# How to encourage patients with metabolic syndrome to lead a healthy lifestyle?

**Moon H, Ko HJ***

Department of Family Medicine, Kyungpook National University School of Medicine, Kyungpook National University Hospital, Daegu, Korea

***Correspondence to:** Hae-Jin Ko, Department of Family Medicine, Kyungpook National University School of Medicine, Kyungpook National University Hospital, Daegu, Korea, Tel: +82-53-200-6578; E-mail: liveforme@knu.ac.kr

**Citation:** Moon H, Ko HJ. How to encourage patients with metabolic syndrome to lead a healthy lifestyle? Insights Nutr Metabol. 2017;1(2):69-70.
**Received Date:** November 09, 2017; **Accepted Date:** December 14, 2017; **Published Date:** December 24, 2017



## Commentary

Metabolic syndrome is an accumulation of risk factors associated with central obesity, hyperglycemia, insulin resistance, dyslipidemia and high blood pressure. The underlying etiology of metabolic syndrome is a lack of physical activity, high caloric food intake, obesity, and genetic predisposition. Abdominal obesity is the most frequently observed component of metabolic syndrome [1]. Pro-inflammatory cytokines released from the adipose tissue and endothelial dysfunction adversely influence several body systems. Therefore, metabolic syndrome is a considerable burden due to the marked increase in both cardiovascular morbidity and mortality.

Accumulating data highlight the role of lifestyle modification to reduce cardiovascular morbidity and mortality. Although optimal duration, intensity and type of exercise have yet to be determined, recent studies have reported that a healthy diet and regular physical exercise are the most effective ways to avoid metabolic syndrome [2].

However, among US adults, the prevalence of metabolic syndrome increased from 25.3% during 1988-1994 to 34.2% in 2007-2012 [3]. The prevalence of metabolic syndrome in Chinese adults from 2010 to 2012 also showed an increasing trend [4]. Over the previous 20 years, accumulating data have consistently shown that lifestyle plays an important role in developing metabolic syndrome [2]; however, it seems that healthcare providers have not been able to change people's lifestyles in a positive direction accordingly.

As most disorders associated with metabolic syndrome are asymptomatic, patients often do not consider their health to be in danger. Additionally, many individuals may never have considered themselves as unwell until diagnosed by their doctor. For example, many of obese and overweight people seem underestimate their size [5], Even among the highly educated population, about only 13-14% answered that they have heard about metabolic syndrome [6]. Some patients may be aware that they have a couple of components of metabolic syndrome, but they may not have a detailed understanding that metabolic syndrome put them at high risk for cerebrovascular diseases. Other patients might be aware that they are in danger, but there is still quite a difference between understanding risk and acting against the risk. It is likely that reluctant patients would require more support to change their health-related attitudes and behaviors [7]. A patient with metabolic syndrome may frequently think 'I am a little bit overweight' or 'I will be okay, gaining weight is a natural process of aging' or 'I do not have enough time to work out anyway.' Not having sufficient time can be used as an excuse to deflect serious consideration of medical advice, particularly regarding lifestyle changes [5,8].

What type of nourishment is best for those with metabolic syndrome? Many patients would prefer a simple treatment regimen for their disease, requiring little effort and time to implement. Several standard drug therapies are available to treat metabolic risk factors, but because of cultural acceptability and concern in relation to potential side effects, complementary and alternative medicines (CAMs) have emerged as having a role in the treatment of these risk factors [9]. In general, CAMs are perceived to be a safe, natural therapy with a holistic appeal [10]. For example, *Crocus sativus* L. (saffron) has been used to treat several illnesses including metabolic syndrome [9]. Spa and health resort-based treatments have also been tried, including therapeutic modalities involving taking mineral water in combination with phytococktails for patients with metabolic syndrome [11].

How can healthcare providers encourage patients with metabolic syndrome to adopt healthier lifestyle habits? First, tailored programs of education and lifestyle modification are an effective treatment strategy. Specific knowledge about the individual conditions, not abstract or boring lectures about metabolism or sports physiology, can facilitate patients at risk to aware their personal risk and to make the behavior and lifestyle changes. As healthcare providers become more focused on patients' personal level, lifestyle modifications are more likely to be followed [12].

Tailored programs may be helpful for people reluctant to change their behaviors. Second, healthcare providers need to

inform their patients that exercise can take many forms and does not necessarily require a full gym membership for example. There are many options for greater exercise in everyday life activities. Patients may choose to go to hospital using public transportation, rather than their cars. They may also choose to use the stairs to access the second floor of the hospital, rather than use an escalator or an elevator. During consultation, healthcare providers could also demonstrate simple stretching movements for patients to perform. Third, healthcare providers could ask simple questions regarding lifestyle modification at the beginning of each session. It has been reported that where physicians suggest smoking cessation, there appears to be an increase in smoking cessation, even among those with no previous intention to quit [13]. In this respect, healthcare professionals could easily begin a conversation by asking specific lifestyle-related questions, for example: 'Since your last visit, have you tried to work out more? Have you tried to eat healthier food?' Asking simple questions related to physical activity, fast food habits, smoking, sleeping habits, and hygiene may help patients change their lifestyle. While it is acknowledged that to bring about a complete lifestyle change in someone with several metabolic risk factors can be difficult, it is possible to encourage change as a healthcare professional through repeated questioning. Lastly, early pharmacological intervention is needed for patients when lifestyle modification has not been satisfactorily achieved. An ongoing benefit of early medication use should not be underestimated when considering modifiable factors concerning metabolic syndrome. Recent studies have provided evidence of an ongoing positive effect of an early pharmacological approach, using statin, insulin, or renin-angiotensin-aldosterone system (RAAS) blockade, to control the components of metabolic syndrome [14,15]. Furthermore, a medical prescription itself may also work as both a motivation and a warning to patients to initiate lifestyle modifications.

Motivating a patient to change is a key factor in achieving a reduction in metabolic syndrome components. This encouragement to change can be achieved through frequent personal encounters with healthcare providers. As patient lifestyle improvements are made, personalized pharmacological therapy is likely to more easily normalize blood glucose, triglycerides and blood pressure measurements.

## References

1. Engin A. The definition and prevalence of obesity and metabolic syndrome. Adv Exp Med Biol. 2017;960:1-17.
2. Cardona Velasquez S, Guzman Vivares L, Cardona-Arias JA. Systematization of clinical trials related to treatment of metabolic syndrome, 1980-2015. Endocrinol Diabetes Nutr. 2017;64:82-91.
3. Moore JX, Chaudhary N, Akinyemiju T. Metabolic syndrome prevalence by race/ethnicity and sex in the United States, National Health and Nutrition Examination Survey, 1988-2012. Prev Chronic Dis. 2017;14:E24.
4. He YN, Zhao WH, Zhao LY, et al. Prevalence of metabolic syndrome in Chinese adults in 2010-2012. Zhonghua Liu Xing Bing Xue Za Zhi. 2017;38:212-5.
5. Paul TK, Sciacca RR, Bier M, et al. Size misperception among overweight and obese families. J Gen Intern Med. 2015;30:43-50.
6. Lewis SJ, Rodbard HW, Fox KM, et al. Self-reported prevalence and awareness of metabolic syndrome: Findings from SHIELD. Int J Clin Pract. 2008;62:1168-76.
7. Cha E, Crowe JM, Braxter BJ, et al. Understanding how overweight and obese emerging adults make lifestyle choices. J Pediatr Nurs. 2016;31:e325-e332.
8. Martinez-Ramos E, Martin-Borras C, Trujillo JM, et al. Prolonged sitting time: barriers, facilitators and views on change among primary healthcare patients who are overweight or moderately obese. PLoS One. 2015;10:e0125739.
9. Razavi BM, Hosseinzadeh H. Saffron: A promising natural medicine in the treatment of metabolic syndrome. J Sci Food Agric. 2017;97:1679-85.
10. Cheifetz AS, Gianotti R, Luber R, et al. Complementary and alternative medicines used by patients with inflammatory bowel diseases. Gastroenterology. 2017;152:415-29.
11. Chalaya EN, Botvineva LA, Tsallagova LV, et al. The spa and health resort-based treatment of metabolic syndrome with the application of the therapeutic courses of different duration: The evaluation according long-term results. Vopr Kurortol Fizioter Lech Fiz Kult. 2017;94:27-31.
12. Yahia N, Brown C, Rapley M, et al. Assessment of college students' awareness and knowledge about conditions relevant to metabolic syndrome. Diabetol Metab Syndr. 2014;6:111.
13. Wu L, He Y, Jiang B, et al. Very brief physician advice and supplemental proactive telephone calls to promote smoking reduction and cessation in Chinese male smokers with no intention to quit: a randomized trial. Addiction. 2017;112:2032-40.
14. Kashef MA, Giugliano G. Legacy effect of statins: 20 year follow up of the West of Scotland Coronary Prevention Study (WOSCOPS). Glob Cardiol Sci Pract. 2016;4:e201635.
15. Unnikrishnan RI, Anjana RM, Mohan V. Importance of controlling diabetes early - The concept of metabolic memory, legacy effect and the case for early insulinisation. J Assoc Physicians India. 2011;59:8-12.