

THE IMPACT OF DIABETES FOOT EXERCISE USING A JAGGED
PLASTIC BALL ON THE VALUE OF ANKLE BRACHIAL
INDEX (ABI) IN PEOPLE WITH DIABETES MELLITUS
TYPE II AT BONOROWO PUSKESMAS
KEBUMEN DISTRICT

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ABSTRACT

Background: Diabetics can experience various kinds of complications, one of which is complications in the feet, foot complications can occur due to disruption of peripheral vascularization or peripheral arterial disease (PAD). Foot complications affect 40 to 60 million people with diabetes globally. Diabetics can measure the value of the ankle brachial index to determine the risk of foot complications.

Objective: To determine the effect of diabetic foot exercise using a jagged plastic ball on the value of the ankle brachial index (ABI) in patients with type II diabetes mellitus at the Bonorowo Health Center, Kebumen Regency.

Methods: Quasi experimental research design with pretest-posttest research design with control group. Observations were made twice. Data were analyzed using independent t-test with a significant level of $p < 0.05$

Results: The results showed that there was a difference in the value of the ankle brachial index between the intervention group and the control group after being given treatment for diabetic foot exercise using a jagged plastic ball and buerger allen exercise. After analyzing the data using the independent t-test, the results obtained p value = 0.040 (p value < 0.05).

Conclusion: Based on the results of data analysis, it can be concluded that there is an effect of diabetic foot exercise using a jagged plastic ball on the value of the ankle brachial index.

Keywords: Diabetes mellitus, diabetic from foot exercise, jagged ball for ankle brachial index.

**PENGARUH SENAM KAKI DIABETES MENGGUNAKAN BOLA
PLASTIK BERGERIGI TERHADAP NILAI ANKLE BRACHIAL
INDEX (ABI) PADA PENDERITA DIABETES MELITUS
TIPE II DI PUSKESMAS BONOROWO
KABUPATEN KEBUMEN**

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ABSTRAK

Latar Belakang : Penderita diabetes dapat mengalami berbagai macam komplikasi salah satunya adalah komplikasi pada kaki, komplikasi kaki dapat terjadi karena terganggunya vaskularisasi perifer atau *peripheral arterial disease (PAD)*. Komplikasi kaki mempengaruhi 40 sampai 60 juta penderita diabetes secara global. Penderita diabetes dapat dilakukan pengukuran nilai *ankle brachial index* untuk mengetahui risiko komplikasi kaki.

Tujuan : Mengetahui pengaruh senam kaki diabetes menggunakan bola plastik bergerigi terhadap nilai *ankle brachial index (ABI)* pada penderita diabetes melitus tipe II di Puskesmas Bonorowo Kabupaten Kebumen.

Metode : Penelitian *quasi experimental design* dengan desain penelitian *pretest-posttest with control grup*. Observasi dilakukan dua kali. Data dianalisis menggunakan *independent t-test* dengan taraf signifikan $p < 0,05$.

Hasil : Hasil penelitian diperoleh adanya perbedaan selisih nilai *ankle brachial index* antara kelompok intervensi dan kelompok kontrol setelah diberikan perlakuan senam kaki diabetes menggunakan bola plastik bergerigi dan *buerger allen exercise*. Setelah dilakukan analisa data menggunakan uji *independent t-test* diperoleh hasil $p \text{ value} = 0,040$ ($p \text{ value} < 0,05$).

Kesimpulan : Berdasarkan hasil analisa data, maka dapat disimpulkan bahwa terdapat pengaruh senam kaki diabetes menggunakan bola plastik bergerigi terhadap nilai *ankle brachial index*.

Kata Kunci : Diabetes melitus, diabetes dari senam kaki, bola plastik bergerigi untuk *ankle brachial index*.