



Google trends suggest the highest interest to birch pollen allergy at the first splash over pollen threshold

Internet customers' behaviour can give a clue to practitioners on the improvement of approaches they utilize to control a seasonal allergy. Tracking the behaviour of Internet customers, one can see how it coincides with environmental changes that can promote the symptoms. Based on this data, it is possible to adjust measures of prophylaxis of seasonal allergies. So, the aim of our work was to track the interest of users to search queries "Birch" and "Birch allergy" and compare them with the patterns of *Betula* flowering in Ukraine.

The data of Google trends suggested that the highest levels of interest in the query "birch" during the years 2018-2022 on the territory of Ukraine was observed in the regions located in the forest zone, where *Betula* has the widest spread. Despite of the war, in the year 2022, this list included Sumy and Chernihiv' regions, which were affected by the war in the spring of 2022. Other key regions were Ternopil', Zhytomyr, Volyn and Rivne oblasts. All are located in the forest zone of Ukraine. Interestingly, the same trend was observed in all studied years preceding year 2022, yet, interest to birch was higher.

What is more, peaks of this interest coincided rather with the beginning than with the peak of the season in all investigated years. For example, in 2022 the highest rate of the "birch" queries was observed on March 30, just on the first day of the season, when *Betula* pollen concentrations exceeded a pollen symptoms threshold in 25 pollen grains / m³ established for birch in Ukraine by our earlier studies.

Query "birch allergy" was much less popular, and its peaks were observed all year round: from 22 to 26 of March, from 1st to 7th of May, from June 26 to July 2, 2022, and from 8 to 14th of January 2023. Peaks in May, June and July may suggest either a lack of data on pollen allergy in customers or their will to check what factors may cause symptoms in summer. Peaks of interest to birch allergy in January and March can be evidence of customers' preparation for the time of the possible symptoms.

Thus, Google trends suggest the highest interest in birch pollen allergy at the beginning of the pollen season, when the first symptoms' threshold is reached, and a month prior to a season, possibly due to the will to be ready for the season start.

Primary author: KUCHENKO, Tetiana (National Pirogov Memorial Medical University, Vinnytsya, Ukraine)

Co-author: Prof. RODINKOVA, Victoria (2National Pirogov Memorial Medical University, Vinnytsya, Ukraine)

Presenter: KUCHENKO, Tetiana (National Pirogov Memorial Medical University, Vinnytsya, Ukraine)