Mesotherapy and Thyroid Hormones

Jacob Koehler*

Editorial office, Journal of Steroids and Hormonal Science, Brussels, Belgium

Corresponding Author*

Jacob Koehler

Editorial office

Journal of Steroids and Hormonal Science, Brussels,

Belgium

E-mail: steroids@journalsres.com

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Introduction

Thyroid hormones are the master regulators of metabolism and growth in the body. They manipulate genes and cellular functions at the molecular level to balance the basic metabolic rate. They bind to the nuclear receptor superfamily, which recognizes discrete DNA sequences and acts as transcription factors. Thyroid hormones have a direct effect on the mitochondria at the cellular level. The main mechanism of losing energy and thus body weight is thought to be the uncoupling of mitochondrial energy production and heat dissipation. Thyroid hormones' close relationship with the sympathetic nervous system has a significant impact on basal body metabolism and fat deposition. Epinephrine binds to the Sympathetic Beta Receptor, mediating fat breakdown (lipolysis) and, as a result, body weight. Many pharmaceutical companies have made it their mission to find the perfect weight loss formula. Mesotherapy is one of many products and techniques used to manage body contouring and weight loss. The contentious technique has gained popularity in various countries and was recently introduced to North America. It was founded in 1952 by Michel Pistor, and its principles are based on injecting pharmaceutical agents and/or nutrients into the skin's mesodermal layer. Thyroid hormones are used in injectable cocktails to help people lose weight. Previous clinical trials have not supported the use of thyroid hormones in mesotherapy.

The use of thyroid hormones for a temporary, non-permanent cosmetic procedure will be left to the better judgement of cosmetic experts. However, the legitimate medical and pharmaceutical concerns would be the dosing, effectiveness, and unwanted side effects associated with those hormones. Aside from the reported side effects of mesotherapy, such as infection, the use of powerful hormones by non-medical personnel, in some cases, did not go without complications. For example, a case of factitious thyrotoxicosis was reported following the use of a cocktail containing Triiodothyroacetic acid. Other pharmaceutical agents, such as Epinephrine and Aminophylline, are used in fat reduction mesotherapy cocktails in addition to hormones. In light of the previously mentioned thyrotoxicosis case, systemic absorption appears to be a problem in the ostensibly localized technique, and it could be a major contributor to side effects. Because hormones have such a powerful effect on cells, tissue, and the vascular system, the unorthodox use of hormones, particularly thyroid hormones, in mesotherapy should be strictly regulated to avoid serious side effects and to ensure some benefits, if any.

Thyroid hormones are the master regulators of the body's metabolism and growth.

To balance the basic metabolic rate, they manipulate genes and cellular functions at the molecular level. They bind to the nuclear receptor superfamily, which recognises and acts as transcription factors on discrete DNA sequences. At the cellular level, thyroid hormones have a direct effect on mitochondria. The uncoupling of mitochondrial energy production and heat dissipation is thought to be the primary mechanism of losing energy and thus body weight. The close relationship between thyroid hormones and the sympathetic nervous system has a significant impact on basal body metabolism and fat deposition. Epinephrine binds to the Sympathetic Beta Receptor, causing fat breakdown (lipolysis) and, as a result, an increase in body weight. Many pharmaceutical companies have made finding the perfect weight loss formula their mission. Mesotherapy is just one of the many products and techniques available to help with body contouring and weight loss. The contentious technique has gained popularity in a number of countries, including North America. Michel Pistor founded it in 1952, and its principles are based on injecting pharmaceuticals and/or nutrients into the skin's mesodermal layer. Thyroid hormones are used in injectable cocktails to aid in weight loss. Thyroid hormones have not been shown to be effective in mesotherapy in previous clinical trials.

Thyroid hormones will be used for a temporary, non-permanent cosmetic procedure at the discretion of cosmetic experts. The legitimate medical and pharmaceutical concerns, on the other hand, would be the dosing, effectiveness, and unwanted side effects associated with those hormones. Aside from the reported side effects of mesotherapy, such as infection, the use of powerful hormones by non-medical personnel did not always go smoothly. A case of factitious thyrotoxicosis, for example, was reported following the use of a cocktail containing Triiodothyroacetic acid. In addition to hormones, other pharmaceutical agents such as epinephrine and aminophylline are used in fat reduction mesotherapy cocktails. Systemic absorption appears to be a problem in the ostensibly localised technique, as evidenced by the previously mentioned phoney thyrotoxicosis case, and it could be a major contributor to side effects. Because hormones have such a powerful effect on cells, tissue, and the vascular system, their use in mesotherapy should be strictly regulated to avoid serious side effects and to ensure some benefits, if any.

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