Hypochondria

A mental disorder characterized by an excessive and habitual preoccupation with personal health and a tendency to interpret insignificant or imaginary conditions as evidence of serious disease; also called hypochondriasis.

Typically, hypochondriacs not only falsely believe that they have a serious disease (often, but not exclusively, of the heart or another internal organ), they persist in this belief even after being assured that they do not have the disease by a physician (or, usually, by many physicians). Hypochondriacs seem to have an increased sensitivity to internal sensations. It is also thought that serious childhood illness or experience with disease in a family member or friend may be associated with hypochondria, and that psychological stress in early adulthood related to disease or death may precipitate or worsen this condition.

Further Reading

Hypothalamus

A section of the forebrain, connected to other parts of the forebrain and midbrain, that is involved in many complex behaviors.

The hypothalamus, which together with the thalamus makes up the section of the forebrain called the diencephalon, is involved in such aspects of behavior as motivation, emotion, eating, drinking, and sexuality. Lying under the thalamus, the hypothalamus weighs only a fraction of an ounce and is a little larger than the tip of the thumb. It is connected to the autonomic nervous system, and controls the entire endocrine system using the pituitary gland to direct the work of all the other endocrine glands. If a particular section of the hypothalamus is destroyed, an overwhelming urge to eat results; damage to another section of a male’s hypothalamus can reduce the sex drive. Yet another part of the hypothalamus, the suprachiasmatic nuclei (SCN), is the site of a person’s “internal clock” that regulates biological rhythms according to a cycle of roughly 24 hours. From the SCN, signals reach areas of the hindbrain that regulate sleep and wakefulness. With neurons firing on a 24- or 25-hour cycle, it determines the periods of greatest alertness—whether one is “morning person” or a “night person.” Pathways from the SCN to the eyes connect its circadian rhythms to external cycles of light and dark.

Different roles have been identified for various sections of the hypothalamus in interpreting and acting on hunger signals. The ventromedial nucleus, whose neurons detect blood levels of glucose, signals when it is time to stop eating. Rats in whom this part of the hypothalamus has been destroyed will eat extremely large quantities of food, enough to triple their body weight. Similarly, the lateral hypothalamus signals when it is time to begin eating. Yet another area, the paraventricular nucleus, appears to motivate the desire for particular types of foods, depending on which neurotransmitters are acting on it at a particular time.

See also Brain

Hypothesis testing

The method psychologists employ to prove or disprove the validity of their hypotheses.

When psychologists engage in research, they generate specific questions called hypotheses. Research hypotheses are informed speculations about the likely re-
## Hypothesis Testing

<table>
<thead>
<tr>
<th>Two groups really do differ</th>
<th>Two groups really do not differ</th>
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<tbody>
<tr>
<td>You conclude that the two groups differ so you reject the Null Hypothesis.</td>
<td>You conclude that the two groups do not differ so you fail to reject the Null Hypothesis.</td>
</tr>
<tr>
<td>You correctly rejected the Null Hypothesis. You made a good decision.</td>
<td>You made a Type II error. You should have said there is a difference, but you made a mistake and said there wasn’t.</td>
</tr>
<tr>
<td>You made a Type I error. You said that the groups are different, but you made a mistake.</td>
<td>You correctly failed to reject the Null Hypothesis. You said that the groups are not different, and you were right.</td>
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As a rule, psychologists attempt to rule out the Null Hypothesis and to accept the Research Hypothesis because their research typically tries to focus on changes from one situation to the next, not failure to change. In hypothesis testing, psychologists are aware that they may make erroneous conclusions. For example, they might reject the Null Hypothesis and conclude that performance of people in two groups is different, that is, that one group remembers more than the other because they organize the information differently. In reality, one group might have gotten lucky and if the study were performed a second time, the result might be different. In hypothesis testing, this mistaken conclusion is called a Type I error.

Sometimes researchers erroneously conclude that the difference in the way the two groups learn is not important. That is, they fail to reject the Null Hypothesis when they should. This kind of error is called a Type II error. The table below indicates the relationship among errors and correct decisions.

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Unfortunately, when researchers conduct a single experiment, they may be making an error without realizing it. This is why other researchers may try to replicate the research of others in order to spot any errors that previous researchers may have made.

See also Scientific method