

## INTISARI

### Pengaruh Terapi Diet Berbahan Dasar Umbi-Umbian Terhadap Persen

### Lemak Tubuh dan Lemak Viseral Penderita Diabetes Melitus Tipe 2

(Vania Haneswari<sup>1</sup>, Sunarti<sup>2</sup>, Emy Huriyati<sup>3</sup>)

**Latar Belakang:** Jumlah penderita diabetes melitus (DM) bertambah pesat. Penyakit DM kerap dikaitkan dengan obesitas, terutama obesitas sentral. Penanganan obesitas pada penderita DM meliputi penerapan diet sehat, salah satunya yaitu peningkatan asupan serat pangan. Hal ini bertujuan untuk mencegah risiko komplikasi dan mortalitas. Umbi gembili (*Dioscorea esculenta* L.), garut (*Maranta arundinaceae* L.), dan singkong (*Manihot utilissima*) merupakan komoditas pertanian Indonesia yang kaya akan kandungan serat pangannya. Ketiga umbi tersebut dapat diolah menjadi makanan selingan tinggi serat bagi penderita DM.

**Tujuan:** Mengetahui pengaruh pemberian makanan selingan berbahan dasar umbi-umbian terhadap persen lemak tubuh dan lemak viseral penderita DM.

**Metode:** Jenis penelitian eksperimental dengan desain *pre-post* kuasi eksperimental. Sebanyak 30 karyawan dan pasien Poli Penyakit Dalam RSUP.Dr. Sardjito yang menderita DM direkrut untuk mengikuti penelitian ini. Responden menerima intervensi berupa makanan selingan (keripik) berbahan dasar gembili, garut, dan singkong setiap hari selama 1 bulan. Responden diminta untuk mengonsumsi 32 gram keripik setiap hari. Persen lemak tubuh dan lemak viseral responden diukur dan dibandingkan sebelum dan setelah intervensi. Uji hipotesis menggunakan analisis *paired t-test*. Hasil dinyatakan signifikan jika  $p < 0,05$ .

**Hasil :** Rerata konsumsi makanan selingan berbahan dasar umbi-umbian selama 4 minggu yaitu sebanyak 31,98 gram. Terdapat peningkatan nilai rerata persen lemak tubuh dan lemak viseral responden secara keseluruhan di akhir penelitian. Rerata persen lemak tubuh sebelum dan sesudah perlakuan adalah  $32,96 \pm 6,84$  dan  $33,79 \pm 6,96$  % ( $p < 0,05$ ). Sementara rerata persen lemak viseral sebelum dan sesudah perlakuan adalah  $13,41 \pm 5,75$  dan  $13,86 \pm 5,73$  ( $p > 0,05$ ).

**Kesimpulan :** Pemberian makanan selingan berbahan dasar umbi-umbian belum dapat menurunkan persen lemak tubuh dan lemak viseral penderita diabetes melitus tipe 2.

**Kata kunci :** Diabetes melitus tipe 2, gembili (*Dioscorea esculenta* L.), garut (*Maranta arundinacea* L.), singkong (*Manihot utilissima*), serat pangan, persen lemak tubuh, lemak viseral

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## ABSTRACT

### The Effect of Tubers-Based Snack on Body Fat Percentage and Visceral Fat of Type 2 Diabetes Mellitus Patients

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**Background:** Type 2 diabetes mellitus (T2DM) prevalence is increasing worldwide. T2DM is associated with obesity, especially central obesity. Considering a healthy diet modification has always been suggested in managing T2DM, included adding dietary fiber consumption. The goal is to reduce the risk of complication of the DM and mortality. Indonesia's crop commodity, Lesser yam (*Dioscorea esculenta*), arrowroot (*Maranta arundinacea*), and cassava (*Manihot utilissima*), contain high dietary fiber, which can be made into high-dietary fiber-snacks for T2DM patients.

**Objective:** To study the effect of tubers-based snack on body fat percentage and visceral fat of T2DM patients.

**Methods:** This is pre-post quasi experimental study design. Thirty workers and patients of RSUP dr. Sardjito were participating in this study. Subjects were given tubers-based snack for 4 weeks. Respondents were asked to consume 32 grams of snack daily. The body fat percentage and visceral fat was measured and compared pre and post intervention. The hypothesis were tested using pair t-test. The result considered as significant if  $p < 0,05$ .

**Result:** During 4 weeks intervention, the tubers-based snack average consumption is 31,98 grams. Both outcomes' mean average, which are body fat percentage and visceral fat, were increasing at the end of intervention. Mean average for body fat percentage is rising from  $32,96 \pm 6,84$  to  $33,79 \pm 6,96\%$  ( $p < 0,05$ ). Meanwhile, the increment of visceral fat level is slight. The mean average before intervention is  $13,41 \pm 5,75$  and after intervention is  $13,86 \pm 5,73$  ( $p > 0,05$ ).

**Conclusion:** Daily treatment of tubers-based snack toward diabetes patients for 4 weeks does not give any reduction on their body fat percentage and visceral fat level.

**Key words:** Type 2 diabetes mellitus, lesser yam (*Dioscorea esculenta* L.), arrowroot (*Maranta arundinacea* L.), cassava (*Manihot utilissima*), dietary fiber, body fat percentage, visceral fat

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