

When the decision of treating patients is taken, the next step is what type of formulation and how to titrate the dosing. All of the guidelines, and in particular the American Thyroid Association guidelines recommend the use of levothyroxine. This is a very rational approach because levothyroxine is studied, it has multiple formulations, and it's easily titratable, and on top of that is a relatively cheap.

And the most important from the patient's perspective can be taken on a once a day administration. Again, my go to approach is telling patients to take levothyroxine first thing in the morning, avoid interference with the other drugs or supplements, then waiting at least 30 minutes before having breakfast.

This approach is very robust. And, the next step is when to titrate? The goal is, if we are dealing with hypothyroidism and we are not talking at this time in treatment of thyroid cancer, the treatment goal is achieving a normalization of TSH. And for the vast majority of cases, that will result in a normalization of 3 to 4 in total T3.

Very seldom at this time and age are patients with hypothyroidism or present with significant derangement of thyroid hormone levels. Again, the diagnosis is mostly done on TSH abnormalities.

Florida hyperthyroidism is not as common as it used to be in terms of percentage of patients who are treated for hypothyroidism. Levothyroxine or T4 has an extremely longer half life, seven days. And that allows first of all an administration every day on a daily basis, but at the same token requires patients in expecting improvements in symptoms, and also not jumping the gun and making too quick or too frequent adjustments.

So, they're always waiting at least five, six, half lives of the medication, in order to achieve a steady state. And so, we want to wait for at least six weeks before making an adjustment by measuring TSH.

Usually, the dosing is weight based, and we've proven that a patient without endogenous thyroid hormone production or we required 1.6 microgram per kilo of levothyroxine. And that there are a quite significant to enter individual variabilities, but that there will be a good start point for a full replacement of thyroid hormone.

In this scope of sub-clinical hypothyroidism, we can definitely start on a much lower dose, counting on the fact that the intrinsic feedback of the thyroid axis will allow for different doses. And again, the expectation is that in six weeks, we should have a normalization of TSH.