grams and %) and limb fat mass (r=0.68; P<0.0001), but no significant correlation between limb fat mass and either monounsaturated or polyunsaturated fat intake. No dietary fat subtype related to VAT. Dietary fat and carbohydrate intake were not related to total cholesterol, HDL cholesterol, triglycerides, insulin, glucose, HOMA-IR, adiponectin or leptin (P>0.4). Intake of any fat subtype did not relate significantly to any metabolic measure, except that there was a weak relationship between %saturated fat and leptin levels (r=0.03, P=0.001) only.

CONCLUSIONS: In this population of lipoatrophic men, there was a strong, positive correlation between saturated fat intake and limb fat mass, but no relationship between nutrient intake and VAT or

any lipid, glycaemic or adipokine parameter. Only interventional, prospective studies will determine whether any nutritional strategy can assist in ameliorating lipoatrophy or any of its associated metabolic complications.

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