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## Swiss Hypersensitivity Pneumonitis Exposure Questionnaire: A Regionally Adapted and Easy-To-Use Aide for Patients and Clinicians

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Hypersensitivity pneumonitis (HP) is an interstitial lung disease (ILD) characterized by a distinct exposure to an offending antigen, which contributes to the development of the disease. It is therefore a key task to detect exposures within the private or professional environment of patients [1–4]. The lack of identification of a causative agent on the other hand is a risk factor for progression to chronic fibrotic HP and associated with decreased survival [5]. In addition, it can be challenging to discriminate chronic fibrotic HP from idiopathic pulmonary fibrosis. Its distinction, however, is important since this implicates a very different prognosis and treatment strategy. If a potentially causative antigen is identified, the diagnosis of HP as opposed to other forms of ILDs is consolidated and, by avoidance of further exposition to the causative agent, allows for an effective treatment strategy. Manufacturing processes and protective measures in Switzerland have changed over the last decades, reducing

workplace exposure and the risk of occupational HP. Morell et al. [6] could show that with the aid of a questionnaire followed by further diagnostic interventions, a reclassification from IPF to chronic HP has been possible in a substantial proportion of cases.

Obtaining a thorough exposure history can be challenging and time-consuming in the clinical routine. A few observational studies have shown a high detection rate of a potential agent [6, 7]. Therefore, the use of an updated and regionally adapted questionnaire to facilitate exposure detection has been emphasized in recent guidelines [1, 8]. So far, no specific exposure questionnaire for HP has been available in Switzerland. A survey among ILD centres in Switzerland revealed that a specific HP questionnaire is used only by a minority. Furthermore, the available generic ILD questionnaires are often unilingual and too time-consuming [9–11]. The latter may discourage patients to fill-in

## Swiss Hypersensitivity Pneumonitis Exposure (Swiss-HP) Questionnaire

Dear patient

In order to find a possible cause of your lung disease, we kindly ask you to answer the following questions.

1. Did you have any flu-like symptoms when you first became ill? yes  no

2. Are you or have you regularly been exposed to the following items or situations (at home, at work or elsewhere)? Go mentally from room to room in each building you have been in. *Please circle as appropriate:*

Mould, mouldy smell, rooms with water damage	Eiderdown (e.g. in jackets/duvets/pillows)
Potted plants	Heavy smoke or industrial dust
Humidifier (incl. respiratory devices), air filters, ultrasonic nebulizer	Industrial strength cleaning solutions
Table top fountain, aquarium, fish farming	Birds, Bird Droppings, Aviary
Straw mats	Insecticide, Fertilizer

3. Did you/do you undertake activities/have you performed any of the following occupations (*please circle as appropriate*):

Farm work or living nearby a farm	Working in food production or processing (e.g. cheese, wheat, malt, oil, drying/smoking sausage)
Working with silage, mulch, hay or grain	Woodwork
Taking care of or living nearby horses or chickens	Painting, paint spraying, pottery or plaster work
Growing edible mushrooms	Automotive mechanic
Composting greens and comestibles/Gardening	Laboratory worker
Working in a Greenhouse	Working with fabrics
Playing a wind instrument	Welding, founding or smelting
Working in wine production	Working in a mine or quarry
Using a sauna, jacuzzi, swimming pool	Working in a paper, plastic or cork factory
Working as a garbage collector	Working in a cosmetic or herbal factory

4. Are there any other important exposures worth mentioning?  
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5. Did you mention a change in symptoms during vacation/out-of-office? yes  no

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**Fig. 1.** Swiss-HP questionnaire (English version). SWISS-HP, Swiss Hypersensitivity Pneumonitis Exposure.

complete questionnaires properly. In addition, they may not reflect the most prevalent exposure risks in Switzerland.

Our aim was to develop an updated and regionally adapted HP exposure questionnaire, which enables seamless integration of exposure assessment into routine ILD care. The participating Swiss ILD centres supported the project.

Under the auspices of the Swiss Society of Pneumology (SSP) and initiated by the Special Interest Group (SIG) for Interstitial and Rare Lung Diseases of the SSP, a questionnaire according to the current knowledge about local HP exposure and causative agents present in Switzerland has been developed. Recently, a number of consensus-based

recommendations in respiratory medicine have been successfully evolved by applying the Delphi process [12–14]. Accordingly, we conducted a two-round modified Delphi survey. First, different causative agents were identified based on a systematic literature review focussing on recent observational studies, guidelines, and reviews [15]. In a second step, the resulting comprehensive list of identified agents was sent out to Swiss ILD centres. The experts were asked about their personal opinion on the relevance of each of the potential agents with focus on regional prevalence and occurrence (important/not important/comments). In a third step and after consolidation of the experts' replies, the consolidated exposure list was

sent out for further review. Finally, all Swiss experts agreed on the consolidated exposure list as shown in Figure 1. The questionnaire can be completed by patients within approximately 5–10 min and is available in the Swiss national languages German, French, and Italian as well as in English (shown in Fig. 1). It has been reviewed and approved by the SIG for Interstitial and Rare Lung Diseases and by the SSP board by the end of 2021. Translated versions of the questionnaire are not systematically validated but have been marked by native speakers and have already demonstrated to be convenient for use in daily clinical practice.

In conclusion, the Swiss Hypersensitivity Pneumonitis Exposure questionnaire encompasses specific exposures that are potentially causative for the development of HP in Switzerland. The questionnaire is designed to be completed by patients with suspected and diagnosed ILD and to systematically complement the thorough medical history assessed by physicians. Of course, a thorough clinical evaluation, extensive diagnostic assessment, and a multidisciplinary discussion remain the cornerstones of the diagnosis and therapeutic management of patients with ILD [3]. The SSP and the SIG for Interstitial and Rare Lung Diseases

recommend using this questionnaire in patients assessed for ILD. The Swiss Hypersensitivity Pneumonitis Exposure questionnaire is available online in 4 languages at the SSP/SGP homepage.

### Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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### Author Contributions

Conception and study design: S.P., M.F.-C., and M.B. Data collection: S.P. Analysis and interpretation of data: S.P., S.A.G., K.H., C.C., J.-M.F., A.A., D.A., D.S., N.P., S.U., S.G., O.S., F.B., M.F.-C., and M.B. Manuscript draft and revision: S.P., S.A.G., K.H., C.C., J.-M.F., A.A., D.A., D.S., N.P., S.U., S.G., O.S., F.B., M.F.-C., and M.B.

### References

- Raghu G, Remy-Jardin M, Ryerson CJ, Myers JL, Kreuter M, Vasakova M, et al. Diagnosis of hypersensitivity pneumonitis in adults: an official ATS/JRS/ALAT clinical practice guideline. *Am J Respir Crit Care Med*. 2020 Aug 1;202(3):e36–69.
- Tzilas V, Tzouveleakis A, Bouros D. Hypersensitivity pneumonitis: the first diagnostic guidelines. *Lancet Respir Med*. 2020 Oct;8(10):955–7.
- Fernández Pérez ER, Travis WD, Lynch DA, Brown KK, Johannson KA, Selman M, et al. Executive summary: diagnosis and evaluation of hypersensitivity pneumonitis: CHEST guideline and expert panel report. *Chest*. 2021 Aug; 160(2):595–615.
- Hamblin M, Prosch H, Vašáková M. Diagnosis, course and management of hypersensitivity pneumonitis. *Eur Respir Rev*. 2022 Mar 31;31(163):210169.
- Fernández Pérez ER, Swigris JJ, Forssén AV, Tourin O, Solomon JJ, Huie TJ, et al. Identifying an inciting antigen is associated with improved survival in patients with chronic hypersensitivity pneumonitis. *Chest*. 2013 Nov;144(5):1644–51.
- Morell F, Villar A, Montero MÁ, Muñoz X, Colby TV, Pipvath S, et al. Chronic hypersensitivity pneumonitis in patients diagnosed with idiopathic pulmonary fibrosis: a prospective case-cohort study. *Lancet Respir Med*. 2013 Nov;1(9):685–94.
- Millerick-May ML, Mulks MH, Gerlach J, Flaherty KR, Schmidt SL, Martinez FJ, et al. Hypersensitivity pneumonitis and antigen identification: an alternate approach. *Respir Med*. 2016 Mar;112:97–105.
- Johannson KA, Barnes H, Bellanger AP, Dalphin JC, Fernández Pérez ER, Flaherty KR, et al. Exposure assessment tools for hypersensitivity pneumonitis. An official American thoracic society workshop report. *Ann Am Thorac Soc*. 2020 Dec;17(12):1501–9.
- Kreuter M, Ochmann U, Koschel D, Behr J, Bonella F, Claussen M, et al. Patient-enfragebogen zur Erfassung der Ursachen interstitieller und seltener Lungenerkrankungen: klinische Sektion der DGP. *Pneumologie*. 2018 Jun;72(06):446–57.
- ILD Patient Questionnaire [Internet]. CHEST Foundation. Available from: [https://foundation.chestnet.org/wp-content/uploads/2021/06/CHEST\\_ILD\\_Questionnaire.pdf](https://foundation.chestnet.org/wp-content/uploads/2021/06/CHEST_ILD_Questionnaire.pdf).
- Polke M, Kirsten D, Teucher B, Kahn N, Geissler K, Costabel U, et al. A comparison of existing questionnaires for identifying the causes of interstitial and Rare lung diseases. *Respiration*. 2020;99(2):119–24.
- Wilson KC. Consensus-based recommendations in respiratory medicine. *Eur Respir J*. 2020 Dec;56(6):2002889.
- Morisset J, Johannson KA, Jones KD, Wolters PJ, Collard HR, Walsh SLF, et al. Identification of diagnostic criteria for chronic hypersensitivity pneumonitis. An international modified Delphi survey. *Am J Respir Crit Care Med*. 2018 Apr 15;197(8):1036–44.
- Funke-Chambour M, Albera C, Bendstrup E, Costabel U, Grutters JC, Harari S, et al. Suggestions for improving clinical utility of future guidelines for diagnosis and management of idiopathic pulmonary fibrosis: results of a Delphi survey. *Eur Respir J*. 2021 Apr; 57(4):2004219.
- Petnak T, Moua T. Exposure assessment in hypersensitivity pneumonitis: a comprehensive review and proposed screening questionnaire. *ERJ Open Res*. 2020 Jul;6(3):00230–2020.