# Article information:

A transdermal treatment with MC903 ameliorates diet-induced obesity by reducing visceral fat and increasing myofiber thickness and energy consumption in mice | Nutrition & Metabolism | Full Text
[https://nutritionandmetabolism.biomedcentral.com/articles/10.1186/s12986-023-00732-5?utm\_source=stork=referral=paid=MLSR\_JRNLS\_AWA1\_CN\_CNPL\_STKRE\_MLS](https://nutritionandmetabolism.biomedcentral.com/articles/10.1186/s12986-023-00732-5?utm_source=stork&utm_medium=referral&utm_content=paid&utm_campaign=MLSR_JRNLS_AWA1_CN_CNPL_STKRE_MLS)

# Article summary:

1. A transdermal treatment with MC903, a synthetic derivative of vitamin D3, was found to ameliorate diet-induced obesity in mice by reducing visceral fat and increasing muscle fiber thickness and energy consumption.

2. The treatment also improved glucose intolerance and decreased chronic inflammation in the visceral adipose tissue.

3. Vitamin D3 and MC903 both suppressed adipogenic differentiation and enhanced lipolysis in 3T3-L1 adipocytes, and increased UCP3 expression in cultured C2C12 muscle cells.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally trustworthy as it provides detailed information about the research methods used, including the type of mice used, the diets they were fed, the dose of MC903 applied to them, and the analyses conducted to assess their metabolic profiles. The authors also provide evidence for their claims by citing relevant studies from other researchers.

However, there are some potential biases that should be noted. For example, the study only used male C57BL/6 J mice which may limit its generalizability to other populations or genders. Additionally, while the authors cite relevant studies from other researchers to support their claims, they do not explore any counterarguments or alternative explanations for their findings which could weaken their conclusions. Furthermore, there is no discussion of possible risks associated with using MC903 or any potential side effects that could arise from its use which should be considered before recommending it as a therapeutic option for obesity or type 2 diabetes.

# Topics for further research:

* MC903 side effects
* MC903 therapeutic use
* Obesity treatment options
* Type 2 diabetes treatment options
* Gender differences in metabolic profiles
* C57BL/6 J mice research

# Report location:

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