

HAY FEVER.

Hay fever is an idiosyncratic reaction to protein sensitisation in which the naso-pharyngeal mucosa and conjunctiva take the shock.

Ætiology.—The two conditions required are (1) the disposition to sensitisation; (2) the exposure to the sensitising agent.

The Disposition.—Not everyone is disposed to sensitisation to any given protein, but the difference between normal and disposed persons is only one of degree, as repeated exposure may sensitise a person at first insusceptible. Heredity plays an important part in disposition, which reaches its highest effect when there is a history of sensitisation on both sides of the family. When this is the case every child in the family may show disposition, though its manifestations are not necessarily identical in each one as regards the agent or the tissue taking the shock.

The Exposure.—Repeated exposure is probably necessary before the sensitisation occurs or the first exposure may be long and intense. With repeated exposure, the intensity increases and tends to spread. Thus, asthma may supervene after years of hay fever; and the extension may eventually involve other tissues, the cutaneous tissues or the alimentary tract.

Nature of the Sensitising Agent.—True hay fever postulates exposure to a protein, although apparently some non-protein agents may cause similar clinical symptoms. These proteins are of animal or vegetable origin and the contact is generally through the respiratory tract, less often but frequently through the alimentary tract. The common agents are:—Animal: hair and scurf (horse, dog, cat, cow); feathers (those of the mutton bird especially) used in bedding or pillows; Vegetable: pollens powders (especially ipecacuanha), grain-dust, flour, chaff-dust, sawdust, especially red pine and walnut, but most frequently of all the wood of the Queensland bean tree (*Castaneospermum*), which affects nearly everyone who comes in frequent contact with its dust—that is, it induces a special disposition, as does the dust of wheat infested by pediculoides among millers.

House dust is mentioned as a frequent cause and is a highly complex substance, consisting of minute animal, vegetable and mineral particles compounded from the dwellers in the house, their visitors and domestic pets, and largely influenced by their pursuits and personal habits. The particles range from those of macroscopical size down to those of impalpable fineness, and only visible under special illumination. Cosmetic powders of vegetable origin figure largely as sensitising agents, especially those containing iris and rice.

Seasonal and Perennial Hay Fever.—The seasonal occurrence is found in those who are sensitive to pollens. It begins in South Australia with the September wattles (*Acacia Pycnantha*) and during the summer is added to by rose, sweet pea, sunflower and the standard inhabitants of our gardens. The ripening grasses and cereals contribute, and it is with the first hot north winds in October that the incident of these is felt to the full in the city. The massive fields of the Cape dandelion, hundreds of acres of pure culture, used to be a main cause of the so-called dandelion-fever, but this plant has been largely displaced by less obnoxious species.

Perennial Hay Fever.—The source of perennial hay fever must be looked for in the home or pursuits or habits of the patient. If in the home, he may be sleeping on a feather bed or pillow; a parrot, dog or cat may be the cause, or a stable over the fence outside his bedroom window may supply the item. Many times in the last twenty years I have traced the incidents of seasonal or perennial cases to nocturnal exposure, to causes acting through a bedroom window; a strongly odorous flowering tree like the *Pittostrochum* is especially deadly. The same face powder may be used all the year round and its effects be perennial without the victim suspecting it.

Trade Hay Fevers.—Trade hay fevers from the nature of their work affect hairdressers (hair), bakers (flour), grocers (various), chemists (ipecacuanha), only to mention a fraction of possible occurrences. In fact, constant contact with any animal or vegetable protein will sooner or later cause symptoms in the disposed.

Age Incidence.—Hay fever may occur in the young (seldom infants) as rhinitis and conjunctivitis and pass later by extension to asthma, but there are plenty of people who do not show evidence of sensitisation until adult and even late adult life, the appearance in time (that is, at various age periods) often being a family peculiarity.

The Symptoms.—The attack begins with sneezing, a feeling of crackling on pressure over the nasal bridge, intense sensitiveness of the middle turbinate to inspired air, swelling and hyperemia of the mucosa and watery rhinorrhea. If, by the use of adrenalin, the mucosa of the middle turbinate is brought into view, there will be seen on the prow of the concha a little strawberry-red granular patch; in chronic cases this is sometimes replaced by a polypoid thickening over the same area. Conjunctival hyperemia, with intense itching of the caruncle, lachrymation and photophobia, sometimes swelling of the lids, partial closure of the eyes, are seen in cases according to their grade of intensity. Often, too, the intolerable irritation spreads to the ear and the palate and mouth. All the sensory branches of the sphenopalatine ganglion and the tympanic plexus are involved in the discomfort, which, in its worst form, drives people to distraction and renders them incapable of any mental effort. Those who wake sneezing in the night or early morning should suspect their feather pillow (kapok rarely causes sensitisation). When it begins at the toilet, powder may be the cause. Try a non-scented talc powder (French chalk) and observe the result. Remember, too, that after the removal of the suspected cause, continuance of symptoms may occur owing to persistence of feather dust or powder in the bedroom or bathroom; ordinary sweeping will not remove them.

Differential Diagnosis.—The rhinorrhea of hay fever is mimicked by iodism. Apart from this, a foreign body in the eye or nose may cause a symptomatic nasal hydrorrhea which may in the early stages suggest a sensitisation. The common catarrhal cold, too, may closely resemble it, but as a rule the diagnosis is easy as regards the fact of sensitisation, although it may tax one's patience to determine the single or multiple agents by the cutaneous tests.—ROBERT PULLEINE, M.B., Ch.M., Sydney, F.R.A.C.S., Lecturer in Rhinology and Otolaryngology, University of Adelaide.—Reprinted from *Medical Journal, Australia*.

[previous page](#)

[next page](#)