Autoimmune bullous dermatoses include pemphigus and pemphigoid diseases.

Current research focuses on the pathophysiologic, genetic, and pharmacologic basis of disease.

A gap in the identification of epigenetic factors and our understanding of disease onset remains.

Study Goals:

To identify lifestyle and environmental factors present prior to disease onset, that may play a role in disease onset & promote research focused on studying these factors in conjunction with genetic and cellular mechanisms of pemphigus and pemphigoid diseases.
Pemphigus and Pemphigoid Pre-Symptom Lifestyle Survey: An Attempt to Identify Potential Epigenetic Factors in Autoimmune Bullous Dermatoses

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Introduction

This study was a descriptive cross-sectional for those with pemphigus or pemphigoid disease within the International Pemphigus and Pemphigoid Foundation (IPPF) database.

Methods

Survey materials were sent by email, required electronic consent, a minimum age of eighteen, and access to an electronic device.

Responses were received from the United States, United Kingdom, Canada, Europe, Middle East, Australia, South America, and India with a total of 397 participants. Participation was voluntary.

The survey asked about lifestyle and external environmental factors that existed prior to the onset of disease symptoms.

The survey collected:

- **Nominal data** on gender, specific diagnosis, age of disease onset, allergies, exercise, food content, pre-selected stress events, major stress events, and significant moments

- **Descriptive data** on occupation, allergies, stress events, and significant moments.
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<table>
<thead>
<tr>
<th>Gender</th>
<th>Females 73%</th>
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<td>Males 27%</td>
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Disease Onset
- 34.31% over the age of 60
- 26.60% ages 51 and 60
- 19.68% ages 41-50
- 11.97% ages 31-40
- 7.45% ages 18-30

Notable Occupations
- Management/Business/Finance (30.77%)
- Health Care/Allied Health (14.06%)
- Education/Social services (12.79%)

Exercise Frequency
- 1-2 times per week (34.76%)
- 3-4 times per week (28.88%)
- Never exercising (20.86%)
- Exercising 5 or more times per week (15.51%)

Most commonly mentioned stress events
- Stress from work at 13.23%
- Death of a family member/significant other/friend at 9.62%
- Home/family life at 9.22%
- Stress from ill family member/significant other/friend at 8.42%

Most commonly mentioned significant moments
- Sudden stress/anger
- Exposure to extremes in heat, travel to hot, tropical, dry locations
- Recent illness with antibiotic or anti-fungal use.
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Methods

Stressful Major Life Events Prior to Disease Symptom Onset

- Used tobacco products? (cigarettes, cigars, chewing tobaccos, patches)
- Had a minor viral or bacterial infection?
- Had a major infection that resulted in hospitalization or affected activities of daily...
- Experienced trauma to the skin or mouth
- Been in a major accident that caused a physical trauma? (eg. broken bone, concussion)
- Received a blood transfusion?
- Had surgery? (ex: wisdom teeth removal, appendix removal?)

Results

Discussion
Pemphigus and Pemphigoid Pre-Symptom Lifestyle Survey: An Attempt to Identify Potential Epigenetic Factors in Autoimmune Bullous Dermatoses

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Introduction

Autoimmune bullous diseases are complex and difficult to study with **multiple potential factors** that could play a role in the onset of disease symptoms.

These diseases have genetic components and are thought to be **multifactorial**, meaning that one or more epigenetic or external factors can cause the body enough insult to trigger disease in people with certain genetic mutations.

The goal of this study was to ask patients with pemphigus and pemphigoid disease about their life prior to disease symptoms in an effort to find areas that could be studied more in depth in the future.

Methods

There may be a relationship between experiencing **multiple stress events**, particularly extremes in emotion, environmental changes, and persistent stress events with onset of disease, especially in conjunction with stressful occupations.

We cannot claim that stress is causal in autoimmune bullous dermatoses, but that the body’s response to stress may play a role.

Results

Future studies

Should focus on the physiological response to stress and coping mechanisms to stress in individuals with genetic susceptibility could be promising, but we cannot exclude other external factors.