

## Introduction

**BACKGROUND:** Compared with the general population, people with spinal cord injury (SCI) have a higher prevalence of metabolic diseases because due to their motor deficits, being impossible for them to exercise big muscle groups.

**OBJETIVE:** To quantify metabolic changes in lipid profile and oral glucose tolerance test (OGTT) caused by a protocol of interval aerobic exercise with functional electrical stimulation cycling (FES-cycling) in patients SCI.

## Materials and Methods

**METHODS:** Prospective, quasi-experimental research, before-and-after. Funded by State project, no conflict of interest of researchers.

10 male patients with chronic SCI and neurological level between T4 and T12, users Law 16.744 on Occupational Accidents and Occupational Diseases of the Chilean Constitution, treated at the Hospital Clínico Mutual de Seguridad C.CH.C.

30 sessions in a maximum of 12 weeks, structured with 5 minutes of heating followed by 10 repetitions of 1 minute of exercise with FES-cycling and 2-minute break, ending with a 5-minute cool down.

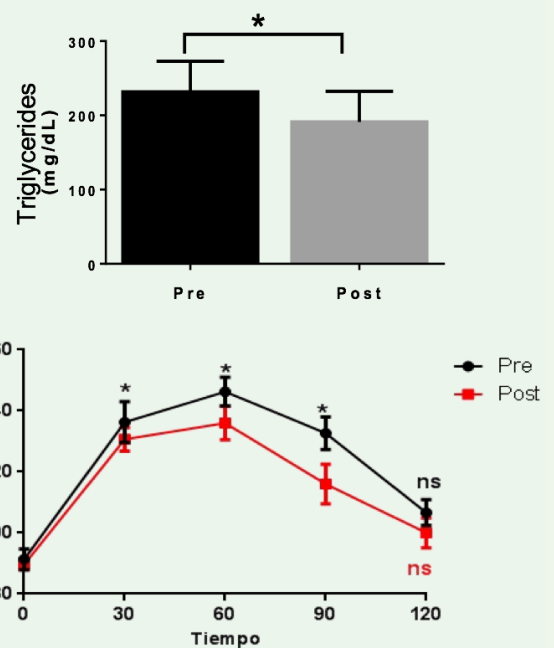


## Results

9/10 patients completed the study.

Statistically significant changes were observed for triglycerides ( $p=0,043$ ) and OGTT for the 30min ( $p=0,048$ ), 60min ( $p=0,041$ ) and 90min ( $p=0,039$ ).

No changes were observed for HDL ( $p=0,398$ ), LDL ( $p= 0,779$ ), VLDL ( $p= 0,933$ ), total cholesterol ( $p=0,623$ ) and OGTT for 0min ( $p=0,195$ ) and 120min ( $p=0,945$ ).



## Conclusions

The aerobic interval exercise with FES-cycling in patients with SCI can be a useful tool to improve the metabolism of carbohydrates and triglycerides.

## References

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