

# Short, but daily and controlled physical activity of children with obesity has a positive effect on the irisin and chemerin levels

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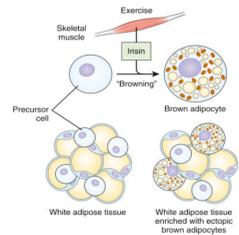
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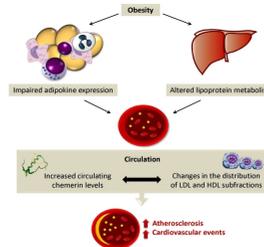
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## Background

Therapeutic interventions in obesity in addition to the weight loss, seek to improve the profile of cytokines. It is believed that physical activity, even in the absence of significant weight loss, may favorably increase the concentration of irisin and decrease the concentration of chemerin.



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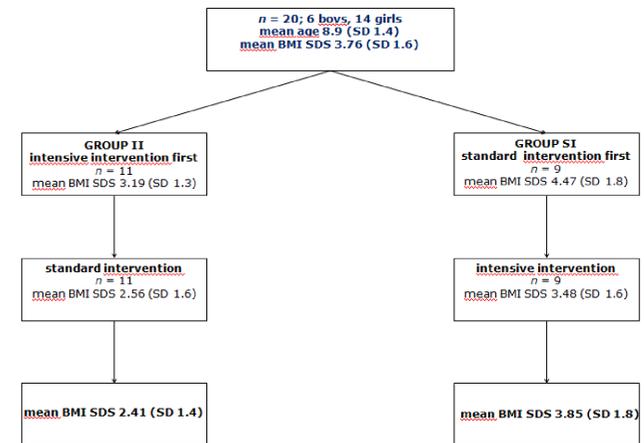


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## The aim of the study

was to compare the impact of a standard lifestyle intervention (SI) with an intense intervention (II) including controlled increase of daily physical activity (from 5 up to 15 min. daily) on the concentration of irisin and chemerin in prepubertal children with obesity.

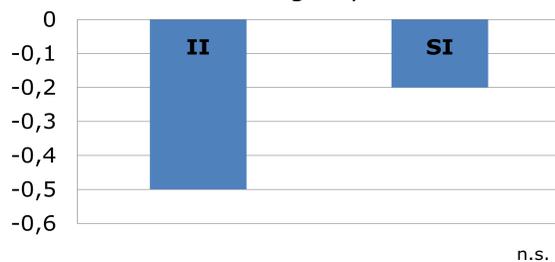
## Material and Methods



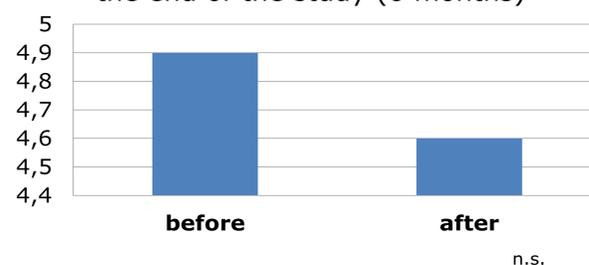
The participants were randomly assigned to two groups II –starting treatment with intensive intervention (personalized dietary counseling 60 min. every 2-3 weeks, controlled physical activity-from 5 up to 15 min. daily), and SI – starting treatment with standard intervention (one-time meeting with a dietitian, general recommendation to increase physical activity. After 3 months, the groups were switched.

## Results

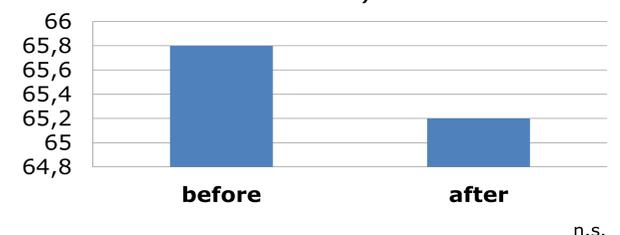
**Δ BMI-SDS** after II and SI in the whole group



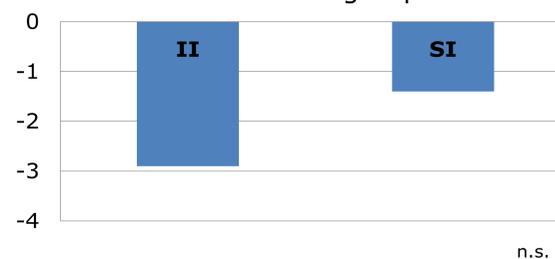
**mean irisin level [μg/mL]** in the whole group at the beginning and at the end of the study (6 months)



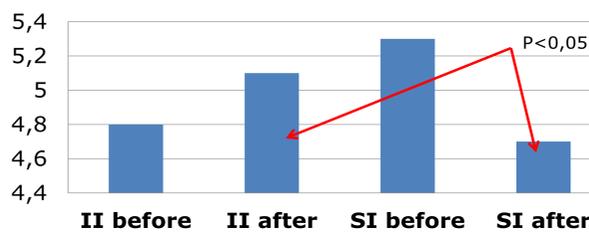
**mean chemerin level [ng/mL]** in the whole group at the beginning and at the end of the study (6 months)



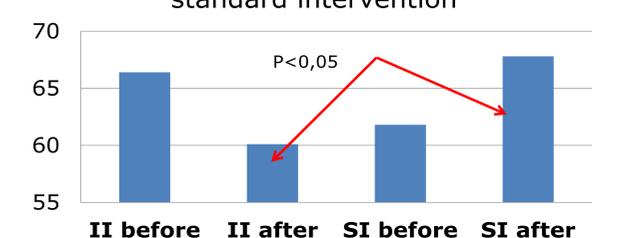
**Δ FAT%** after II and SI in the whole group



**mean irisin level [μg/mL]** before and after intensive and standard intervention



**mean chemerin level [ng/mL]** before and after intensive and standard intervention



## Conclusion

**Even short, but regular and controlled physical activity has a beneficial effect on the concentrations of irisin and chemerin in children with obesity.**

## References

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