Physical activity is a hallmark of managing Nonalcoholic fatty liver disease according to nowadays European and USA guidelines and researches. Several studies show that any physical activity despite intensity reduces liver steatosis even without weight loss. But still there is a gap how to increase patient adherence for physical activity. Also scientists are looking for methods of reducing hepatic disease progression, which can be measured by biomarker cytokeratin 18.

**MATERIALS & METHODS**

- **Placebo**
  - Main group: (289.14 ± 45.6 vs 261.48 ± 42.3 (P < 0.01)) and Visceral Adiposity Index (2.28 ± 0.46 vs 2.02 ± 0.42 (P < 0.05) in group with controlling Physical activity by using pedometers after 12 weeks while Body Mass Index (27.47 ± 2.9 vs 26.94 ± 2.8 (P < 0.04) and body fat percentage (28.19 ± 4.5 vs 27.05 ± 4.4 p = 0.31) measured by using bioelectrical impedancemetry have not been significantly reduced.

**RESULTS**

We observed significant decreasing in cytokeratin18 fragments (289.14 ± 45.6 vs 261.48 ± 42.3 (P < 0.01)) and Visceral Adiposity Index (2.28 ± 0.46 vs 2.02 ± 0.42 (P < 0.05) in group with controlling Physical activity by using pedometers after 12 weeks while Body Mass Index (27.47 ± 2.9 vs 26.94 ± 2.8 (P < 0.04) and body fat percentage (28.19 ± 4.5 vs 27.05 ± 4.4 p = 0.31) measured by using bioelectrical impedancemetry have not been significantly reduced.

**CONCLUSIONS**

We observed significant decreasing in cytokeratin18 fragments (289.14 ± 45.6 vs 261.48 ± 42.3 (P < 0.01)) and Visceral Adiposity Index (2.28 ± 0.46 vs 2.02 ± 0.42 (P < 0.05) in group with controlling Physical activity by using pedometers after 12 weeks while Body Mass Index (27.47 ± 2.9 vs 26.94 ± 2.8 (P < 0.04) and body fat percentage (28.19 ± 4.5 vs 27.05 ± 4.4 p = 0.31) measured by using bioelectrical impedancemetry have not been significantly reduced.

**REFERENCES**


Freak-Poli RL. Participant characteristics associated with greater reductions in waist circumference during a four-month, pedometer-based, workplace health program. BMC Public Health. 2011;11:82.

**SUMMARY**

**BACKGROUND**

Physical activity is a hallmark of managing Nonalcoholic fatty liver disease according to nowadays European and USA guidelines and researches. Several studies show that any physical activity despite intensity reduces liver steatosis even without weight loss. But still there is a gap how to increase patient adherence for physical activity. Also scientists are looking for methods of reducing hepatic disease progression, which can be measured by biomarker cytokeratin 18.

**OBJECTIVES**

Our purpose was to investigate whether physical activity reduced liver apoptosis or not.

**MATERIALS & METHODS**

85 patients were randomized in a two groups by age, gender and BMI. All of them had low level of physical activity and high level of Visceral Adiposity Index. The level of cytokeratin 18 fragments was measured by Elisa method. To patients from first group were given pedometers with recommendations of walking 10 000 steps per day, and to those from control group were just given general recommendations of changing sedentary behavior by improving physical activity without self and doctors control by using pedometers.

**RESULTS**

58 patients were randomized in a two groups by age, gender and BMI. All of them had low level of physical activity and high level of Visceral Adiposity Index. The level of cytokeratin 18 fragments was measured by Elisa method. To patients from first group were given pedometers with recommendations of walking 10 000 steps per day, and to those from control group were just given general recommendations of changing sedentary behavior by improving physical activity without self and doctors control by using pedometers.

**CONCLUSIONS**

Changing sedentary behavior into brisk walking 10000 steps per day reduces not only visceral adiposity but also a level of hepatic apoptosis biomarker cytokeratin 18 in previously sedentary individuals with NAFLD even in the absence of weight loss and changes in BMI. Measurement of serum fragments level of CK18 can be used not only in the verification of steatosis and apoptosis degree in NAFLD patients, but also can be used in evaluation of therapy efficacy. And using pedometers can be recommended to patients with Nonalcoholic fatty liver disease and visceral obesity as they improve patient’s adherence to physical activity.

**REFERENCES**


Freak-Poli RL. Participant characteristics associated with greater reductions in waist circumference during a four-month, pedometer-based, workplace health program. BMC Public Health. 2011;11:82.