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SUPPLEMENTI DIETETICI NELLA GESTIONE DEL FOOD CRAVING E DEL SENSO DI SAZIETÀ

Federica Fogacci

Università di Bologna

14°
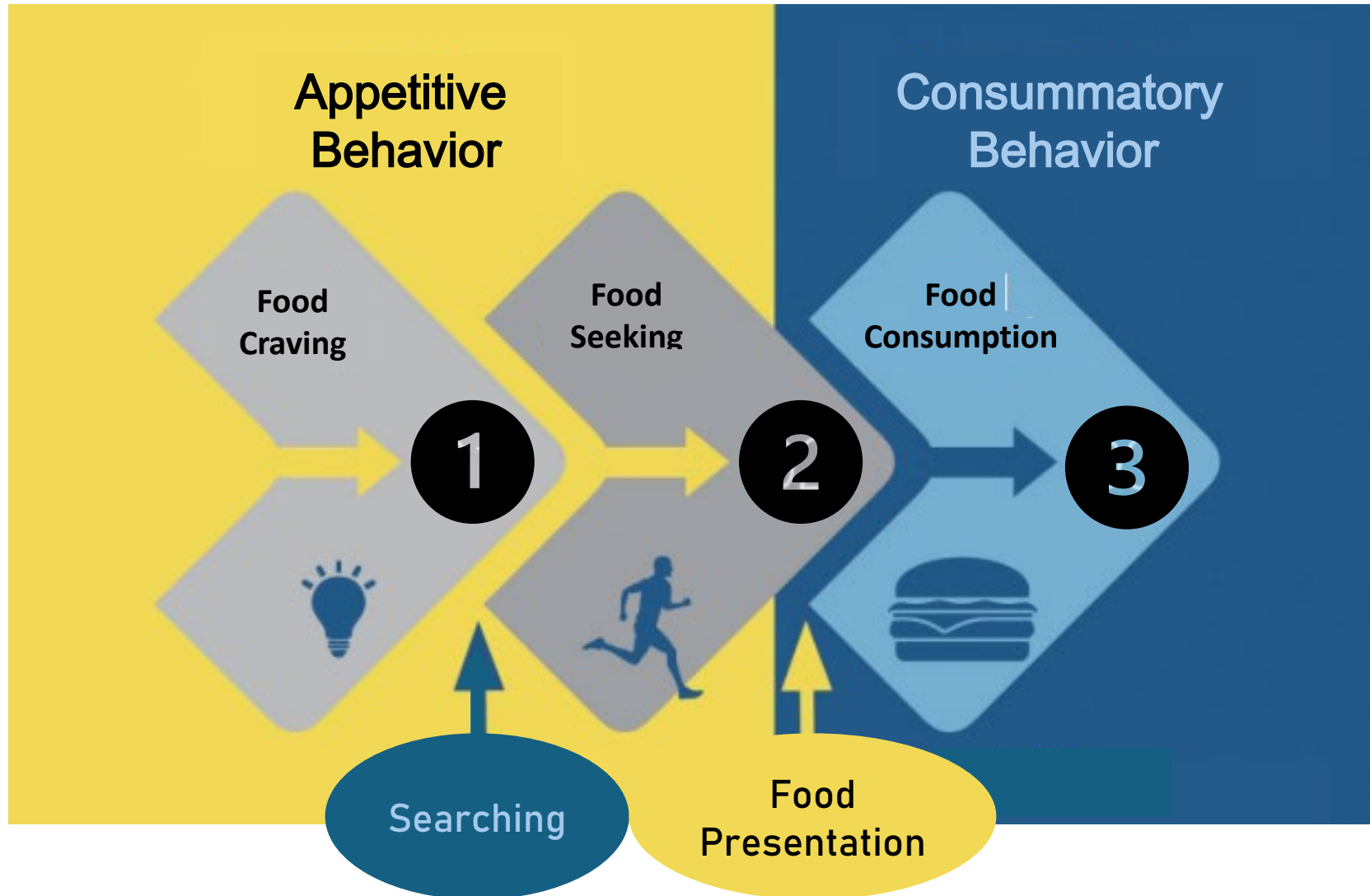CONGRESSO NAZIONALE SINut

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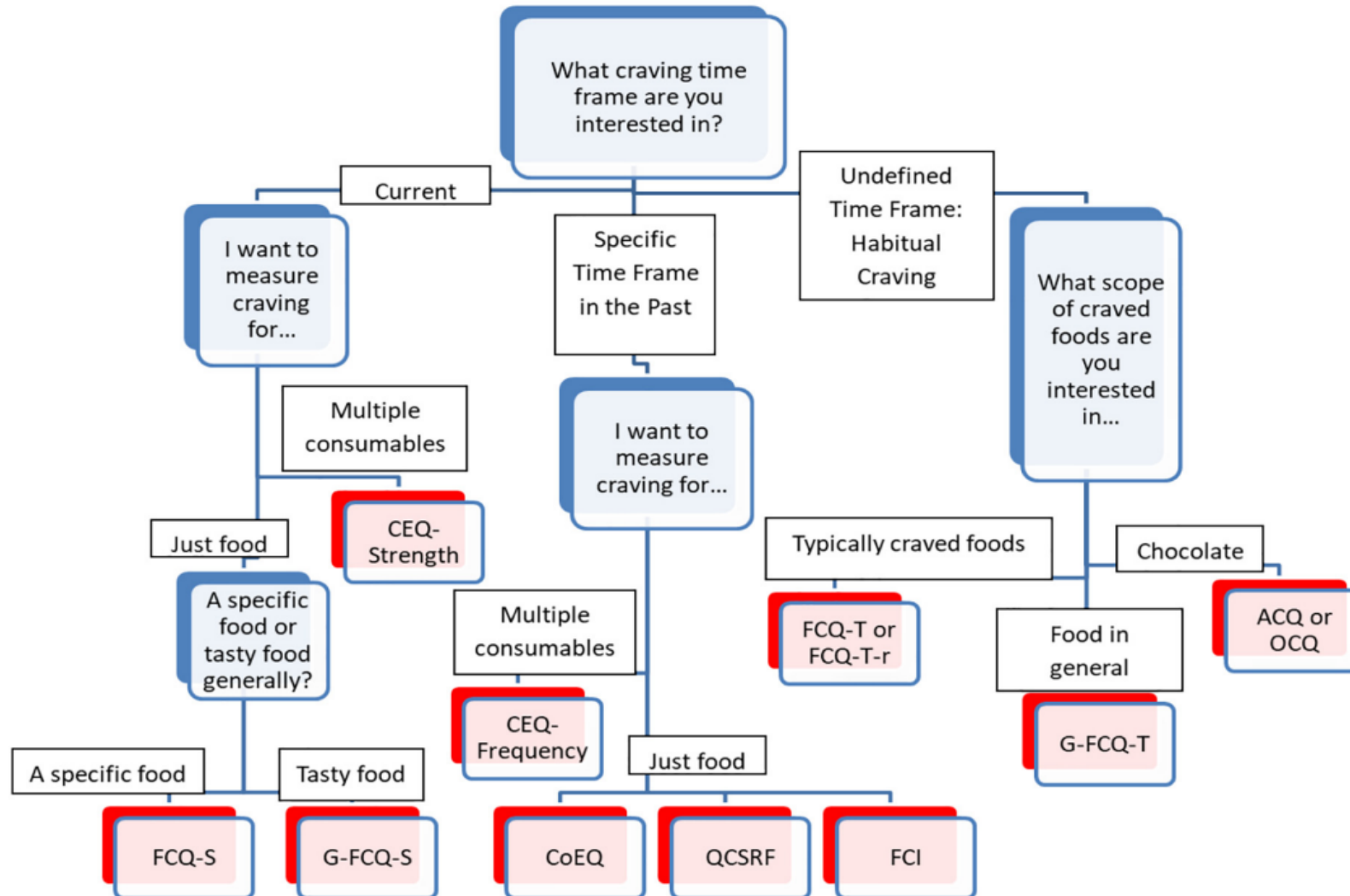*Il sottoscritto Federica Fogacci*
ai sensi dell'art. 3.3 sul Conflitto di Interessi, pag. 17 del Reg. Applicativo dell'Accordo Stato-Regione del 5
novembre 2009,

dichiara

che negli ultimi due anni NON ha avuto rapporti diretti di finanziamento con soggetti portatori di
interessi commerciali in campo sanitario

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Appetitive Behavior

Consummatory Behavior

Food Craving

Food Seeking

Food Consumption

1

2

3

Searching

Food Presentation

- Food cravings may be defined as **intense desires or urges** for **a particular type of food**

- Food craving may include intense and intrusive thoughts and multi-sensory imagery of a food; strong urges to seek and consume a food, perception of poor self-control with the food, and anticipation of positive and/or negative reinforcement if one eats the food

- State food cravings are regularly experienced by individuals with and without eating disorders

Lee YH, et al. J Obes Metab Syndr. 2019 Sep;28(3):148-157

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Decision making tree to select a measure of food craving

A key limitation of self-report questionnaires is that they are subject to social desirability bias and demand characteristics. Also, the validity of these questionnaires may be limited because respondents may have different interpretation of items and response options. A third potential problem, relevant to measures assessing past experience of craving, are deficits in retrospective recall

Taylor M. Eat Behav. 2019 Jan;32:101-110

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- People **typically** report **craving highly processed, palatable foods** that contain high levels of refined carbohydrates, sugar, and/or fat

- Higher levels of craving intensity are associated with **more consumption of snacks** and this relationship is moderated by trait craving, with higher trait cravers showing higher levels of snack consumption

- Frequent and intense food cravings may serve as an impediment to psychological and emotional wellness, personal nutrition, health, and/or physical appearance goals
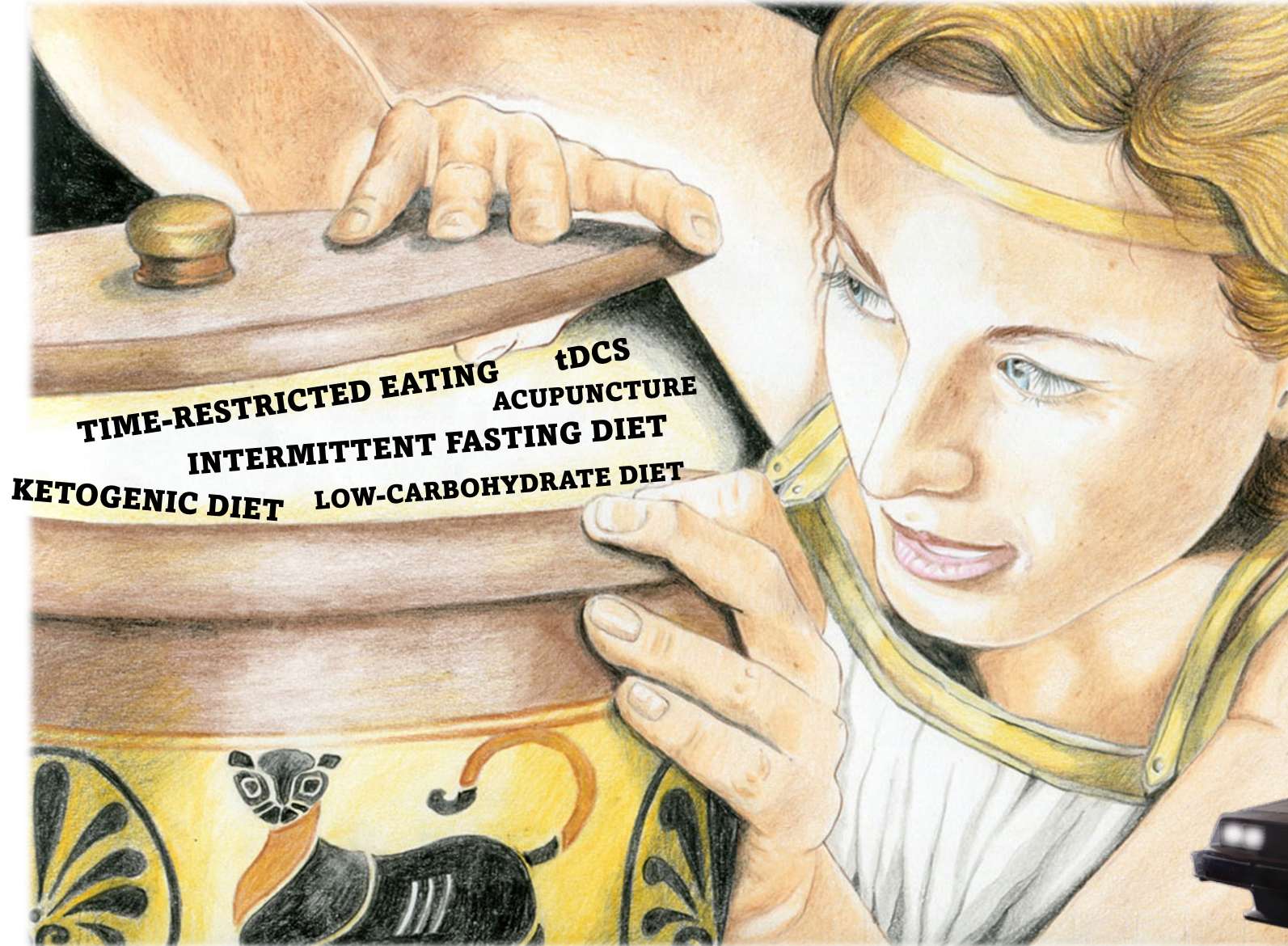
Taylor M. Eat Behav. 2019 Jan;32:101-110

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TIME-RESTRICTED EATING   tDCS
ACUPUNCTURE
INTERMITTENT FASTING DIET
KETOGENIC DIET   LOW-CARBOHYDRATE DIET

Once Pandora's box is open, there is no going back!

Nutraceuticals for Food Craving: a Story of Defeats

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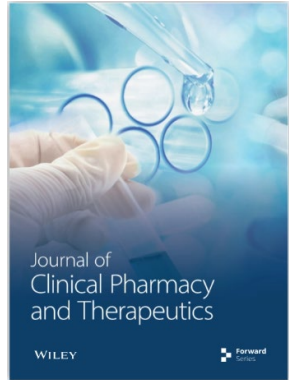
A placebo controlled randomized clinical trial of *Crocus sativus L.* (saffron) on depression and food craving among overweight women with mild to moderate depression

Shahin Akhondzadeh PhD[1] | Seyed-Ali Mostafavi PhD[1] | Seyed Ali Keshavarz PhD[2] |

Mohammad Reza Mohammadi MD[1] | Saeed Hosseini PhD[2] |
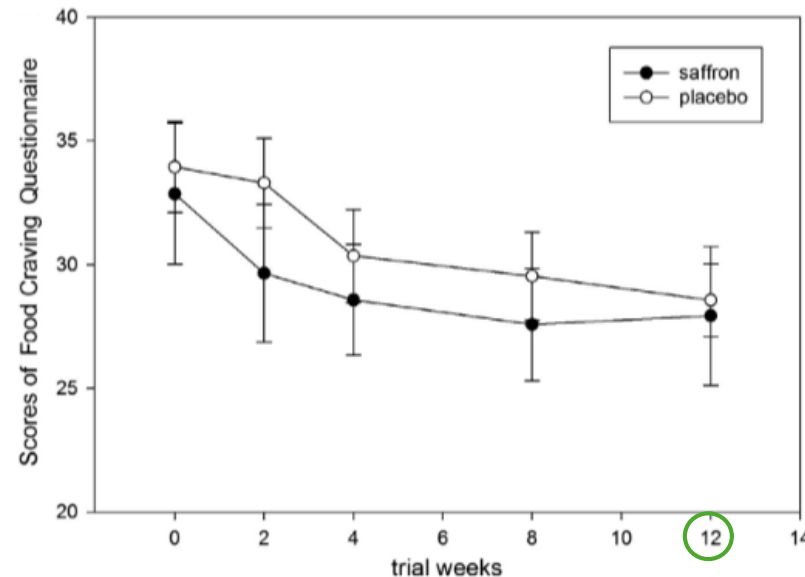
Mohammad Reza Eshraghian PhD[3]

Journal of Clinical Pharmacy and Therapeutics
WILEY

Inclusion Criteria:

- Women
- BMI ≥ 25 Kg/m^2
- Major depressive disorder

Exclusion Criteria:

- Severe depression
- Other severe psychiatric disorders
- Treatment with medications which may affect the appetite and body weight

- Saffron capsule (30 mg/day *Crocus Sativus L.*) was **not effective** in reducing **food craving** or **body weight**, but as a safe over-the-counter supplement

- It may be helpful in patients with depression and BMI ≥ 25 Kg/m^2 for decreasing the symptoms of depression

Akhondzadeh S, et al. J Clin Pharm Ther. 2020 Feb;45(1):134-143

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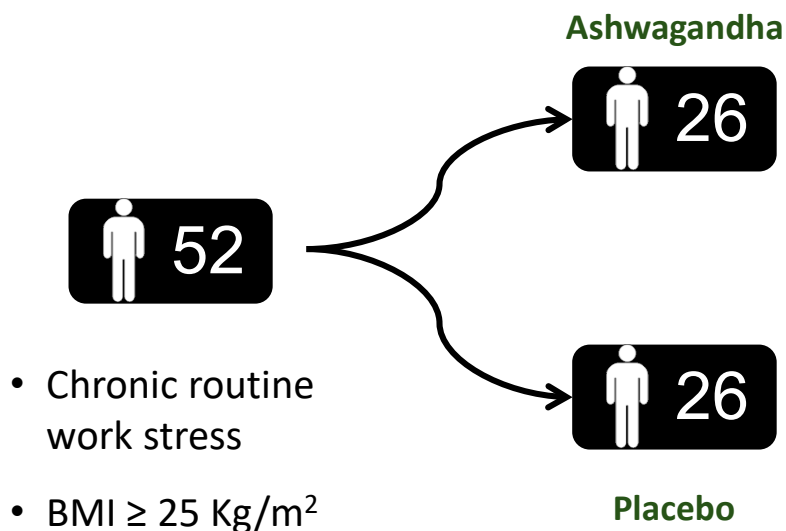Società Italiana di Nutraceutica
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Body Weight Management in Adults Under Chronic Stress Through Treatment With Ashwagandha Root Extract: A Double-Blind, Randomized, Placebo-Controlled Trial

Ashwagandha
(Withania somnifera)

Ashwagandha
👤 26

👤 52

👤 26
Placebo

- Chronic routine work stress
- BMI ≥ 25 Kg/m^2

- **Ashwagandha root extract** (**300 mg;** containing 5% withanolides) resulted in a **marked reduction of** mean scores on the **Perceived Stress Scale** at both 4 and **8 weeks,** compared with baseline values and placebo group

- **Food Craving** (FCQ-T assessed) also showed significantly **greater improvement** in the treatment group than the placebo group

Choudhary D, et al. J Evid Based Complementary Altern Med. 2017 Jan;22(1):96-106

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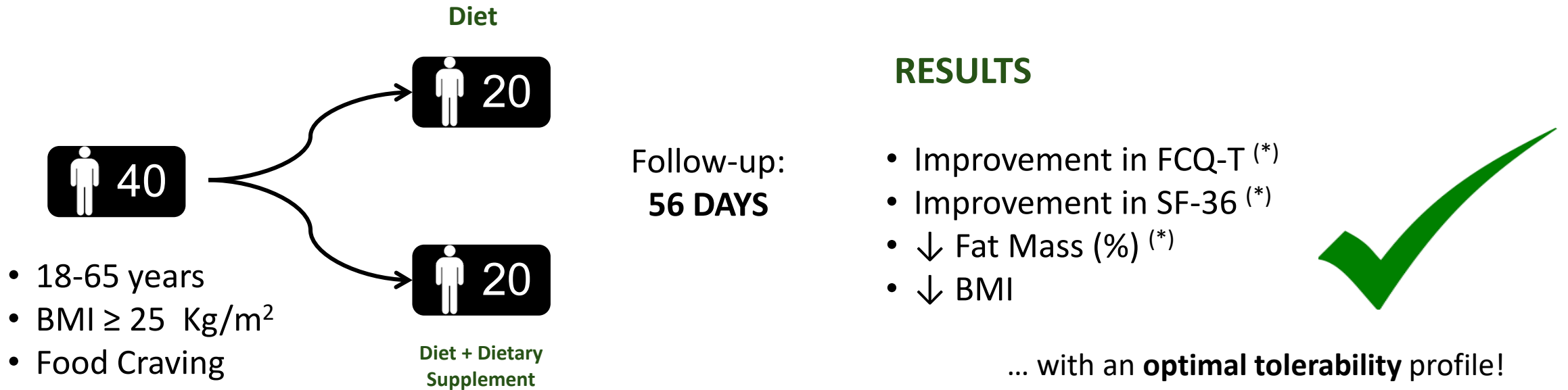
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ORIGINAL ARTICLE

Effect of a combined mulberry-sage dietary supplement on food craving and body weight: a pilot clinical trial

Federica Fogacci[1,2], Maddalena Veronesi[1], Antonio Di Micoli[1], Marilisa Bove[1], Arrigo FG Cicero[1,2]

[1]Hypertension and cardiovascular risk research group, Medical and Surgical Sciences Dept., Alma Mater Studiorum University of Bologna, Bologna, Italy; [2]Italian Society of Nutraceuticals (SINut), Bologna, Italy

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EFFECT OF MULBERRY AND SAGE ON FOOD CRAVING AND BODY WEIGHT

A PILOT CLINICAL STUDY

Diet

👤 20

👤 40

- 18-65 years
- BMI ≥ 25 Kg/m^2
- Food Craving

Diet + Dietary
Supplement

👤 20

Follow-up:
56 DAYS

RESULTS

- Improvement in FCQ-T [*]
- Improvement in SF-36 [*]
- ↓ Fat Mass (%) [*]
- ↓ BMI

... with an **optimal tolerability** profile!

✓

This approach can support body weight loss by decreasing food craving
in healthy overweight individuals

Fogacci F, et al. Progr Nutr [Internet]. 2023;25(3):e2023047

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IMPROVE GLUCOSE CONTROL
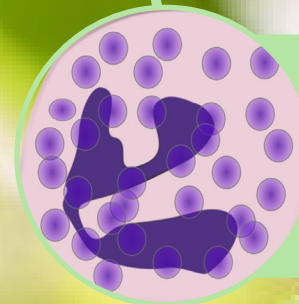
REDUCE SERUM MARKERS OF INFLAMMATION

REDUCE PLASMA LIPIDS

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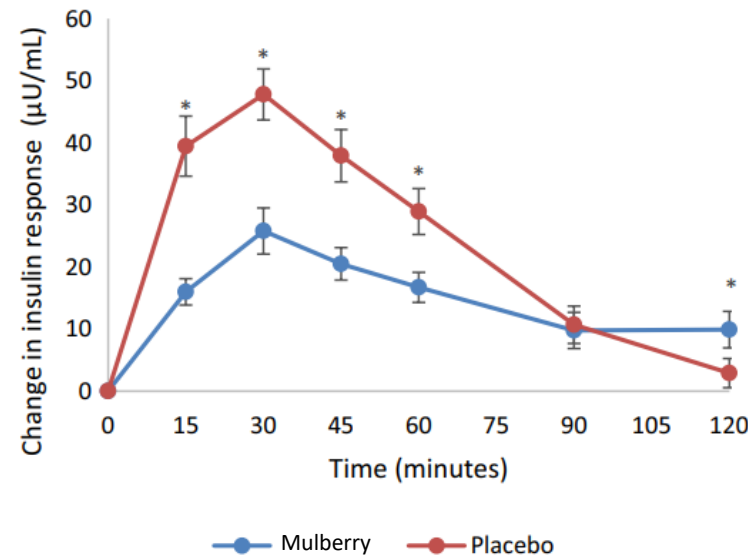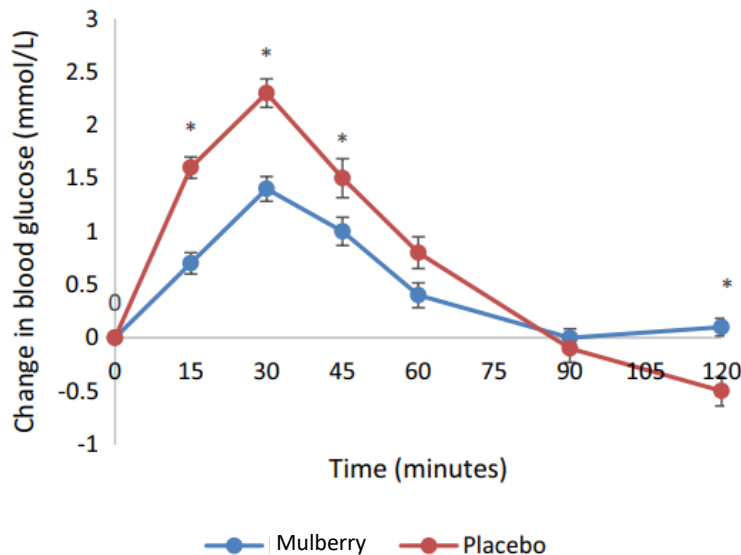
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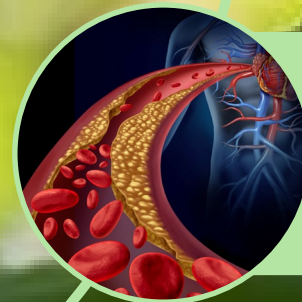
RESEARCH　　　　　　　　　　　　　　　　**Open Access**

Mulberry leaf extract improves glycaemic response and insulaemic response to sucrose in healthy subjects: results of a randomized, double blind, placebo-controlled study

Pariyarath Sangeetha Thondre[1], Helen Lightowler[1], Lis Ahlstrom[1] and Andrew Gallagher[2*] ⓘ

Nutrition & Metabolism

Check for updates

- The results showed a clear and significant effect of **250 mg white mulberry leaf extract** to **decrease** both **glucose** and **insulin** concentrations following a sucrose challenge in **normoglycemic individuals** (*n*= 37)

- Both the peak blood glucose and blood insulin levels were lowered, as was the total postprandial glucose and insulin levels, as represented by iAUC
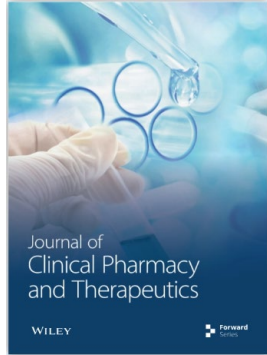
Thondre PS, et al. Nutr Metab (Lond). 2021 Apr 15;18(1):41

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Bologna

Morus Alba leaf extract affects metabolic profiles, biomarkers inflammation and oxidative stress in patients with type 2 diabetes mellitus: A double-blind clinical trial

Mohsen Taghizadeh, Azam Mohammad Zadeh, Zatollah Asemi,
Amir Hosein Farrokhnezhad, Mohammad Reza Memarzadeh, Zarin Banikazemi,
Mohammad Shariat, Rana Shafabakhsh[*]

Morus Alba extract

👤 30

👤 60

- 35-70 years
- Type 2 Diabetes

👤 30

Placebo
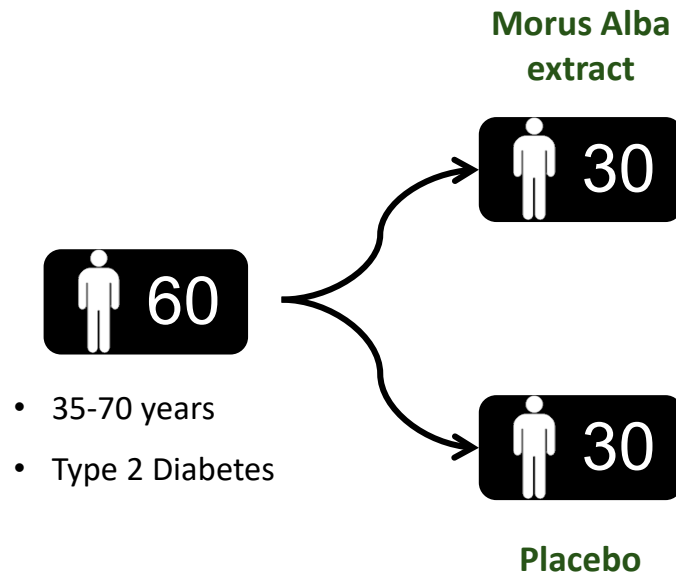
- This study was carried out to determine the effect of **12-week** administration of **Morus Alba extract** (**300 mg twice a day**) on liver enzymes, biomarkers of inflammation and oxidative stress, insulin metabolism and lipid profiles in patients with **T2DM**

- Morus Alba extract had **beneficial effects** on **HDL-cholesterol**, **insulin** and **MDA** levels, but did not affect other metabolic profiles

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Impact of mulberry consumption on cardiometabolic risk factors: A systematic review and meta-analysis of randomized-controlled trials

Xibin Chen MD[1] | Mohammad Hassan Sohouli PhD[2] (iD) | Mahsa Nateghi MSc[3] |
Ebru Melekoglu PhD[4] | Somaye Fatahi PhD[3]

Journal of Clinical Pharmacy and Therapeutics
WILEY · Forward Series
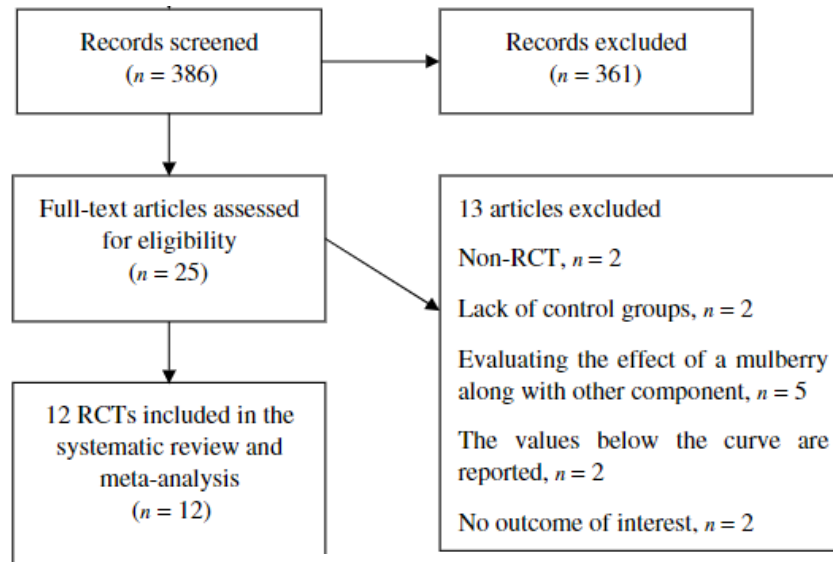
- Duration of intervention was ranged **from 4 to 48 weeks**
- The amount of administered mulberry ranged **between 6 –1000 mg/day** among studies

- The present systematic review and meta-analysis of controlled clinical trials found that mulberry consumption significantly reduced **HbA1c**. Moreover, mulberry consumption beneficially reduced **total cholesterol**, **LDL-C**, and **TG**. Lastly, mulberry consumption favourably decreased **CRP** inflammatory marker as a predictor of CVD

- Subgroup analysis results showed that mulberry consumption **>300 mg/day** and **≤6 weeks** resulted in **greater reductions** in total cholesterol, TG, and LDL-C levels. Also, >300 mg daily intake of mulberry exhibited a favourable effect on serum HDL-C

Chen X, et al. J Clin Pharm Ther. 2022 Dec;47(12):1982-1993

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IMPROVE GLUCOSE CONTROL

REDUCE PLASMA LIPIDS

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JOURNAL OF COMPLEMENTARY AND INTEGRATIVE MEDICINE
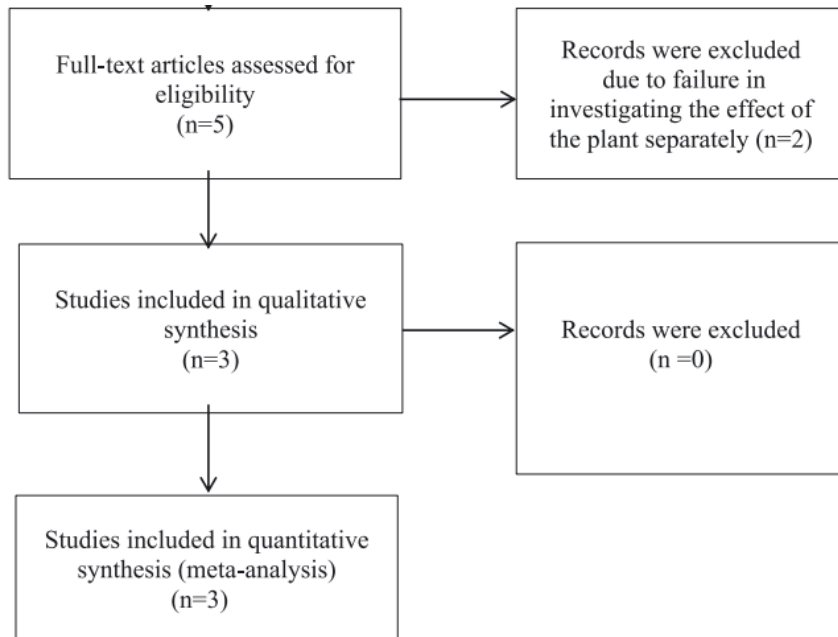
Ali Abdollahi, Faeze Adelibahram, Nafiseh Ghassab-Abdollahi, Mostafa Araj-khodaei, Zahra Parsian and Mojgan Mirghafourvand*

The effect of *Salvia officinalis* on blood glycemic indexes and blood lipid profile in diabetic patients: a systematic review and meta-analysis

First author (year)	Country	Type of clinical trial	Sample size	Age of participants, years	Intervention (dosage + months of treatment)	Comparison (dosage + months of treatment)	Duration of follow up
Behradmanesh et al. (2013)	Iran	RCT	*Salvia officinalis* group = 40 Placebo group = 40	40–60	*Salvia officinalis* tablets (150 mg extract) 3 times a day for 3 months	Placebo 3 times a day	3 months
Kianbakht et al. (2013)	Iran	RCT	*Salvia officinalis* group = 44 Placebo group = 42	40–60	*Salvia officinalis* leaf extract (one 500 mg capsules) 3 times a day for 3 months	Placebo 3 times a day	3 months
Kianbakht et al. (2016)	Iran	RCT	Group:105 *Salvia officinalis* group = 52 Placebo group = 53	40–60	*Salvia officinalis* capsules(contained 500 mg of the extract powder) every 8 h (3 times a day) for 2 months	Placebo capsule every 8 h for 2 months	2 months

Abdollahi A, et al. J Complement Integr Med. 2022 Jan 25;20(3):521-529

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Ali Abdollahi, Faeze Adelibahram, Nafiseh Ghassab-Abdollahi, Mostafa Araj-khodaei, Zahra Parsian and Mojgan Mirghafourvand*

JOURNAL OF COMPLEMENTARY AND INTEGRATIVE MEDICINE

The effect of *Salvia officinalis* on blood glycemic indexes and blood lipid profile in diabetic patients: a systematic review and meta-analysis

The results of meta-analysis showed that S. officinalis has **significant effect** on :

- **FBS** (mg/dL) (n=3 studies; MD: −31.15; 95% CI: −37.56 to −24.73; p<0.00001)

- **HbA1c** (%) (n=2 studies; MD: −0.94; 95% CI: −1.25 to −0.63; p<0.00001)

- **Total Cholesterol** (mg/dL) (n=3 studies; MD: −43.64; 95% CI: −83.26 to −4.02; p=0.03)

- **Triglycerides** (mg/dL) (n=3 studies; MD: −39.78; 95% CI: −85.69 to 6.12; p=0.09)

- **LDL-C** (mg/dL) (n=3 studies; MD: −19.23; 95% CI: −35.81 to −2.65; p=0.02)

- **HDL-C** (mg/dL (n=3 studies; MD: 6.15; 95% CI: −1.73 to 14.03; p=0.13)

- **2-HPPG** (mg/dL) (n=2 studies; MD: −49.24; 95% CI: −62.39 to −36.08; p<0.00001)

Abdollahi A, et al. J Complement Integr Med. 2022 Jan 25;20(3):521-529

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Antihyperlipidemic Effects of *Salvia officinalis* L. Leaf Extract in Patients with Hyperlipidemia: A Randomized Double-Blind Placebo-Controlled Clinical Trial

S. Kianbakht,[1]* B. Abasi,[2] M. Perham[3] and F. Hashem Dabaghian[4]

Sage extract capsules

👤 34

👤 67

- 20-60 years
- Primary Hyperlipidemia

👤 33
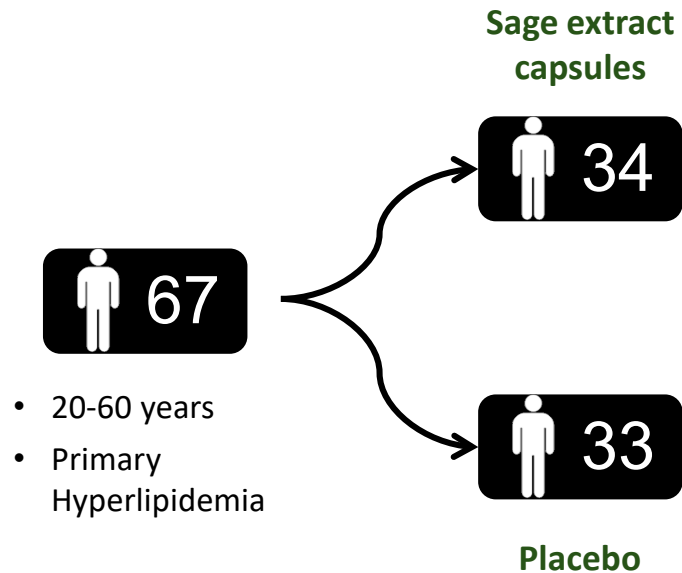
Placebo

- **Total cholesterol**, **TG**, **LDL-C** and **VLDL-C** levels **decreased**, whereas **HDL-C** levels **increased** in the sage group after **4 months** compared to the baseline and compared to placebo

- No adverse effects were reported by patients

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TAKE HOME MESSAGES

1 **Food cravings consists in an intense desires or urges for a particular type of food**

2 Some botanicals can ameliorate food craving and potentially decrease the risk for the long-term metabolic consequences

3 Studies involving large numbers of individuals will be necessary to obtain further evidence on the topic

THANKS FOR YOUR ATTENTION

... any question? E-mail me!

federicafogacci@gmail.com