# 4. Metabolism and Endocrine Diseases

# Reference

Park SH. Effects of Yak-Sun tea prescription from Oriental medicinal herbs for serum lipid levels and oxidative stress in hyperlipidemic women. *Dongui-Saengli-Byeongli-Hakhoeji (Korean Journal of Oriental Physiology & Pathology*) 2006; 20(5): 1180–6 (in Korean with English abstract).

#### 1. Objectives

To examine the effects of Yak-Sun tea (藥膳茶: Koekac, Sansa, Heshouwu, Wulong) on blood lipid levels and oxidative stress in hyperlipidemic women.

## 2. Design

Randomized controlled trial (RCT).

# 3. Setting

One Oriental hospital (details not mentioned), Republic of Korea.

#### 4. Participants

Forty career women (30–45 years old) diagnosed as having hyperlipidemia.

# 5. Intervention

Arm 1: Patients consumed Yak-Sun tea (藥膳茶, 10 g) twice a day for 14 days (n=20).

Arm 2: Control. Patients consumed 1000 ml of 0.02% xylitol water twice a day for 14 days (n=20).

# 6. Main outcome measures

- 1) A measure of dietary uptake.
- 2) Concentration of various blood lipids.
- 3) Units of active oxygen measured by the  $H_2O_2$  test.

## 7. Main results

- 1) Lipid uptake and animal protein uptake were increased in Arm 1.
- 2) Blood glucose level was significantly higher in Arm 1 ( $83.2\pm4.4 \text{ mg/dl vs. } 60.1\pm2.05 \text{ mg/dl}$ ). Serum homocysteine level was significantly lower in Arm 1 ( $8.42\pm1.11 \text{ } \mu \text{mol/L} \text{ } vs. 10.2\pm1.6 \text{ } \mu \text{mol/L}$ ).
- 3) HDL-cholesterol level was significantly higher in Arm 1 (66.2 mg/dl *vs.* 51.2 mg/dl, while LDL-cholesterol level was significantly lower (96.2 mg/dl *vs.* 108.7 mg/dl).
- 4) Active oxygen level was significantly lower in Arm 1.

## 8. Conclusions

Yak-Sun tea intake significantly increases HDL-cholesterol level but decreases LDL-cholesterol homocysteine levels in women with hyperlipidemia. This objective study provides basic data and a scientific approach to the study of herbs as functional foods.

## 9. Safety assessment in the article

No unusual adverse effects were observed.

## **10.** Abstractor's comments

Yak-Sun can reduce overweight, obesity, and hyperlipidemia. This study reported that Yak-Sun tea improves hyperlipidemia. Yak-Sun tea used in this study was a mixture of Koekac, Sansa, Heshouwu, and Wulong and its administration followed Monarch (jun). Minister (chen). Adjuvant (zou). Guide (shi) (君臣左使) principles, so it acts by Yang gan ik sin (養肝益腎, nourishing the liver and kidney), Kang Ji Gambi (降脂減肥, lowering fat andreducing obesity), Saeng bal oh bal (生髮烏髮, promoting the growth of hair and black hair), and Yeonn yeon ik su (延年益壽, prolonging life,). There are reports that Yak-Sun tea improves hypertension, hyperlipidemia, arteriosclerosis, coronary arteriosclerosis, diabetes, obesity, and alopecia, and reverses the graying of hair and aging. The study was too short (14 days) to establish definite efficacy. The results of this study suggest that Yak-Sun tea may be a functional food and that herbal dietary supplements may have efficacy.

# 11. Abstractor

Lee BC, 28 May 2010.