Introduction: The lifestyle definitely influences fertility capacity of women. From clinical perspective, it is important to evaluate how bad habits affect ovarian reserve.

Objective: To evaluate the influence of smoking and Body-mass index (BMI) on ovarian reserve, estimated by the number and quality of eggs retrieved after controlled ovarian hyperstimulation (COH).

Materials and methods: The study comprises 108 patients, age 23-43. Observed were the average number and quality of eggs retrieved after COH considering smoking and BMI. Regarding smoking, women were divided into 2 groups: smoking (n=49) and non-smoking (n=57). Concerning BMI, patients were divided in 4 groups: BMI<18.5(n=12), BMI 18.5-25(n=63), BMI 25-30(n=26) and BMI>30(n=7).

Results: results demonstrate no influence of smoking over quantitative ovarian reserve - 4.5 average number of eggs in both groups. Noticeable difference is detected in quality of eggs - in smoking women the average number of eggs with bad quality is twice higher - 0.8 to 0.4 in non-smoking women. As regard the influence of BMI over the number and quality of eggs retrieved after COH, results show a slight decrease of number of eggs in women with extremely low weight - 4.5, compared to those with normal weight - 4.7 and noticeable decrease of number of eggs in over weight groups - 4.1 eggs in the group with BMI between 25 - 29.9 and particularly in the group with the excessive high weight - 2.3 eggs. No noticeable difference in the number of eggs with bad quality is observed in all groups: 0.8, 0.7, 0.5 and 0.2 eggs respectively.

Conclusion: Lifestyle and bad habits definitely influence the reproductive capacity of women, and particularly the ovarian reserve (quantitative and qualitative). Smoking affects negatively the quality of oocytes. Both low weight and obesity cause negative qualitative changes in the ovarian reserve.