

## INTISARI

UNIVERSITAS AL-IRSYAD CILACAP

D III FISIOTERAPI

SELINDA NUHDWI AMALIA

NIM : 109120002

KARYA TULIS ILMIAH

### **APLIKASI STRETCHING EXERCISE DAN SENAM KAKI PADA KONDISI NEUROPATHY PERIFER DIABETIC**

Terdiri dari 5 bab, 93 halaman, 12 gambar, 15 tabel

**Latar Belakang dan Tujuan Penulisan :** *Neuropati Perifer Diabetic* adalah gangguan saraf perifer dengan kondisi yang memicu gejala kelemahan, mati rasa pada area kaki yang disebabkan oleh kadar gula darah yang tinggi. Tujuan dari penulisan karya tulis ilmiah ini untuk mengetahui pengaruh stretching exercise dan senam kaki pada penurunan kadar glukosa, peningkatan kekuatan otot dan lingkup gerak sendi pada pasien neuropati perifer diabetic.

**Metode Penanganan Kasus :** Pada laporan karya tulis ilmiah ini, penulis memberikan beberapa tindakan pada sample penelitian Tn.S meliputi modalitas berupa stretching exercise yang berguna untuk meningkatkan fleksibilitas dan senam kaki yang berfungsi untuk menurunkan kadar gula dalam darah dan meningkatkan kekuatan otot, untuk instrument pengukuran menggunakan Michigan Neuropathy Screening Instrument, glukometer, MMT dan LGS, tindakan terapi yang dilakukan terhitung 6 kali.

**Pembahasan :** Stretching Exercise dan Senam Kaki adalah salah satu modalitas fisioterapi untuk menangani kasus neuropati perifer diabetic, setelah dilakukan tindakan fisioterapi sebanyak 6 kali didapatkan hasil adanya penurunan kadar gula darah dengan hasil  $T_1 = 261\text{mg/dL}$  hingga  $T_6 = 93\text{mg/dL}$ , peningkatan kekuatan otot dengan hasil  $T_1 = 3$  hingga  $T_6 = 4$  dan peningkatan lingkup gerak sendi pada aktif sinistra dengan hasil  $T_1 = (S) 5^\circ - 0^\circ - 10^\circ$ ,  $(R) 10^\circ - 0^\circ - 10^\circ$  hingga  $T_6 = (S) 15^\circ - 0^\circ - 40^\circ$ ,  $(R) 15^\circ - 0^\circ - 35^\circ$ , dan pada aktif dextra dengan hasil  $T_1 = (S) 5^\circ - 0^\circ - 15^\circ$ ,  $(R) 10^\circ - 0^\circ - 10^\circ$  hingga  $T_6 = (S) 15^\circ - 0^\circ - 45^\circ$ ,  $(R) 15^\circ - 0^\circ - 35^\circ$ .

**Kesimpulan dan Saran :** Setelah diberikan tindakan fisioterapi sebanyak 6 kali tindakan, didapatkan hasil berupa penurunan kadar gula dalam darah, peningkatan kekuatan otot dan lingkup gerak sendi dengan pemberian stretching exercise dan senam kaki. Saran dari penulis karya tulis ilmiah ini jika terjadi kondisi neuropati perifer diabetic bisa dilakukan tindakan fisioterapi berupa stretching exercise dan senam kaki.

**Kata Kunci :** *Neuropati Perifer Diabetic, Stretching Exercise, Senam Kaki.*

## ABSTRACT

UNIVERSITAS AL-IRSYAD CILACAP

D III FISIOTERAPI

SELINDA NUHDWI AMALIA

NIM : 109120002

SCIENTIFIC WRITING

### ***APLIKASI STRETCHING EXERCISE DAN SENAM KAKI PADA KONDISI NEUROPATHI PERIFER DIABETIC***

Consist of 5 bab, 93 pages, 12 chart, 15 tabel

**Background and Purpose of Writing:** Diabetic Peripheral Neuropathy is a peripheral nerve disorder with conditions that trigger symptoms of weakness, numbness in the leg area caused by high blood sugar levels or what is commonly called Diabetes Mellitus (DM). The purpose of writing this scientific paper is to determine the effect of stretching exercises and foot exercises on decreasing glucose levels, increasing muscle strength and range of motion in diabetic peripheral neuropathy patients.

**Case Methode :** In this scientific paper report, the authors provide several actions on the Tn.S research sample including modalities in the form of stretching exercises which are useful for increasing flexibility and leg exercises which function to reduce blood sugar levels and increase muscle strength, for measuring instruments using the Michigan Neuropathy Screening Instrument, glucometer, MMT and LGS, the therapeutic measures were carried out 6 times.

**Discussion :** Stretching Exercises and Foot Exercises are one of the modalities of physiotherapy to treat cases of diabetic peripheral neuropathy, after 6 physiotherapy actions it was found that there was a decrease in blood sugar levels with the results T1 = 261mg/dL to T6 = 93mg/dL, an increase in muscle strength with results T1 = 3 to T6 = 4 and increased range of motion on the active left with the results T1 = (S) 5° - 0° - 10°, (R) 10° - 0° - 10° to T6 = (S) 15° - 0° - 40°, (R) 15° - 0° - 35°, and on active dextra the result is T1 = (S) 5° - 0° - 15°, (R) 10° - 0° - 10° up to T6 = (S) 15° - 0° - 45°, (R) 15° - 0° - 35°.

**Conclusions and Suggestions :** After being given 6 physiotherapy actions, the results were obtained in the form of a decrease in blood sugar levels, an increase in muscle strength and range of motion by giving stretching exercises and leg exercises. Suggestions from the authors of this scientific paper if there is a condition of diabetic peripheral neuropathy can be done physiotherapy in the form of stretching exercises and foot exercises.

**Keywords :** Diabetic Peripheral Neuropathy, Stretching Exercise, Foot Exercise.