



Ease Seasonal Discomfort with Pollen Protect™

A CLINICAL STUDY





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Banyan Botanicals' Pollen Protect™ is an herbal formulation tablet with ten key herbal ingredients targeted at supporting respiratory system functions and providing relief for common seasonal irritants.

As important as pollen is for our ecosystems, it can be a great source of irritation, if not outright distress, for many people. Occasional itchy or watery eyes, sneezing, and congestion are just a few signs of the respiratory tract under duress.

The body normally and naturally responds to irritants with a healthy inflammatory response. In short, this response is the body's first defense mechanism against pathogens. However, the body can be indiscriminate when it comes to foreign invaders, and pollen is treated like any other microorganism—as a threat. This is relatively common and occurs at some point in most people. Dietary supplementation through herbs can help support a healthy respiratory system and also help to moderate a healthy inflammatory response to common seasonal irritants.



THE FORMULA



BANYAN[®]
BOTANICALS

AYURVEDIC HERBS

Pollen
Protect[™]

Respiratory Support
for Common Seasonal Irritants*



90 Tablets
Dietary Supplement

Certified Organic

Pollen Protect is an herbal compound formulated with herbs known to support a healthy inflammatory response, soothe the respiratory system, and support normal breathing.

The Pollen Protect herbal formulation consists of the following powdered herbs:

- *Curcuma longa* (Turmeric)
- *Andrographis paniculata* (Kalmegh)
- *Phyllanthus emblica* (Amalaki)
- *Zingiber officinale* (Ginger)
- *Piper longum* (Pippali)
- *Plumbago zeylanica* (Chitrak)
- *Boerhavia diffusa* (Punarnava)
- *Tinospora cordifolia* (Guduchi)
- *Ocimum sanctum* (Tulsi)
- *Apium graveolens* (Ajamoda)

Total herb weight used per capsule is 500 milligrams. Several of these herbs are known for their cooling and soothing qualities. One of the mechanisms of the inflammatory response is elevated pitta, or heat in the body. Turmeric, amalaki, and guduchi all have properties to soothe excess pitta and cleanse the blood.

The congestion that arises is an increase in the body's kapha, or water and earth element. This is a natural reaction to remove everyday irritants that our respiratory tract encounters. Ginger, pippali, and chitrak all help alleviate excess kapha, while punarnava then acts to move the liquids of the body. Tulsi is warming to the circulatory system and respiratory tract, providing a soothing and nourishing quality. Finally, ajamoda acts to harmonize the whole formula and balance any excess vata or kapha.



THE STUDY

17 PARTICIPANTS

3 TABLETS

2 TIMES A DAY

28 QUESTIONS

30 DAYS



Pollen Protect recently underwent a small pilot study of seventeen participants who were challenged with moderately disturbing occasional seasonal discomfort. They were given a one-month supply of Pollen Protect tablets (3 tablets twice daily for 30 days). The participants were asked to take a 28-question validated questionnaire enumerating the challenges one may experience with common seasonal irritants. Participants took this questionnaire on day 1, before taking Pollen Protect tablets; on day 30, they answered the same questions again and their scores were then compared.

Statistically, we used a normality test to determine whether our sample size of seventeen participants is truly representative of the general population who face trouble with occasional seasonal discomfort. Our data set passed this test and was indeed statistically representative of this population ($\alpha = 0.05$).

Figure 1: Participants were asked to score their discomfort level according to the score card in the questionnaire:



NOT TROUBLED	0
HARDLY TROUBLED AT ALL	1
SOMEWHAT TROUBLED	2
MODERATELY TROUBLED	3
QUITE A BIT TROUBLED	4
VERY TROUBLED	5
EXTREMELY TROUBLED	6

After 30 days of using Pollen Protect tablets, the results of the participants showed an overall decrease (as shown by an average of the scores for all 28 questions) in seasonal irritant challenges by a whopping 66%!

Participants generally reported that their seasonal discomfort challenges went on average from being “moderately troubled” to “hardly troubled at all” or “not troubled.”

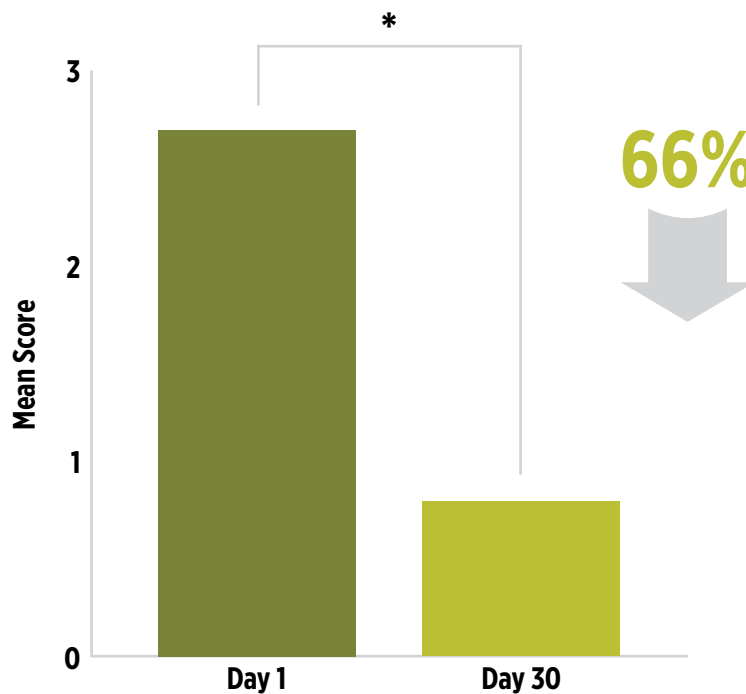


Figure 2: The study showed an overall decrease in symptoms by 66% as represented by the questionnaire scores taken by participants on Day 1 and Day 30.

* Score results had a significant P value of less than 0.05.

When looking at the individual data domains, we were further reassured. The 28 questions were grouped into seven domains or categories of challenges. These categories represented the general effect seasonal difficulties had on daily activities, sleep, non-nose/eye challenges, practical problems, nasal challenges, eye challenges, and emotional state. All domains showed a significant change and decrease in difficulty with seasonal irritants.

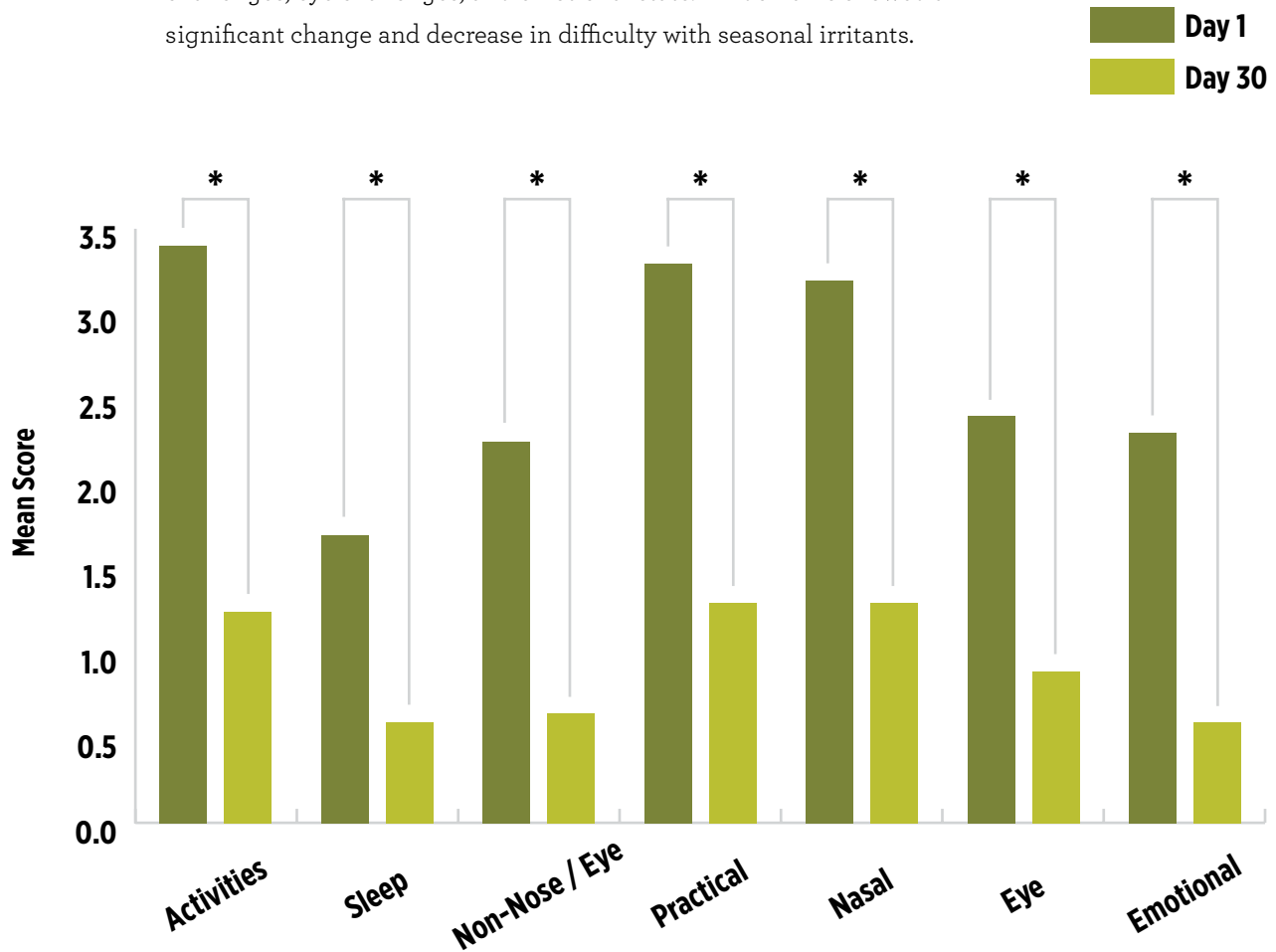


Figure 3: Mean scores calculated for all participants at Day 1 and Day 30 in each domain.

* Results had a significant P value of less than 0.05.

ACTIVITIES

The most notable difference in score was in the domain of day-to-day activities, where participants reported that their challenges decreased by a remarkable 63%; and work-related activities showed a 71% decrease in challenges.

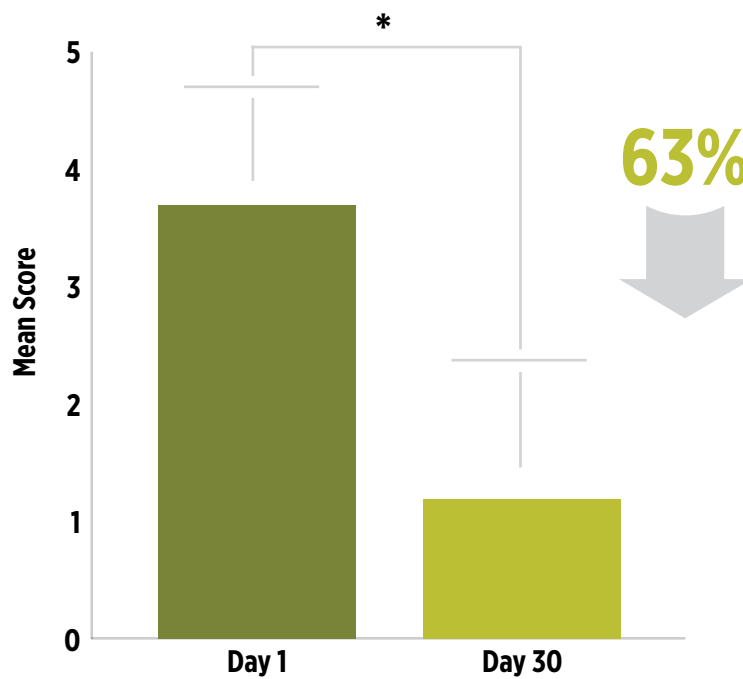


Figure 4: The average decrease in challenges in day-to-day activities from Day 1 to Day 30.

* Score results had a significant P value of less than 0.0001.

SLEEP

The domain for sleep contained three questions related to sleep patterns and quality of sleep, including ability to go to sleep, waking up in the middle of the night, and the overall impression of their quality of sleep. The results for sleep showed noticeable improvement. Participants reported that their sleep challenges decreased by 69% after taking Pollen Protect tablets. The difference in average score from day 1 to day 30 was 1.18, which translates to the participants feeling their sleep went from “somewhat troubled” to “hardly troubled at all” or “not troubled.”

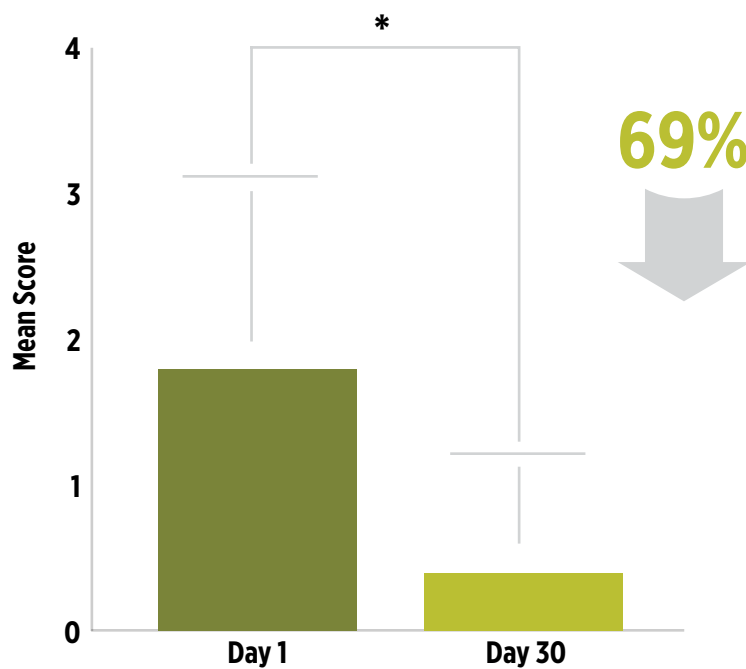


Figure 5: The average decrease in challenges in sleep from Day 1 to Day 30.

* Score results had a significant P value of 0.0012.

NON-NOSE / EYE

The questions for this domain focused on challenges unrelated to nose or eyes and showed very significant improvements. Questions pertained to particular challenges such as fatigue, thirst, concentration, and productivity. These challenges showed a significant decrease of 72%. Participants reported that their productivity, in particular, was immensely improved.

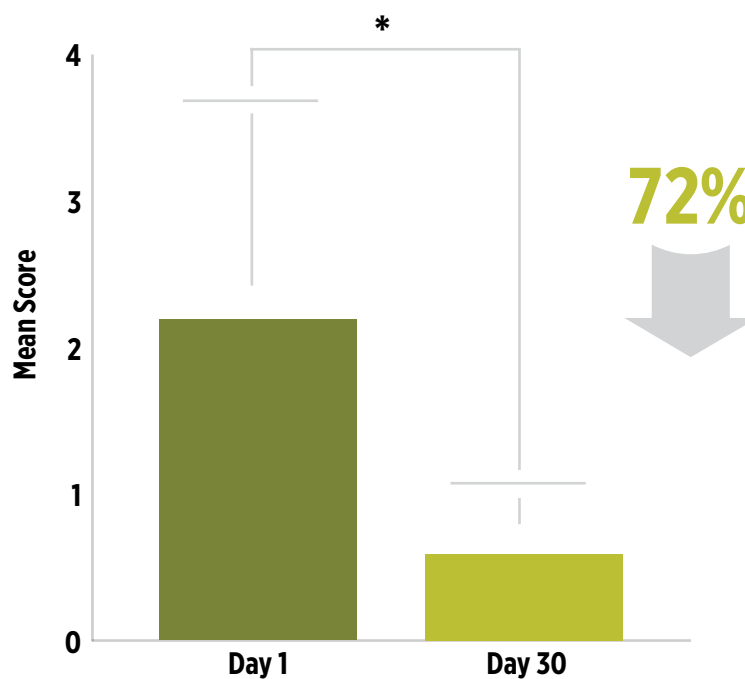


Figure 6: The average decrease in challenges in non-nose / eye challenges from Day 1 to Day 30.

* Score results had a significant P value of less than 0.0001.

PRACTICAL

The fourth domain concerned questions on the practical problems participants face while challenged with seasonal discomfort. For instance, how inconvenient was it for the participant to be carrying tissues or handkerchief, needing to rub nose or eyes, and other related challenges. At the end of the study, there was an overall decrease in challenges by 63% in this domain.

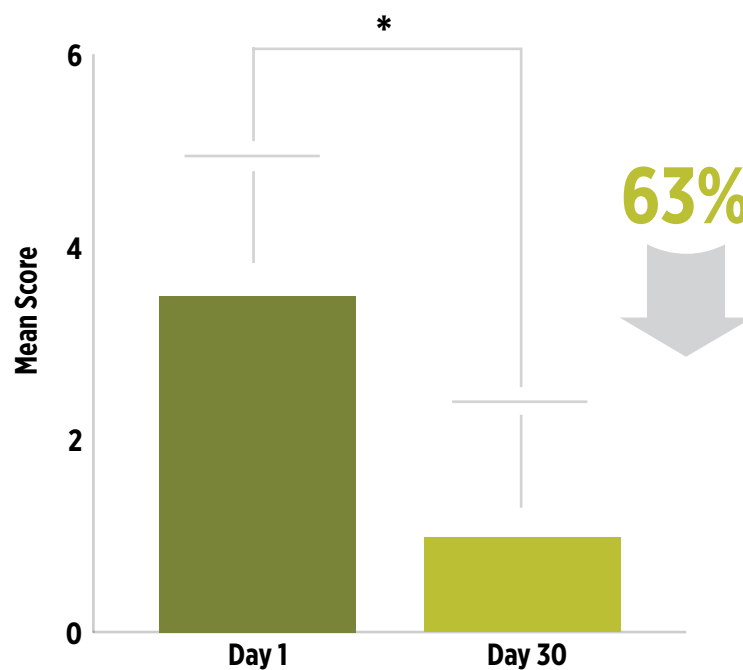


Figure 7: The average decrease in challenges in practical problems from Day 1 to Day 30.

* Score results had a significant P value of less than 0.0001.

NASAL

The fifth domain focused on nasal challenges, which showed a 61% decrease.

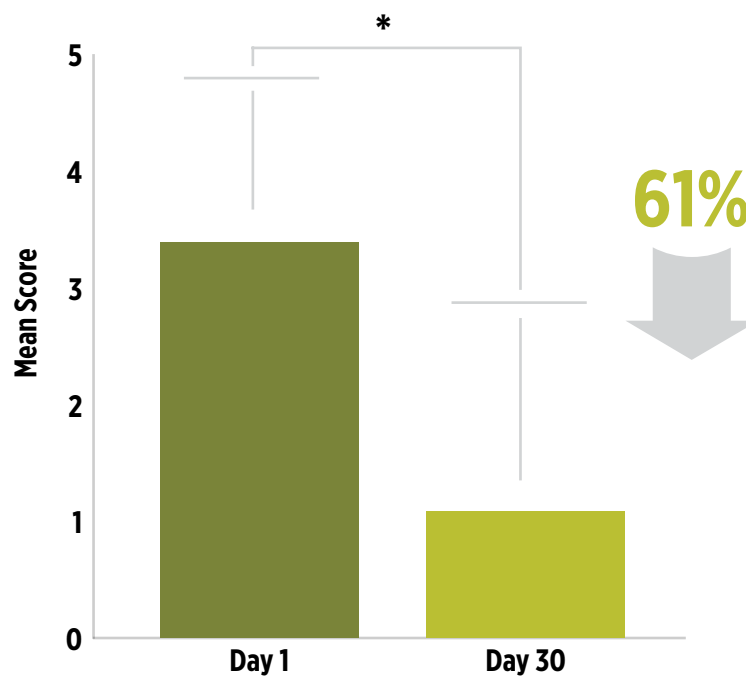


Figure 8: The average decrease in nasal challenges from Day 1 to Day 30.

* Score results had a significant P value of less than 0.0001.

EYE

The sixth domain targeted eye challenges, such as occasional itchininess or watery eyes. This domain showed an average of 62% decrease after taking Pollen Protect over the study period of 30 days.

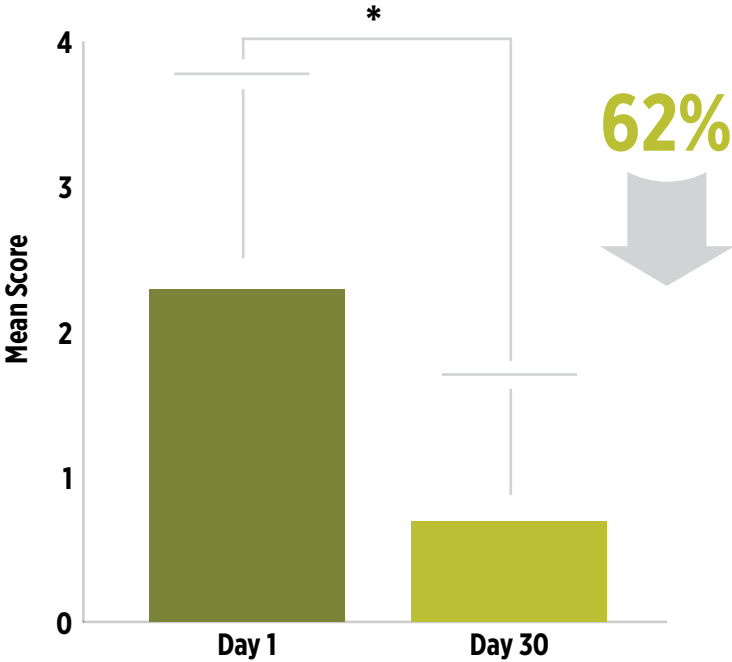


Figure 9: The average decrease in eye challenges from Day 1 to Day 30.

* Score results had a significant P value of less than 0.0001.

EMOTIONAL

We selected a questionnaire that addressed every perspective of an individual when faced with seasonal discomfort challenges. The last domain focused on the participants' emotional state when faced with challenges from seasonal discomfort. The results revealed a 72% overall decrease in emotional challenges, such as frustration or embarrassment. Perhaps most importantly, many participants reported that their restlessness and irritability decreased by 75% after using Pollen Protect tablets.

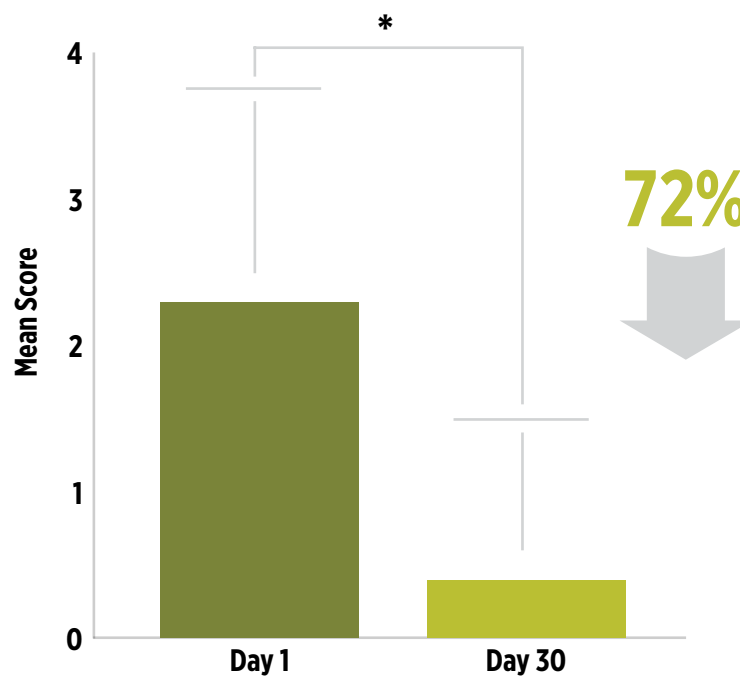


Figure 10: The average decrease in emotional challenges from Day 1 to Day 30.

* Score results had a significant P value of 0.0002.

In addition to evaluating the questionnaire per each domain, we also performed the same tests on each question (1–28) to make sure that the results obtained were statistically significant in decreasing the occasional challenges of seasonal discomfort after taking Pollen Protect. There was significant decrease in symptoms for each question.

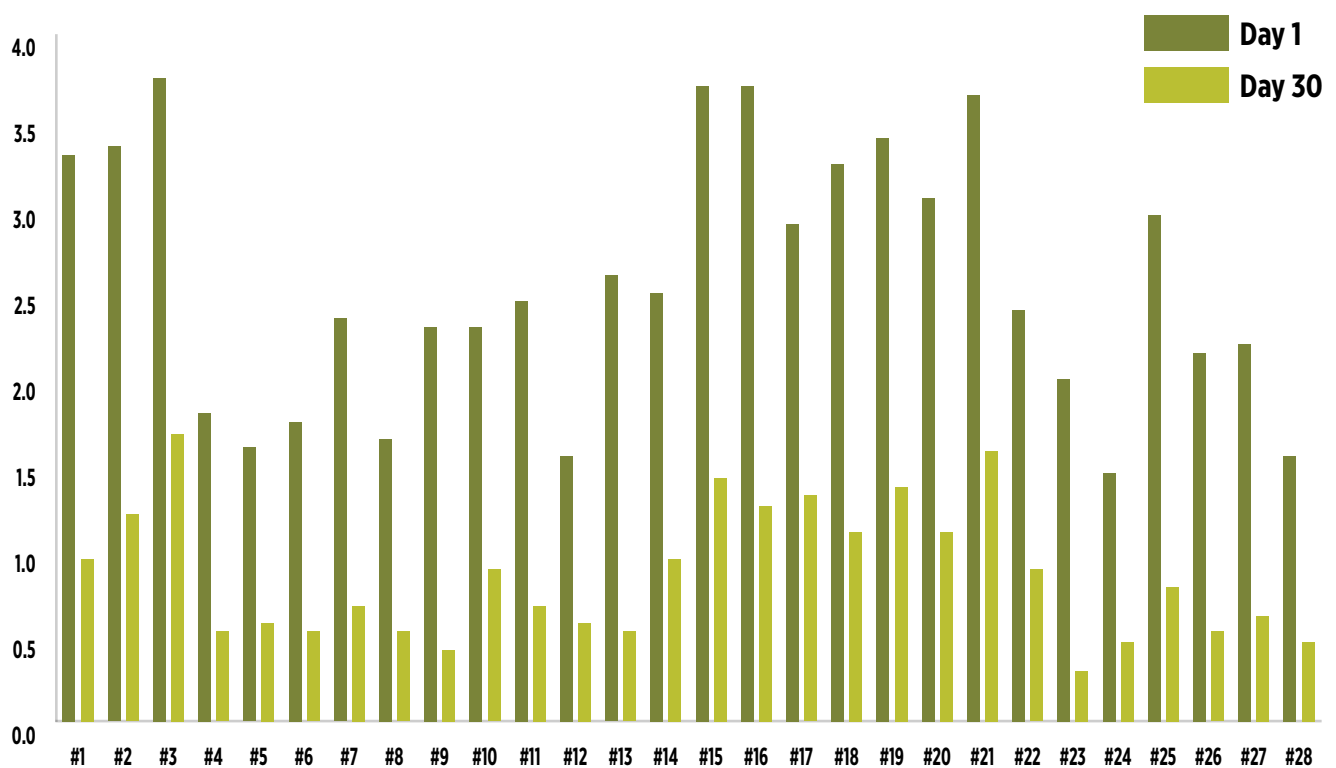


Figure 11: Mean scores for all participants on each question at Day 1 and Day 30 for questions 1–28. All results had a significant P value of less than 0.05 except for Question 16.

FINAL THOUGHTS



While this study was truly a pilot study in that it was not placebo-controlled and had a small sample size of seventeen participants, we feel that the results were revealing in demonstrating the potential for Pollen Protect to support the respiratory system and a healthy inflammatory response due to seasonal irritants.

Throughout the study, all participants were carefully monitored for any adverse events; no adverse events or side effects were reported by the participants while taking the supplement tablets during the study period. There were three out of twenty participants who dropped from the study due to the severity of their challenges at the time. They opted to resume their routine regimen that involved various over-the-counter products.

This is a great and promising first step in our research for Pollen Protect and we plan to use the information to design a larger, controlled study.





Banyan Botanicals was founded in 1996 with the mission to help people achieve and maintain optimal health and well-being. As an Ayurvedic lifestyle company, we specialize in products made from Ayurvedic herbs that are organically grown, sustainably sourced, fairly traded, and made in the USA. Our product line includes the largest selection of USDA certified organic Ayurvedic herbs as well as herbal tablets, liquid extracts, massage oils, and Chyavanprash. Banyan is committed to providing exceptional customer service, inspiring educational content, and the highest quality Ayurvedic herbs that are safe, pure, and effective.

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