



### **Arom-X to Burn Fat**

One of the primary ingredients in Arom-X is resveratrol. This is an extremely popular anti-aging and overall health promoting compound. Advanced Muscle Science (AMS) uses it in Arom-X as it has been shown to improve male reproduction function (triggers erections, enhancing serum testosterone levels, and sperm count and quality). These are all highly advantageous benefits after a cycle of prohormones.

### **What does all this have to do with fat burning?**

A recent study out of Spain attempted to determine what happens in fat tissue as a result of resveratrol consumption (1). The study did point out the fact that there is existing research on resveratrol showing potential fat loss, but the majority of this research has been in vitro. This particular study used healthy rats. Which although not as good as healthy males, it is still substantially better than in vitro research.

### **Study Setup**

The study used 16 rats (8 controls, and 8 resveratrol) and fed both groups the same diet which is used to promote fat gain. They then gave the rats 30mg's of resveratrol per kilogram of weight each day. This translates to approximately 2.7 grams of resveratrol for a 200lb male. The supplementation period lasted for 6 total weeks.

### **Fat Loss Findings**

At the end of the 6 weeks there were no major differences in total weight, or in weight gain. What they did find was a large decrease in fat tissue weight including a substantial decrease in subcutaneous fat (the squish that covers your abs) of **30.5%**! There were also significant weight decreases in visceral fat (generally unhealthy).

In addition to fat tissue weight they also measured several enzymes responsible for fatty acid uptake (fat storage). One particular enzyme they measured is known as heparin-releasable lipoprotein lipase (HR-LPL). They found that HR-LPL was significantly decreased in the resveratrol group. HR-LPL is a key enzyme responsible for cellular uptake of free fatty acids, in other words it plays a key role in fat storage

(2). Decreasing this enzyme is one mechanism of action the researchers suggest plays a role in resveratrol's fat prevention properties.

In addition to the above effects the researchers also measured several other lipogenic (enzymes that promote fat storage, and/or block fat burning). They found a significant reduction in the activity of three of the four tested enzymes in fat tissue. This also indicates resveratrol's positive impact on fat gain prevention and fat burning (oxidation).

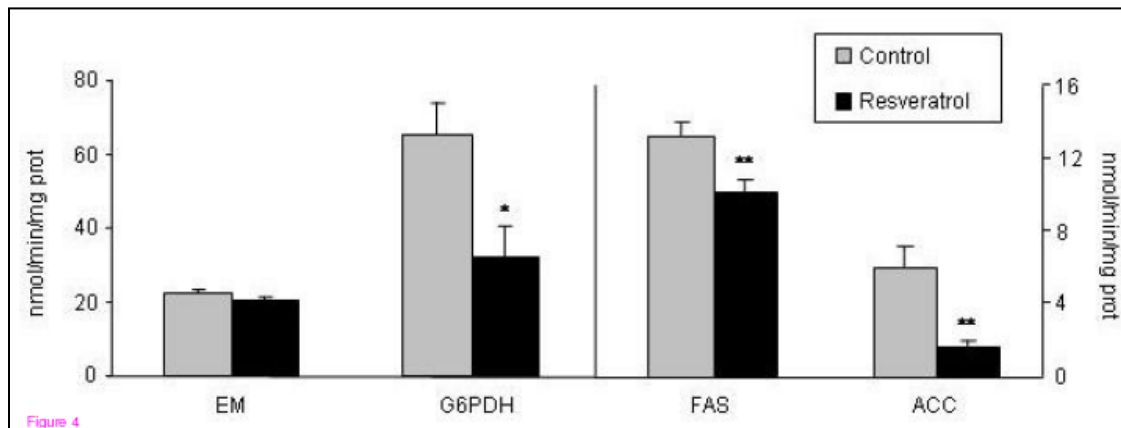


Figure 4  
EM - Malic Enzyme, G6PDH - Glucose-6P-dehydrogenase, FAS - fatty acid synthase, ACC - acetyl-CoA-Carboxylase

The researchers also measured hormone-sensitive lipase, which is an enzyme that once activated increases lipolysis. Or in simpler terms, releases stored fat into the blood in order for its use by other tissues for fuel. They found that this enzyme expression was raised in the resveratrol group.

So in summary, this study found resveratrol:

- Decreased subcutaneous fat weight
- Decreased visceral fat weight
- Decreased key enzymes involved in fat storage
- Positive influence on fat burning and storage enzymes
- Increased activation of the all important HSL enzyme

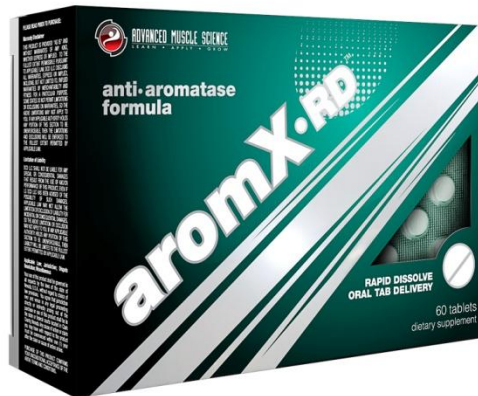
### Caveats

The authors do go on to discuss resveratrol and its bioavailability issues. A recent study found that the oral bioavailability of resveratrol to be approximately 20% (3). As noted earlier the dose given to rats in this study translated to a significant dose for humans. However, even a dose as small as 10mg/day in diabetic humans showed a positive influence on insulin sensitivity (4).

### Arom-X

Knowing that resveratrol bioavailability is an issue, AMS created a special orally disintegrating tablet. This helps avoid first pass metabolism and improve bioavailability even further. Overall this makes

Arom-X not only a great recovery and natural testosterone boosting option, but also a potentially potent fat loss/prevention agent. For more information on this powerful natural supplement please visit the [Advanced Muscle Science Website](#).



#### References:

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2. *Lipoprotein lipase regulation by insulin and glucocorticoid in subcutaneous and omental adipose tissues of obese women and men.* Fried SK, Russell CD, Grauso NL, Brodin RE. 1993, The Journal of Clinical Investigation, pp. Nov;92(5):2191-8.
3. *Pharmacokinetics, oral bioavailability, and metabolic profile of resveratrol and its dimethylether analog, pterostilbene, in rats.* Kapetanovic IM, Muzzio M, Huang Z, Thompson TN, McCormick DL. 2010, Cancer Chemotherapy and Pharmacology, p. Nov 30. .
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