



## Is the Use of Nutritional Supplements in Dosage Forms a “Gateway” to Oral Substance Abuse?

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### DEAR EDITOR,

Dietary supplements have become increasingly popular among children and adolescents in the recent years and their use is increasing. The results of several studies in different countries demonstrate significant increase in the consumption of different dietary supplements in all age groups.<sup>[1]</sup> In certain population such as athletes and students, the increasing oral use of dietary supplements has become a serious concern for stakeholders.<sup>[2]</sup>

Meeting the daily dietary demand of trace elements and vitamins is the main justification of consumption of the dietary supplements. In other words, although prescription of nutritional supplements in children and adolescents is a therapeutic approach for the treatment of certain nutritional disorders, consumption of these products in different forms such as tablets, capsules, powders, and ampoules may contribute to an increase in frequency and amount of their intake. This can contribute to formation of a behavior of drug-form supplement intake regardless of their content which may itself, in turn, lead to an increase in their consumption among children and adolescents.

It can be argued that this new behavioral pattern may lead to an alarming tendency for repetition of taking drug forms with other contents which maybe illicid or dangerous for adolescents.

Many believe that today, we are witnessing a change of pattern from traditional to industrial substance abuse and oral agents are replacing the traditional smoked substances.<sup>[3]</sup>

This transformation, as well as normalization of consumption of oral dietary supplements, can be

considered as an important contributing factor for involvement of individuals in a drug-abuse culture. Interestingly, it seems that this pattern is in line with the “gateway hypothesis.”<sup>[4]</sup>

According to the gateway hypothesis, the misuse of licit substances such as alcohol or tobacco can facilitate the use of light illicit drugs such as marijuana; and this, in turn, in a gradual process, leads to the use of more addictive illicit substances such as heroin and cocaine. Thus, marijuana serves as a gateway for heavy-drug abuse. Based on this hypothesis, several countries have passed legislations and implemented strict policies against abuse of light illicit drugs.

Therefore, it can be suggested that normalization and internalization of regular use of a medication with health benefits such as nutritional supplements maybe a gateway toward abuse of oral drugs in different forms such as tablets, capsules, powders, etc., This argument can be supported by the demonstrated pattern that using licit sports supplements can lead to the use of anabolic hormones and illicit doping agents.<sup>[5]</sup> Of course, it should be noted that the role of other reinforces such as social determinants and peer pressures should not be ignored in this regard.

However, further studies are warranted to shine more light on this issue and its validity. If proven true, more awareness-raising activities need to be carried out on the issue so that parents can effectively prevent the adverse effects of the excessive use of drug-form dietary supplements by their children.

Several different alternative strategies can be adapted for the provision of dietary supplements in vulnerable groups such as fortification of milk and bread instead of

drug forms of nutritional needs. This may effectively prevent from normalization and internalization of oral supplement intake behavior which may lead to the aforementioned abuse patterns and its consequences.

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