

## TREND ASSAY OF SUPPLEMENTS CONSUMPTION IN ALBANIA

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### **Abstract**

*Supplement drugs, known as dietary or nutritional supplements, are pharmaceutical products designed to boost your diet and to improve your overall health. Part of the supplement family are included active principals form various sources such as vitamins, minerals, amino acids and other biological compounds administered in a variety of forms ranging from pills to shots. Whilst a number of supplements offer health benefits, this part of the pharmaceutical industry is still very loosely regulated, leading to risks in quality, safety or efficacy. Our study is centred on analysing the trend of usage of five different dietary supplements in the population of Albania. The supplements in our focus are DeRefluss, FlorUp Gonfiore, SedaFluid, MultiSeng and CalcioBase, all used for different types of maladies or overall improvement. These supplements are analysed for a two-year period, 2023-2024, as a whole and seasonally as to better comprehend their demand in Albania as well as to understand the diseases which affect our country the most frequently. Analysis showed the SedaFluid was the most demanded and sold supplement, followed relatively closely by CalcioBase which had an all-year demand, but not higher quantities and ending in last place with DeRefluss. This trend of sales helps us understand the diseases that affect our population as well as the specific season time-frame which could help us better deal with the issue and to formulate the necessary strategies for supply and demand.*

**Key words:** Drug, supplement, trend, analysis, consumption.

## **Përmbledhje**

*Barnat suplementare, të njohura si suplemente dietike ose ushqimore, janë produkte farmaceutike të krijuara për të nxitur dietën tuaj dhe për të përmirësuar shëndetin tuaj të përgjithshëm. Një pjesë e familjes së suplementeve përfshin principat aktivë nga burime të ndryshme si vitamina, minerale, aminoacide dhe komponime të tjera biologjike të administruara në formë të ndryshme duke filluar nga pilulat deri tek injeksionet. Edhe pse një pjesë e suplementeve shfaqin përfitime shëndetësore, kjo pjesë e industrisë farmaceutike është ende jo mirë e rregulluar, duke çuar në rreziqe në cilësi, siguri ose efikasitet. Studimi ynë është përqëndruar në analizimin e trendit të përdorimit të pesë suplementeve të ndryshme dietike në popullatën e Shqipërisë. Suplementet në fokusin tonë janë DeReflux, FlorUp Gonfiore, SedaFluid, MultiSeng dhe CalcioBase, të gjitha të përdorura për lloje të ndryshme sëmundjesh ose përmirësim të përgjithshëm. Këto suplemente janë analizuar për një periudhë dyvjeçare, 2023-2024, në tërësi dhe sezonale për të kuptuar më mirë kërkesën e tyre në Shqipëri si dhe për të kuptuar sëmundjet që prekin më shpesh vendin tonë. Analiza tregoi se SedaFluid ishte suplementi më i kërkuar dhe më i shitur, i ndjekur relativisht afër nga CalcioBase, i cili kishte një kërkesë përgjatë gjithë vitit, por jo në sasi më të larta dhe duke përfunduar në vendin e fundit me DeReflux. Ky trend i shitjeve na ndihmon të kuptojmë sëmundjet që prekin popullatën tonë si dhe periudhën specifike kohore të sezonit që mund të na ndihmojë të përballemi më mirë me këtë çështje dhe të formulojmë strategjitë e nevojshme për ofertën dhe kërkesën.*

**Fjalë kyçe:** Bar, suplement, trend, analizë, konsum.

## **Introduction**

The pharmaceutical industry is a branch of medicine specialized in finding, developing, producing and selling pharmaceutical products with the purpose of easing, preventing or curing diseases or their symptoms. The sub-branches of this industry are subject to a variety of laws and tightly controlled regulations which in turn supervise all pharmaceutical processes, including patenting, testing and efficacy, safety and security and drug marketing (Di Masi et al., 2016).

The pharmaceutical industry in Albania comprises of 200 pharmaceutical companies, more than 1000 pharmacies, 210 private pharmaceutical agencies and 42 hospital pharmacies. The Albanian market is currently flooded by

imported drug products, mainly comprising of world-renowned brands. Local brands, even though on the rise in the last years, still continue to be a minor actor in the domestic market (AKBPM 2019).

The Compulsory Health Care Insurance Fund (FSDKSH) is the main entity in Albania responsible for managing the public health insurance drug coverage by framing a yearly reimbursement drug list subsidized by the government. Dy health commissions approve these lists yearly, as well as determining the profit margins for the importers and second-hand distributors such as pharmacies (KMRSH, 2021).

Supplements are also part of the drug superfamily. These supplements are not used to treat or cure diseases. Dietary supplements are products taken by everyone in order to fill or complete the daily food or biochemical compound requirements of the human organism. They include vitamins, minerals, amino acids and probiotics. They are useful when used for dietary deficiencies such as calcium for normal bone health and growth, or for iron to prevent anemia. Nonetheless their efficacy can change dependent on a number of factors (FDA, 2021). Folic acid has been shown to lower birth defects (Crider KS et al., 2022), whereas ginkgo biloba supplements still give contradicting results (Nguyen , Alzahrani . 2023). Supplements are treated as food, not as drugs, and as such approval is not necessary from security and efficacy agencies to be sold. Even though the criteria to be produced and sold are met, they are not always verified (NIH, 2023). Potential risk factors may include side effects ranging from allergic reactions to damaging interaction with other drugs, especially in the cases involving blood thinners (Fan Y et al., 2017), anti-depression drugs (Patel YA et al., 2017) or birth control (Palmerly M et al., 2013).

In Albania, dietary supplements are regulated by the National Agency of Drugs and Medical Devices (AKBPM), which supervises their registration, marketing and security. As well as in most other countries, supplements are considered as food products in Albania too, meaning that that do not undergo the same strict processes of approval as pharmaceutical drugs.

Our study focuses on analyzing the Albanian market for a number of supplement products (five supplements), to understand the trend of sale of these products and to recognizing the health practices of everyday persons, their pharmaceutical needs during different time frames and to evaluate their impact on the overall health of Albanians.

## Material and methods

The study is focused in the city of Tirana, which being the capital also boasts the highest number of the Albanian population and thereby giving a highly accurate analysis and conclusions. Data for the 5 supplements which were analyzed (DeReflux, FlorUp Gonfiore, SedaFluid, MultiSeng and CalcioBase) were gathered by one of the biggest pharmaceutical distributors in Albania, Incomed Sh.p.k, corroborating their validity and accuracy. The data was assayed for two-time frames: January – August of 2023 and January – August 2024 for the purpose of evaluating the trend of usage of these supplements for the same time period. This evaluation also studies the seasonal variations of the usage of these drugs to understand the behavior of consumers regarding their healthcare for these time frames. Data was collected and assayed as monthly sales of each drug separately, as a total sum for yearly sales and seasonal sales for each individual drug. Data were then analyzed in Microsoft Excel which fulfilled the necessary criteria for the evaluation of the compounds in the study.

**DeReflux** – dietary supplement used to create a buffer environment in the stomach and reducing irritation of the digestive system (Ezira, 2024).

**FlorUp** – a dietary probiotic supplement used to improve digestion and restore normal stomach flora (Ezira, 2024).

**SedaFluid** – N-acetylcysteamine extract supplement used for the soothing action and fluidity of bronchial secretions and normal function of the respiratory tract (Ezira, 2024).

**MultiSeng** – a product used to maintain the balance between electrolytes/hydrosaline, as well as reducing fatigue, tiredness and improving metabolic energy (Ezira, 2024).

**CalcioBase** – a sweetened food supplement used to maintain normal calcium levels in the human body (Abiogen, 2024).

## Results and discussions

Data analysis of the supplements shows a high value of sales in the year 2023. This correlates with the ever-increasing demand of the population for quality supplements for a higher standard of life and at the same time to boost and reinforce the immune system for the verified and well-established “viral season”.

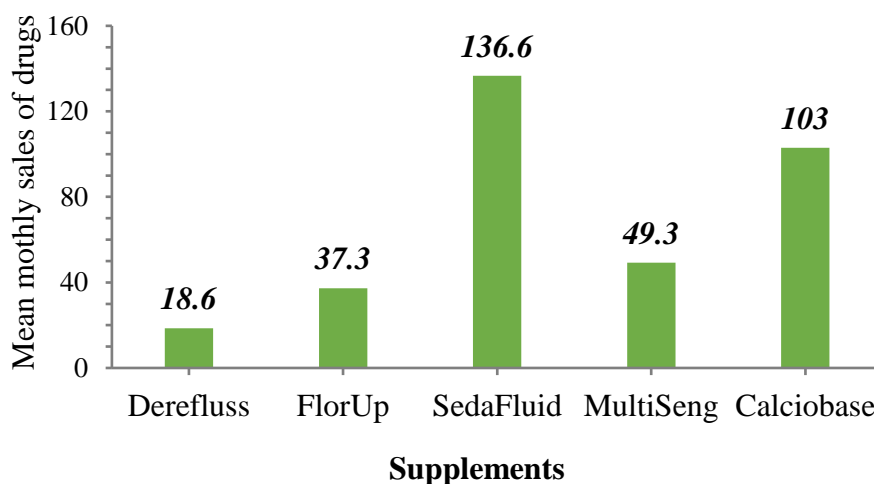
The increase in supplement consumption can be interpreted as a double indicator:

- a) Evidence of the awareness of people to upkeep and maintain a normal range of values for their physiological parameters
- b) Proof to treat and cure diseases via a proactive health approach.

As seen in figure 1, SedaFluid, a supplement used to treat cough and infection of the upper respiratory airways, has registered the highest sales in 2023. This suggests that SedaFluid has been used not only as a dietary supplement, but as a cough syrup as well. High demand for this supplement can be attributed to the all year-periods of respiratory infections and blockage affecting people, making this drug more of a therapeutic agent than a supplement.

In second place the drug Calciobase, with calcium citrate as an active principal, is found. This supplement has been shown to have an all-round year consumption because of its role in maintaining bone health and management of chronic diseases, especially rheumatism. This drug is not time frame specific and can be used whenever to fulfill the daily biological quota of calcium in the human body, integral for bone density and strength.

Given its therapeutic role and the results seen by its consumers, calcium citrate has shown a prominent role in ameliorating inflammatory chronic diseases (Eun-Young Choi et al., 2015). Coupled with the ever-increasing older population in Albania, Calciobase sales show that patients are reacting quite well to the drug itself and to the beneficial role citrate plays as a signal in inflammation and immunity (Zotta A et al., 2020).



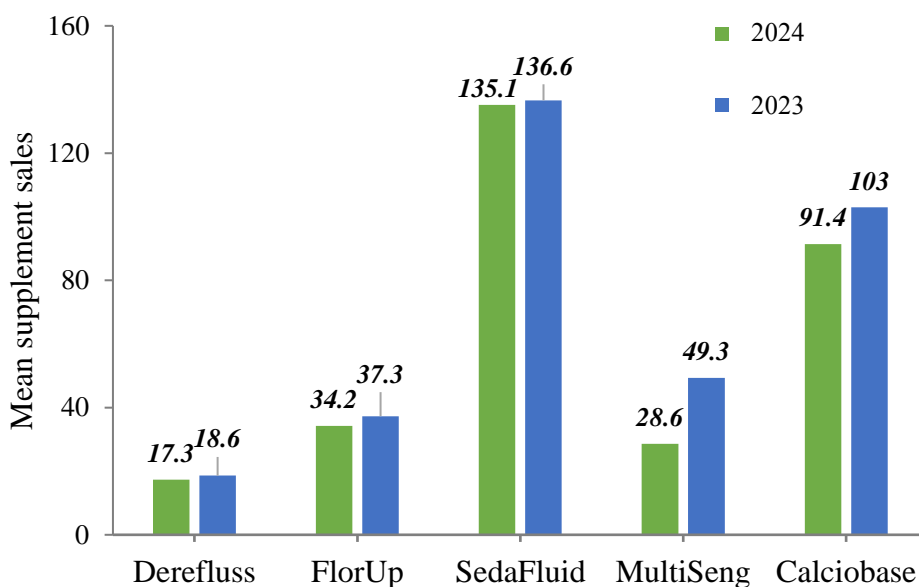
**Figure 1:** Annual supplement sales in 2023

DeReflux is the drug with the lowest sale for the year 2023. As a gastroesophageal supplement there is not enough demand for this drug, either because of undiagnosed patients, patients who do not use treatment for the symptoms or the disease itself, or use more specialized or have different alternatives to choose from to treat gastroesophageal reflux disease (GERD).

Sales data for these drugs in 2024 shows a follow-up trend as in 2023. This trend shows a stable market for supplement demand which can be attributed to 2 main factors:

- 1) Health issues in the Albanian population
- 2) Very successful marketing strategies by the pharmaceutical companies.

Stability in sales in 2024 (Figure 2.) for these newly integrated drugs in the market can be interpreted as a fulfillment of the demand from consumers and patients for high end quality drugs which help maintain and improve overall health and at the same time compensate the necessary dietary requirements in the not so healthy patients or those suffering from chronic diseases.

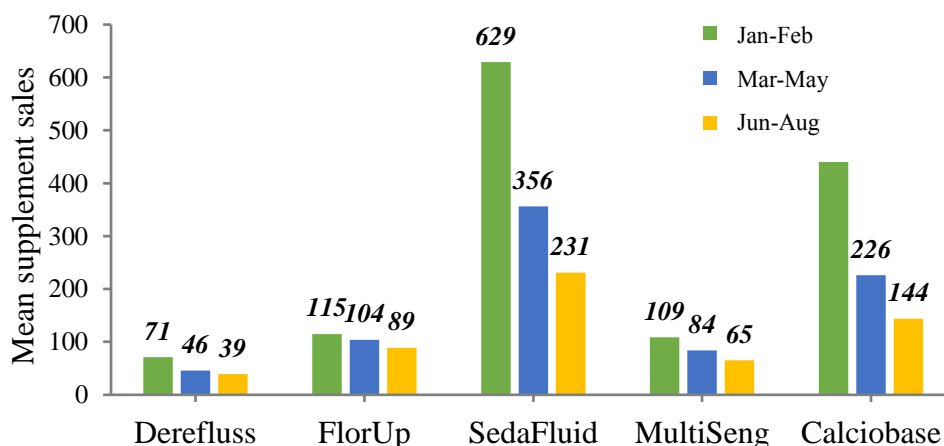


**Figure 2:** Annual supplement sales in 2023-24

And last but not least, marketing stratagems employed by the Incomed company have resulted in a very successful campaign to keep the trend going amidst a very competing market for dietary supplements. Even though there is a slight decrease in sales in 2024, this still falls under the margin of safety (10%) and does not affect the overall ongoing trend of sales and profit. The only drug with a more prominent decrease is MultiSeng (40%). The decreased consumption of this supplement can be attributed to the fact that consumers preferences have changed, or that a cheaper substitute has entered the market. In addition, being an electrolyte balancer, this product is generally not very sought after in Albania for a couple of reasons: people do not know these products even exist or are available, and even when this is not the case, they either disregard the product entirely or use more alternative and traditional methods.

Figure 3 shows a clear model of the demand of supplements in correlation to the climate differences and disease frequency. As seen in figure 3, there is a drastic increase of demand for these supplements in the cold months of January and February which also corresponds with peak seasonal viral infections and disease. Apart from the usage of SedaFluid because of airways obstruction and clearing, the use of Calciobase and FlorUp also sees a spike

during these months. The ending of the cold season shows a lowering trend in supplement consumption, which can be linked to the changes in preference by the consumer for fresh fruits and vegetables, increased nutritional variety as well as decreased need for processed supplements. Last, but not least there is also a lowering in the incidence of respiratory and infectious diseases with the warming of temperatures. Apart from the aforementioned reasons, it must be noted that SedaFluid stills finds usage in the warmer seasons because of the seasonal allergies affecting Albanians, which have drastically increased post-Covid-19 and leading to blocked airways (Oh J et al., 2024). At the same time FlorUp shows a very low fluctuation compared to the other products because warmer months are usually associated with bacterial diseases or other infectious parasites found predominantly in children who are more likely to suffer from diarrhea, abdominal pain and consequently diminished appetite (Sejdini A et al., 2011). The use of FlorUp in these instances has shown quick recovery of the intestinal flora and alleviation of diarrhea symptoms.



**Figure 3:** Supplement sales for the cold and warm seasons in 2024

Analysis of the data offers a clear understand of the dynamic of supply and demand for supplements by the population, emphasizing the need to adapt new and diverse strategies for the market as well as offering the required and most demanded drugs for each season. Nonetheless, these results also show the ever-increasing trend of non-cancer, non-heart pathologies that most frequently affect our country which could lead to prolonged suffering and death, numbers which compared to the overall state of health in Europe and in the European Union too (Jenkins VA et al., 2020; Santos J,V et al 2024).



Comparing these data and assessing the trend of sales could be used to further and better analyze and also understand consumer behavior in order to optimize supplement offers in the future.

## **Conclusions**

The use of supplements has made it possible to further improve the general health and to mitigate the symptoms of acute or chronic diseases affecting the Albanian population. Data analysis of different years as well as different seasons within the year creates a more complete picture for the supply and demand of the consumers for the different types of supplements they need and when they need it. At the same time, this assay clearly demonstrates some of the more frequent diseases affecting our country, with upper airways infections and lung blockage dominating. Bone health is also a priority with patients and consumers taking the necessary precautions to either prevent or treat diseases affecting the bones. In contrast, GERD medication is still not as popular as it should be, even though the number of cases in Albania is increasing. All these data and analysis makes it possible to better understand the health issues that affect our country, the steps that could be taken to prevent or at the very least mitigate the problem and to create strategies that could influence the outcome of these problems, to supply the demand of the consumer and make it affordable too.

It is important to acknowledge that the current study is constrained by a limited sample size and a relatively short observation time-frame. Ongoing and future phases of our research will seek to address these limitations by incorporating and integrating a larger and more diverse portfolio of pharmaceutical compounds, by extending the observation period as well as combining datasets from multiple pharmaceutical manufacturers. These enhancements are intended to provide a more comprehensive and nuanced understanding of the underlying issues, thereby strengthening the validity and generalizability of the findings.

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