



LE

MAGAZINE | Shed Belly Fat: The Mediterranean Way

In human trials, a new moro orange extract decreased waist circumference up to 2.79 inches.

By **Michael Downey**.



**Prescription drugs** that enable massive **weight loss** made headline news this year.<sup>1</sup>

Yet people seeking modest **weight loss** often turn to **plant-based** alternatives that are backed by **human** research.

In a **placebo**-controlled study, both groups were asked to continue their existing diet and exercise habits.

The group ingesting a new **fruit extract** lost more total **body weight** than the placebo arm.<sup>2</sup>

The **fruit extract** group also reduced **waist circumference** by **2.8 inches**.<sup>2</sup>

This article describes research supporting the use of this **fruit** that originated in the Mediterranean.

Dangers of Abdominal Fat

More than **70%** of U.S. adults are **overweight** or **obese**.<sup>3</sup>

But not all body fat is the same. Certain types, such as **abdominal fat**, pose the greatest threat.

Excess body weight around the abdomen, or abdominal obesity, keeps our bodies in an **inflammatory** state that has been associated with increased risk of metabolic abnormalities.<sup>4</sup>

A review paper published in the *Archives of Medical Science* concluded that:<sup>5</sup>

**"Sustained inflammation is considered a strong risk factor for developing many diseases including CVDs [cardiovascular diseases], metabolic syndrome, diabetes, and cancer."**

Readers of this publication have been educated for decades about the dangers of chronic **inflammation** and strategies to combat it.

The "Moro Orange"



Searching for a way to promote healthy **weight loss**, scientists have investigated compounds known as **anthocyanins**.

Evidence from preclinical studies suggests that diets enriched in **anthocyanins** can improve glucose tolerance and **insulin sensitivity**.<sup>5</sup>

Anthocyanins are pigments found in red, blue, and purple color **fruits** and in the "**moro orange**."<sup>5</sup>

The **moro orange** fruit is believed to have originated at the beginning of the 19th century in Sicily, as a result of a natural bud interaction with another orange type.<sup>5</sup>

Anthocyanins from **moro oranges** have been shown to help decrease **weight** and **adipose tissue** (fat) by regulating metabolism of fatty acids.<sup>7</sup>



One study showed that when healthy, overweight adults supplemented with a **moro orange** juice **extract** rich in **anthocyanins** it resulted in significant reductions in **body mass index** (BMI) compared with taking a placebo.<sup>3</sup>

#### BENEFICIAL COMPOUNDS IN MORO ORANGE

Scientists have concluded that the **anti-obesity** effect of **moro orange** juice in animal studies is so significant, it *cannot be explained by anthocyanin content alone*.

**Moro orange** contains other health-promoting compounds, including:<sup>6</sup>

- Flavonoids
- Carotenoids
- Hydroxycinnamic acids



These and other **moro orange** components may work **together** to inhibit **fat storage**.<sup>6</sup>

Research on mice demonstrated that intake of **moro orange juice**:<sup>8</sup>

- **Reduced fat accumulation** by about **50%**,
- **Decreased adipocyte size**, and
- **Regulated gene expression** of adipose tissue (modulated gene expression changes caused by a high-fat diet).

#### WHAT YOU NEED TO KNOW

##### Weight-Loss Benefits of Moro Orange

- Clinical studies show that **moro orange extract** can reduce weight by an average of **4.2%** and decrease dangerous **belly fat**, when combined with exercise and a reduced-calorie diet.
- Moro orange is high in **anthocyanins**, which some data have linked to weight loss, along with an array of other beneficial compounds.



#### Weight Loss in Humans

Scientists set out to assess **moro orange's** potential for weight loss in **humans**.

In a clinical study, researchers instructed 60 overweight individuals to take **400 mg** of **moro orange juice extract** once daily. They were also asked to continue with their existing diet and exercise habits.<sup>2</sup>

Compared to **placebo**, those who took the **moro orange** extract for **12 weeks** reduced their:

- **Weight** by **4%** (vs. **0.5%** with placebo),
- **BMI** by **1.11 kg/m<sup>2</sup>** (vs. **0.15 kg/m<sup>2</sup>** with placebo),
- **Waist circumference** by **2.79 inches** (vs. **0.31 inches** with placebo), and
- **Hip circumference** by **2.35 inches** (vs. **0.27 inches** with placebo).

#### Losing Weight and Fat

For greater validation, a clinical trial was designed that involved 136 overweight but healthy **humans**, followed for a longer period of **six months**.<sup>9</sup>

This time, the volunteers were asked to consume **500** fewer calories daily and walk for **30 minutes**, three times a week.

Those who took **400 mg** of **moro orange extract** once daily, on average reduced:<sup>9</sup>

- **Weight** by **4.2%** (vs. **2.2%** with placebo),
- **BMI** by **1.2 kg/m<sup>2</sup>** (vs. **0.6 kg/m<sup>2</sup>** with placebo),
- **Waist circumference** by **1.5 inches** (vs. **0.7 inches** with placebo),
- **Fat mass** by **7.5%** (vs. **5.7%** with placebo),

- **Abdominal fat mass** by **11.3%** (vs. **6.1%** with placebo),
- **Visceral fat mass** (between abdominal organs) by **12.4%** (vs. **9.0%** with placebo), and
- **Subcutaneous fat mass** (just under the skin) by **9.4%** (vs. **6.4%** with placebo).

Overall, **36%** of those in the **moro orange** group had a **weight loss** of *more than 5%*, compared to **22.5%** of the **placebo** group.<sup>9</sup>

To put the waist-size reduction of **1.5 inches** into perspective, the notches on a belt are usually about one inch apart, making this a reduction of *well more than one belt notch*.

Evidence is clear that **moro orange extract** can be a vital part of a healthy weight-loss program.

### Summary



The **moro orange** has been found to help reduce weight and dangerous **abdominal fat**.

It is high in anthocyanins and other compounds that may work together to promote weight loss.

Human studies found that **moro orange extract** safely reduced **waist circumference** by **1.5** to **2.79 inches**.

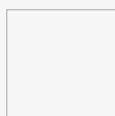
If you have any questions on the scientific content of this article, please call a **Life Extension** Wellness Specialist at 1-866-864-3027.

### References

1. Jastreboff AM, Aronne LJ, Ahmad NN, et al. Tirzepatide Once Weekly for the Treatment of Obesity. *N Engl J Med*. 2022 Jun 4.
2. Titta L, Trinei M, Stendardo M, et al. Blood orange juice inhibits fat accumulation in mice. *Int J Obes (Lond)*. 2010 Mar;34(3):578-88.
3. Cardile V, Graziano AC, Venditti A. Clinical evaluation of Moro (*Citrus sinensis* (L.) Osbeck) orange juice supplementation for the weight management. *Nat Prod Res*. 2015;29(23):2256-60.
4. Available at: <https://www.cdc.gov/nchs/fastats/obesity-overweight.htm>. Accessed June 29, 2022.
5. Ellulu MS, Patimah I, Khaza'ai H, et al. Obesity and inflammation: the linking mechanism and the complications. *Arch Med Sci*. 2017 Jun;13(4):851-63.
6. Azzini E, Giacometti J, Russo GL. Antiobesity Effects of Anthocyanins in Preclinical and Clinical Studies. *Oxid Med Cell Longev*. 2017;2017:2740364.
7. Grosso G, Galvano F, Mistretta A, et al. Red orange: experimental models and epidemiological evidence of its benefits on human health. *Oxid Med Cell Longev*. 2013 2013/05/02;2013:157240.
8. de Lima LP, de Paula Barbosa A. A review of the lipolytic effects and the reduction of abdominal fat from bioactive compounds and moro orange extracts. *Heliyon*. 2021 Aug;7(8):e07695.
9. Briskey D, Malfa GA, Rao A. Effectiveness of Moro Blood Orange *Citrus sinensis* Osbeck (Rutaceae) Standardized Extract on Weight Loss in Overweight but Otherwise Healthy Men and Women-A Randomized Double-Blind Placebo-Controlled Study. *Nutrients*. 2022;14(3):427.

### Related Lab Testing

- **Weight Loss Panel (Comprehensive) Blood Test**
- **Weight Loss Panel (Basic) Blood Test**
- **NutriGen™ Genetic Weight Management Panel Cheek Swab**



**MAGAZINE**  
SUBSCRIPTION

Stay informed with Life Extension Magazine®

[Subscribe Now](#) 



## LAB TESTS

From basic health panels to genetic testing

[Learn More](#) 



## ADVERTISE IN THE MAGAZINE


Spread the word to LE customers

[Learn More](#) 



## STRESS AND BURNOUT STUDY

Feeling Frazzled? Is stress keeping you up at night?

[Learn More and Apply](#) 

[Affiliate Program](#) | [Become a Reseller](#) | [Careers](#) | [Website Map](#) | [California Privacy](#)

[Shipping Information](#) | [Terms of Use](#) | [GDPR Privacy Notice](#) | [Cookie Statement](#) | [Privacy](#)

[About Us](#) | [Contact Us](#) | [FAQs](#) | [Blog](#) | [Website Accessibility Statement](#)

[California Privacy Contact Form](#) | [Ad-Choices](#)

Life Extension does not provide medical advice, diagnosis, or treatment. All Contents Copyright ©2022 Life Extension. All rights reserved.

\*2022 Consumer Satisfaction, Rated #1 Catalog/Internet Brand.

Ratings based on results of the 2022 ConsumerLab.com Survey of Supplement Users.

More information at [www.consumerlab.com/survey](http://www.consumerlab.com/survey).

**These statements have not been evaluated by the Food and Drug Administration.  
These products are not intended to diagnose, treat, cure, or prevent any disease.**