



# Efficacy and Safety of Metformin in Weight Loss in Bahraini Population

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# IOL's



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# Introduction



**Obesity is a major factor in the morbidity and mortality of the sufferers and has been described as a risk factor for the development many diseases**



**The obesity control is challenging and includes lifestyle modification with therapeutic approaches that can be followed depending on the severity of the condition**



**One of the therapeutic approaches, is Biguanides, which are oral hypoglycemic agents used for the management of type 2 diabetes mellitus; claimed to reduce blood glucose by reducing hepatic gluconeogenesis, decreasing absorption of intestinal sugar .**

# Introduction



**Biguanides are reduce blood glucose by reducing hepatic gluconeogenesis, decreasing absorption of intestinal sugar .**



**Many studies reported weight-reducing effect of metformin in different categories of patients such as patients with diabetes mellitus, polycystic ovarian syndrome, Schizophrenia and obesity .**



**Effect of metformin on body weight is believed to be decrease in food consumption, The anti-tumour activity of biguanides and their ability to extend life-span were both linked to their weight reducing effect**



# Introduction



In regard to metformin safety, studies mentioned that metformin use is associated with several gastro-intestinal adverse effects such as diarrhea, vomiting, flatulence

**The aim of this study:** explore the efficacy and safety of metformin in weight loss in Bahraini population.





# Material & Methods

Ahmid al arbi

# Material & Methods



01



The search profile included comprehensive lists of various clinical studies that were conducted in different world areas for statistically relevant information about metformin effect on weight loss

100 Bahraini patients aged 20 to more than 40 years were interviewed in different private and public outpatient clinics and community pharmacies of different geographical areas in Bahrain



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The Inclusion criteria were adult diabetic patients attending outpatient clinics and community pharmacies, The exclusion criteria were any patient using any other slimming method was excluded from this study.

Both genders were enrolled, in which forty eight males and fifty two females were interviewed.



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Participants answered different questions regarding the use of metformin, its side effects and sources of their information regarding metformin

The final survey, included 15 questions about different aspects of metformin purposes of usage, frequency and time of administration, awareness of the side effects and sources of information



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A summary score of percent correct answers was finally created. Data were analyzed using the SPSS statistical software Version 20.0. (SPSS Inc. Chicago, IL, USA)



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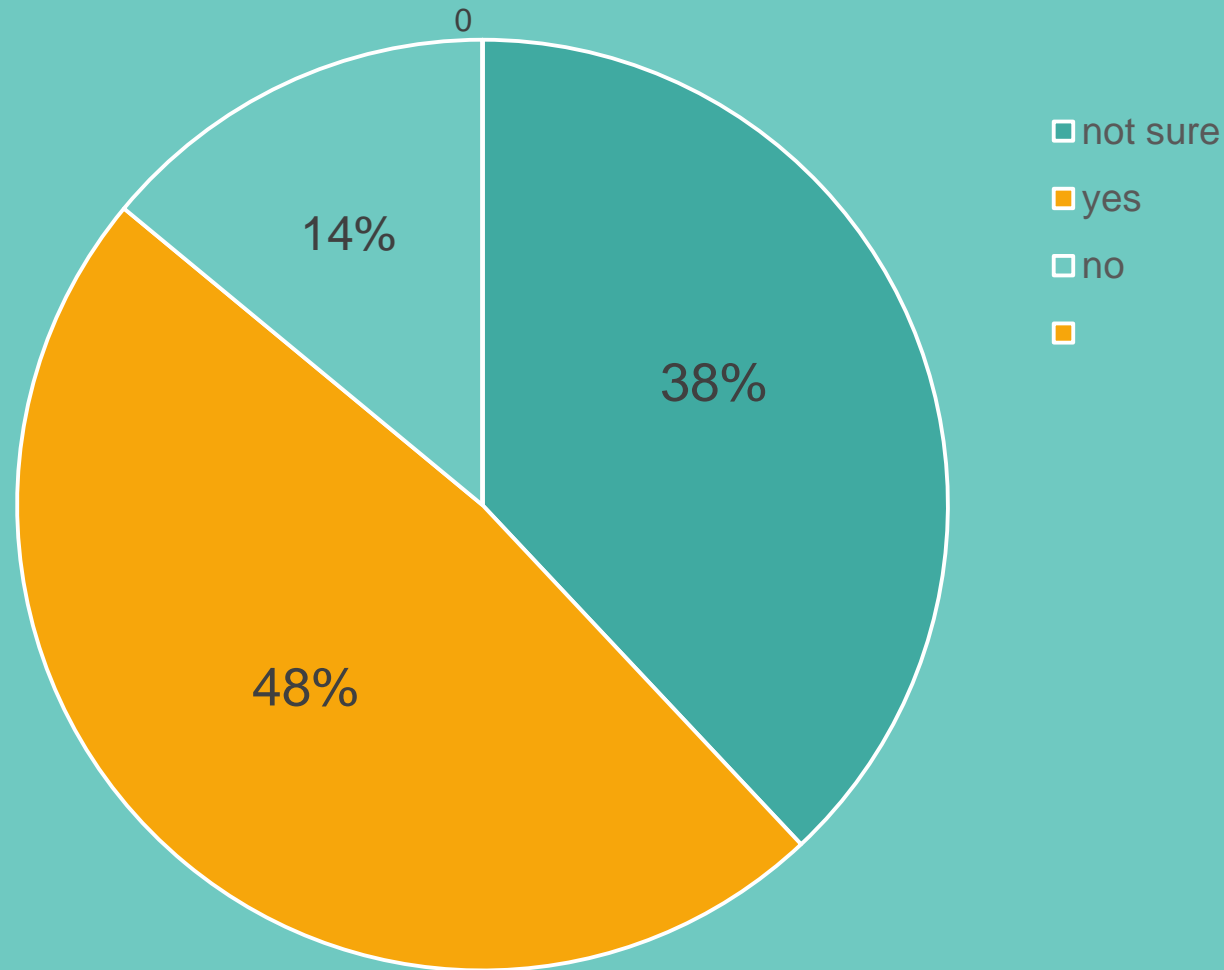




# Results

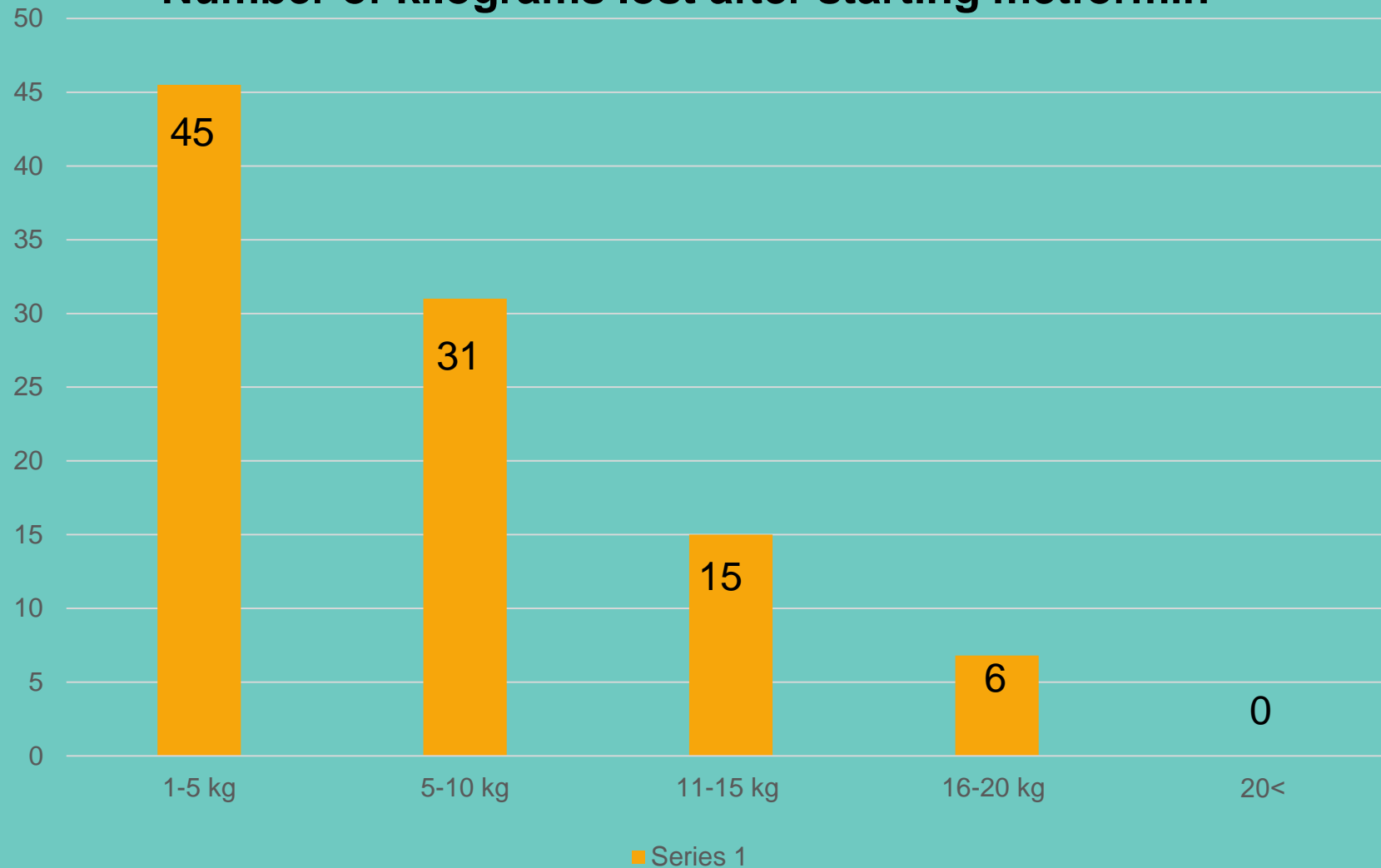
Samia jahir

## Patients belief that weight loss was caused by metformin



Results have shown that 44 % of the participator have experience of weight loss after begin metformin.

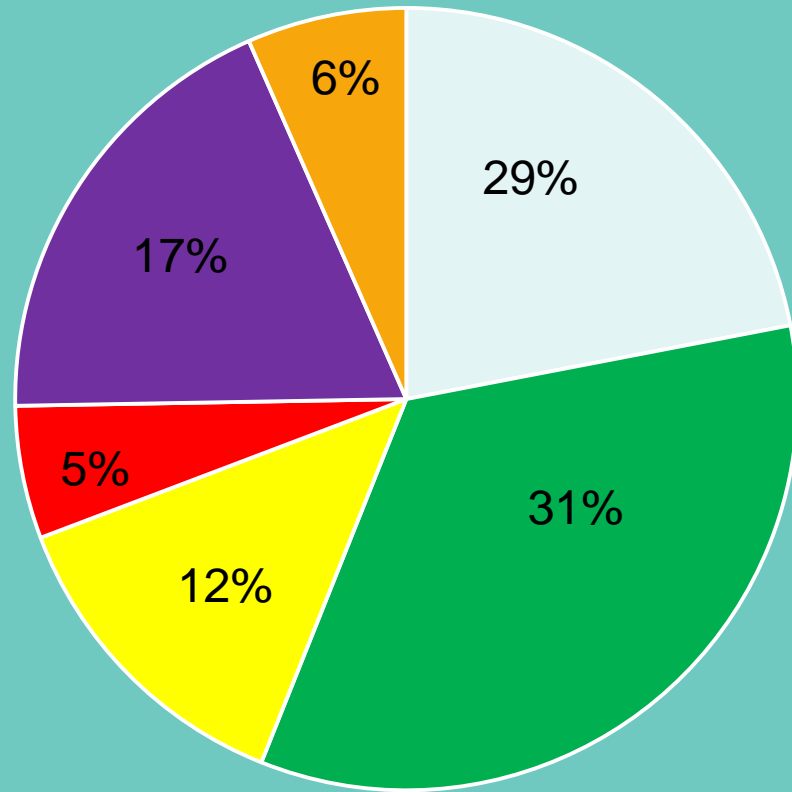
## Number of kilograms lost after starting metformin



**Weight loss reported was 1-5 kilograms by 45.4% and up to 10 Kg by 32 % of contributors.**



## Adverse effects experienced by patients after starting metformin.



loss of appetite    abdominal pain    diarrhea  
vomiting    nausea    other

23% of the patients have no idea about adverse effects after starting metformin while some patients had abdominal pain (31 %) or loss of appetite (29 %).

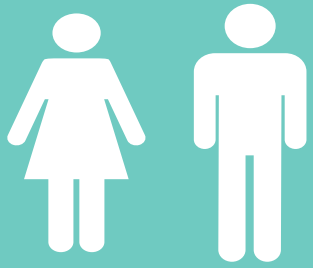




# Discussion

Anisa el Naas

# Discussion



Both men and women are using metformin at almost the same percentage.

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Most of patients are using in addition to physicians' prescriptions. The doses used: 500mg –1000mg

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common purpose of use: diabetes mellitus

Side effects: mild to moderate, abdominal pain and loss of appetite.

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The frequency: once or twice daily with a few cases of 3 times daily with the majority using it for more than one year.



# Discussion



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Patients believe that metformin caused them weight loss up to 15 kilograms. Patients said that they haven't followed any lifestyle modification during the drug treatment.

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Combination of metformin with some other anti-diabetic agents was found to be better than metformin alone.

Example of anti-diabetic agents is


Glucagon-like peptide-1 (GLP1)

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Metformin in combination with lifestyle changing programs was able to achieve reduction in BMI higher than that with lifestyle modification alone.



# In conclusion



The combination of metformin with lifestyle modification represents a strongly effective and safe way for the control of obesity.

This way need more studies to prove the safety on the long-term

Adjusting weight loss to actual patients' weight and the exact period of use was not possible due to the scope of the current study and the time frame.







## References:

Al-qallaf, S., 2016. Efficacy and Safety of Metformin in Weight Loss in Bahraini Population. *Journal of Applied Pharmaceutical Science*, pp.091-095.





Thank you