

# Perbandingan efek latihan isokinetik dan isometric terhadap nyeri, kekuatan otot dan kemampuan fungsional pada pasien osteoarthritis lutut = Comparison of isokinetic and isometric strengthening exercise on pain, strength and functional capacity of patients with osteoarthritis of the knee

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## Abstrak

Tujuan: Mengetahui perbandingan efek latihan isokinetik dan isometrik terhadap nyeri, kekuatan otot dan kemampuan fungsional pada pasien osteoarthritis lutut.

Disain: Eksperimental paralel.

Subjek: 28 orang pasien berusia antara 50-64 tahun, dibagi secara acak menjadi dua kelompok.

Tempat: Bagian Ilmu Kedokteran Fisik dan Rehabilitasi. Perjan RS Dr. Hasan Sadikin. Bandung.

Intervensi: Pasien menjalani program latihan isokinetik atau isometrik selama 6 minggu.

Parameter: VAS, peak torque, indeks Lequesne yang diukur setiap minggu.

Hasil: Kedua kelompok menunjukkan penurunan yang bermakna pada intensitas nyeri ( $p < 0,001$ ) dan indeks Lequesne ( $p < 0,001$ ), juga peningkatan yang bermakna pada peak torque ( $p < 0,001$ ) setelah 6 minggu. Tidak terdapat perbedaan yang bermakna antara kedua kelompok.

Kesimpulan: Kedua jenis latihan berguna pada pasien osteoarthritis berusia lanjut Pada kelompok isokinetik tidak didapatkan subjek yang mengeluh nyeri yang bermakna.

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Objective: To compare the effect of isokinetic and isometric strengthening exercise on pain, strength and functional capacity of patients with knee osteoarthritis.

Design: Experimental parallel.

Participants: 28 patients, age 50-64 years, were randomly assigned into two groups.

Setting: Department of Physical Medicine and Rehabilitation. Hasan Sadikin Hospital Bandung.

Interventions: Patients received either a regimen of isokinetic exercise or a regimen of isometric exercise for 6 weeks.

Main outcome measure : VAS, peak torque and Lequesne index were measured each week.

Result: Both training groups showed significant decrease in pain score ( $p < 0,001$ ) and Lequesne index ( $p < 0,001$ ) and an increase in peak torque ( $p < 0,001$ ). However there is no significant difference of those parameters between groups.

Conclusion: Both exercises can benefit elderly patients with knee osteoarthritis as shown by the increase of strength and functional capacity. In the isokonetic group there were no subjects who experienced an increase in pain.