Health anxiety: detection and treatment
Peter Tyrer & Helen Tyrer

SUMMARY
Health anxiety is an important new diagnosis that is increasing in frequency because of changing attitudes towards health, particularly excessive use of health information on the internet (cyberchondria). People with abnormal health anxiety become over-diligent monitors of their health, mis-interpreting most somatic sensations as evidence of disease, consult medical professionals unnecessarily and frequently, and are often over-investigated. Relatively few patients with health anxiety present to psychiatrists; most are seen in primary and secondary medical care. This paper reviews the diagnosis and presenting features of health anxiety, its identification in practice and its treatment. A range of simple psychological treatments have been shown to have long-lasting benefit for the disorder but are greatly under-used.

LEARNING OBJECTIVES
- To be able to identify abnormal health anxiety with the aid of probe questions
- To respond to people whom you have identified with excessive health anxiety in a way that facilitates its treatment
- To learn a few simple techniques derived from cognitive–behavioural therapy that can lead to long-term benefit

DECLARATION OF INTEREST
None.

Health anxiety, an overlapping condition similar to hypochondriasis but not an exact synonym, is an anxiety disorder characterised by excessive fear of having or developing an illness, usually a medical one, with constant health monitoring, bodily checking and, more recently, internet health browsing (cyberchondria). People with health anxiety usually consult doctors and other health professionals repeatedly, often to ask for reassurance, but often in the hope of further investigations, and this places an unnecessary burden on health services. Health anxiety is very similar to a new diagnosis called illness anxiety disorder in DSM-5 (American Psychiatric Association 2013), is remarkably common and greatly underdiagnosed, especially in older people and those attending medical out-patients, many of whom have, or have had, medical pathology, and in primary care. It often persists for years and causes intense misery. Frequently, it fails to be diagnosed: this is regrettable, as there are now treatments, almost exclusively psychological, that can have long-lasting benefit.

The reasons why the subject of health anxiety has been largely forgotten or ignored in psychiatry are not completely clear. When it was bundled together with hypochondriasis, it was increasingly viewed as a depressive equivalent, accentuated by extreme forms of depression associated with hypochondriacal delusions (e.g. Cotard syndrome). Hypochondriasis has also had a long association with the idea that is was both untreatable and a slightly amusing condition, manifested by people who loved talking about their symptoms, but were not really suffering from them. This is very far from the truth. People with health anxiety suffer long and greatly, sometimes in silence, with a small minority afraid of consulting a doctor in case their worst fear is realised. It can become so intense that it leads to suicide. Perhaps the main reason why it has been neglected is the failure of doctors in other specialties either to identify the many people with the condition who come across their paths, or to give anything apart from reassurance as a treatment. This has been accentuated in recent years by the tendency of all specialists to choose only to exclude physical disease, rather than troubling to find a proper explanation for symptoms. To correct these attitudes will require much work and better psychological training for all doctors.

### Box 1 Main diagnostic features of health anxiety

- Fully admitted excessive worries over health
- Hypervigilance in relation to body and bodily functions (and internet browsing)
- Repeated checking of body for signs of disease
- Fear of having or developing a serious (untreatable) illness
- Constant need for reassurance
- Frequent medical consultations
The typical patient with health anxiety

The characteristic features of patients with excessive health anxiety are shown in Box 1. There is usually no difficulty in identifying that the patient is concerned about their health; the more demanding requirement is the recognition that the concern expressed is abnormal and almost certainly unjustified. This to some extent is hinted at by the number of times that the patient has consulted with health problems and nothing wrong has been found. The health problem may vary over time – many health-anxious patients switch their concerns from one disease to another – but the results of assessment and investigations are either normal or just outside the normal range and of no clinical significance.

What differentiates health anxiety from other anxiety disorders is that the patient does not necessarily complain of anxiety (even though it may be observed prominently). This is because the patient is perfectly aware that they are anxious, but also is convinced that their anxiety can be solved by being told that the disease (or group of diseases) that is feared is not actually present. It is therefore not at all surprising that reassurance is top of the requirement list for solving the problem. Health-anxious patients seek reassurance in many ways: asking friends or relatives, even children, and consulting health professionals of all kinds, but mainly medical doctors, on the grounds that they are expert in diagnosis and also because they have recourse to tests that may confirm or disprove a self-diagnosis.

Differential diagnosis

The diagnosis of health anxiety should be relatively easy, but because it is enmeshed with the contentious and heterogeneous group called somatoform disorders (or somatic symptom and related disorders in DSM-5 (Bass 2016)) it complicates the diagnostic process. Health anxiety is the equivalent of illness anxiety in DSM-5 and is the new name for hypochondriasis. It is defined in DSM-5 as ‘a pre-occupation with having or acquiring a serious, undiagnosed medical illness’, with somatic symptoms not being present or ‘if present, […] only mild in intensity’, and ‘the individual’s distress emanates not primarily from the physical complaint itself but rather from his or her anxiety about the meaning, significance, or cause of the complaint’ (American Psychiatric Association 2013: p. 315). In more simple language, health anxiety is excessive unjustified anxiety about illness. This diagnosis, as Mayou (2014) and Scarella et al (2016) suggest forcefully, should be placed in the anxiety disorders rather than the somatic symptom group. What has to be acknowledged is that somatic symptoms of anxiety may be very prominent in health anxiety, and to exclude this diagnosis (or ‘illness anxiety’ in DSM-5) in those with somatic symptoms is not an appropriate way to use the classification.

Some may bemoan the loss of hypochondriasis as a diagnosis in DSM-5, and it is likely to stay in ICD-11, but we do not consider this is a loss (Tyrer 2014a), as hypochondriasis as a diagnosis has been a dead hand conferring only the notions of untreatability and ribald comment on its sufferers, rather than understanding or appropriate intervention. A significant proportion of those with the (old) diagnosis of hypochondriasis have a primary depressive disorder, and 50 years ago this was regarded as the main underlying disorder (Kenyon 1964). For psychiatrists who have been trained to recognise hypochondriasis as a persistent belief in the presence of one or more serious medical disorders despite all evidence to the contrary, the new variant of health anxiety may just appear to be a synonym for hypochondriasis. It is not quite; it is a form of anxious hypochondriasis in which fear of illness associated with anxiety is the most prominent symptom, and it is now also appreciated that absence of physical illness is not relevant. Many with high health anxiety have suffered physical disorders and the onset of the physical disorder (e.g. a myocardial infarction) may have been the trigger for the onset of health anxiety.

There is considerable overlap between health anxiety and obsessive–compulsive disorder, and in ICD-11 the revision group of obsessive–compulsive and related disorders have included not only classic obsessive–compulsive disorder, but also body dysmorphic disorder, hypochondriasis, olfactory reference disorder and hoarding disorder (Stein 2016). There are commonalities between them, but health anxiety is a bit of an outlier, as many patients with the condition do not have significant obsessional symptoms and, as noted below, respond differently to pharmacological interventions. It is also much more common than the other diagnoses in the group (Box 2). Nonetheless, the ICD-11 group are very aware of the close links that health anxiety has to other anxiety disorders (Van der Heuvel 2014) and it is to be hoped that this can be acknowledged formally in ICD-11.
Tyrer & Tyrer do not normally attend psychiatric clinics. (Tyrer 2011). Also, not surprisingly, these patients around 10% in all attenders in primary care (Tyrer 2016a). An Australian national survey found a lifetime prevalence of 5.7% and current prevalence of 3.4%, much higher than in previous studies of hypochondriasis, and it was also associated with physical comorbidity (Sunderland 2013). One of the problems with previous definitions of hypochondriasis is that they required absence of actual disease, but in practice it is very common to get health anxiety in the context of disease, where it can be identified easily and is unequivocally a separate condition (Box 3). It is therefore not at all surprising that rates of health anxiety are higher in those attending medical facilities, with rates of around 10% in all attenders in primary care (Tyrer 2013) and up to 20% in medical out-patients (Tyrer 2011). Also, not surprisingly, these patients do not normally attend psychiatric clinics.

**Prevalence of health anxiety in different settings**

Health anxiety is common and is probably becoming more so because of increased use of the internet to seek knowledge about illness (cyberchondria): in our personal work we have seen a doubling in the prevalence of health anxiety over a 10-year period (Tyrer 2016a). An Australian national survey found a lifetime prevalence of 5.7% and current prevalence of 3.4%, much higher than in previous studies of hypochondriasis, and it was also associated with physical comorbidity (Sunderland 2013). One of the problems with previous definitions of hypochondriasis is that they required absence of actual disease, but in practice it is very common to get health anxiety in the context of disease, where it can be identified easily and is unequivocally a separate condition (Box 3). It is therefore not at all surprising that rates of health anxiety are higher in those attending medical facilities, with rates of around 10% in all attenders in primary care (Tyrer 2013) and up to 20% in medical out-patients (Tyrer 2011). Also, not surprisingly, these patients do not normally attend psychiatric clinics.

**The common pathway for patients with health anxiety**

The average patient with health anxiety has had the condition for many years before it is diagnosed (Hedman 2011). This is one of the main reasons why it is underdiagnosed. The two main groups of patients are very different: ‘avoiders’ and ‘reassurance seekers’. The avoiders do everything they can to diminish contact with doctors and with information that is concerned with illness, especially serious medical illnesses such as cancer. They do not consult any health professionals except when absolutely necessary and will, for example, avoid travelling by routes that may expose them to advertisements for cancer treatment and support (a very difficult task nowadays). Their prevalence is unknown as their consultation rates are low and they often refuse to admit that they have any difficulty.

The reassurance seekers are high consulters of medical services, tending to present early with minor problems such as spots in the skin, marks in the cheek, chest pain or trembling. Each of these is attributed a serious aetiology and the patient often asks for further tests if clinical examination reveals nothing of note. Often, patients have a series of tests of different organ systems, sometimes accentuated by a minor abnormality in one of them occurring by chance. This is becoming particularly common with magnetic resonance imaging (MRI) scans, where normal variation may be commented on as equivocal or worthy of further tests. Most of the diseases feared by those with health anxiety are medical, but psychiatric disorders such as schizophrenia and dementia sometimes become the focus of concern.

Reassurance seekers feel they have a prime responsibility to monitor their health, and often when reassured by one doctor that all is well will question this subsequently in the light of what they feel is better evidence. A comment such as ‘your chances of getting that are one in a million’ do not reassure; the sufferer immediately sees themselves as that one in a million.

Reassurance seeking often extends to families, so when then are no medical agencies available, close family members are bombarded with questions and often collude with the reassurance cycle, even though they try to resist it. With today’s easy communication technology, reassurance from family and friends can include multiple texts, Facebook and links to online medical information. This can eventually lead to schisms within families.

The avoiding and reassurance strategies can also coalesce. So, for example, a patient wanted to be reassured that she was not ill, but realised that reassurance very seldom lasted for any length of time. She therefore deliberately took a very long route when shopping so that she did not go past the health centre, just in case she had the desire to rush in and make an appointment.

**How to identify pathological health anxiety in practice**

As the presentation of health anxiety is so variable it is difficult to give clear advice here. Those who most clearly recognise that they have health anxiety are those who present with their symptoms for

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**BOX 3 A typical case of health anxiety associated with a physical illness**

A formerly healthy man of 56 had recently had a myocardial infarction and had a stent fitted successfully. Cardiologists saw him on several occasions after his operation, and his treadmill and other exercise tests were all very satisfactory, so after 6 months he was discharged and told ‘You are now completely well – we do not need to see you again’. What his medical attendants did not know, because they had not asked and he had not volunteered, was that he was incapacitated by the thought of yet another heart attack and was convinced that the next time it would be fatal. He refused to go out of the house (except for medical appointments, gave up his job and his wife also gave up her part-time job to become his carer.

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**How to identify pathological health anxiety in practice**

As the presentation of health anxiety is so variable it is difficult to give clear advice here. Those who most clearly recognise that they have health anxiety are those who present with their symptoms for
treatment, and they are most obvious in the internet treatment studies of health anxiety, where patients are usually invited to take part by advertisement. Only a minority of these individuals are excluded on the grounds of misdiagnosis, so it is clear that such patients are aware of their pathology.

In psychiatric out-patient clinics health anxiety usually presents as part of an anxiety–depression syndrome and has to be teased out from the other components. It is not readily acknowledged as, because it tends to be chronic, it is not a prime complaint. It is also frequently linked to the symptoms of obsessive–compulsive disorder, and the recurrent checking and monitoring of health has influenced the decision to place the diagnosis in the obsessive–compulsive group in the forthcoming ICD-11.

In primary care and secondary medical care health anxiety is often unacknowledged or explained as secondary to other medical problems. The assumption made is that all symptoms will disappear when the ‘true’ medical cause is identified. It is not difficult to guess that a degree of probing is therefore necessary to elicit the main symptoms (Box 4).

**Treatments available for health anxiety**

Although health anxiety is an important diagnostic entity that has only recently received prominence, it overlaps considerably with generalised anxiety disorder and obsessive–compulsive disorder, and it might be thought that the treatments for each would overlap. This is only partly true. Although the psychological treatments for these disorders are similar in their fundamentals, the other treatments differ greatly.

**Drug treatment**

To date, there have only been three trials of drug treatment in hypochondriasis (and none in health anxiety) (Greeven 2007; Fallon 2008; Fallon 2017). In the larger study (Greeven 2007) 112 patients were randomly assigned to 16 weeks of treatment with cognitive–behavioural therapy (CBT) (n = 40), paroxetine (n = 37) or placebo (n = 35). A complicating factor was that patients in all groups were allowed to take benzodiazepines. The results showed that CBT and paroxetine were equally efficacious, and more so than placebo, in diminishing hypochondriacal symptoms, and this improvement persisted to 18 months (Greeven 2009). In the second study (Fallon 2008), 57 patients were enrolled to a comparative study of fluoxetine and paroxetine, but 12 dropped out during the placebo run-in phase and so only 45 entered the acute treatment phase of 12 weeks. The mean dose of fluoxetine was relatively high (51.4 mg) and the improvement levels only just reached significance. The third trial (Fallon 2017) has just been published in which cognitive therapy, fluoxetine, combined CBT and fluoxetine, and placebo were compared. All the active treatments were superior to placebo at 24 weeks, with best results in the joint treatment group, but response rates overall were poor.

Why are there so few drug trials in this disorder compared with generalised anxiety and obsessive–compulsive disorders? It is not at all surprising: because people with health anxiety are very sensitive to the presence of adverse effects to drugs, often assuming they are evidence of a separate disease, they are generally wary of drug treatment and, when given the choice, much prefer to take psychological treatments (Walker 1998).

**Psychological treatments**

Psychoanalytical and other psychodynamic psychotherapies, stress management, CBT in several forms, mindfulness-focused therapy, and acceptance and commitment therapy have all been used in the treatment of health anxiety. Bibliotherapy has also been used as a supplement to formal psychological therapies but detailed information of its value is lacking.

**Stress management**

Stress management was one of the treatment groups in an early study of psychological treatments for health anxiety (Clark 1998), when it was found to be as effective as CBT. A subsequent trial comparing CBT and behavioural stress management (both delivered via the internet) showed clear superiority for CBT (Hedman 2014).

**Mindfulness-based CBT**

The study by McManus et al (2012) was the first to use a group format for treating health anxiety in a randomised controlled trial (RCT). The trial team

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**BOX 4 Probe questions for health anxiety**

- ‘Have you been worrying a lot about this (problem)?’
- ‘Do you tend to worry about your health in general?’
- ‘Have you ever felt that the problem is more serious than the doctors have found?’

If the patient answers yes to any of these questions, appropriate responses include:

- ‘It sounds as though you are worried about your health.’
- ‘Worrying about your health excessively can make problems more difficult to cope with.’
- ‘We can probably help with this worry.’
examined the efficacy of mindfulness-based group cognitive therapy compared with usual unrestricted services in 74 patients and reported a medium effect size of 0.48 (intention-to-treat analysis) to 0.62 (per-protocol analysis) at 1-year follow-up and a low drop-out rate of 6%.

**Acceptance and commitment therapy**

In another RCT patients with health anxiety were allocated to group treatment with acceptance and commitment therapy (ACT-G) and treated in seven groups of nine patients. They received weekly 3-h sessions for 9 weeks and a booster session 1 month after the ninth session: a total of 30 h of group treatment. This was highly effective in reducing health anxiety and to a much greater extent than in the control group (Eilenberg 2016).

**Cognitive–behavioural therapy for health anxiety (CBT-HA)**

Cognitive–behavioural therapy has the best evidence base for effectiveness for health anxiety (Olatunji 2014; Cooper 2017), with consistent evidence from trials in many different settings, in patients with and without medical illness, and with benefits extending over time. Adverse effects have seldom been reported.

**Principles of CBT-HA**

Cognitive–behavioural therapy for health anxiety follows the general principles of CBT for all anxiety disorders. The major difference between CBT-HA and CBT for generalised and social anxiety, as well as panic, is that a large proportion of the patients who have health anxiety do not recognise it as a problem. This clearly does not apply to those who have sufficient recognition of the problem to come for treatment, and in the randomised trials published to date (mainly internet ones) most people have been recruited by advertisement or referral by another practitioner and so qualify as being ‘health-anxiety aware’. Unfortunately, a larger proportion, almost certainly a majority in view of the prevalence data (Tyrer 2011), do not think that their anxiety is abnormal and regard it as a sign of likely disease. One of the major tasks in treatment occurs right at the beginning. You have to get over to the patient that it is the fear of disease rather than actual disease that is the real problem to be addressed.

In our current work we have found that general hospital nurses are better at getting this message across than are mental health practitioners who have little or no knowledge of medical disease. As a consequence, nurses prove to be better at engaging patients than do psychologists and they produce significantly better outcomes (Tyrer 2015). This may be relevant only in medical settings, where patients are in environments where psychological understanding is often appallingly low and where better credibility is given to members of the medical and nursing team. Important changes in services will be needed if health anxiety is to be properly addressed and managed in these settings (Tyrer 2017a).

Once this initial step has been surmounted, the remainder of treatment follows standard cognitive therapy principles, but these have to be adapted for health anxiety. The dangers of internet browsing (cyberchondria) have to be emphasised, as ‘Dr Google’, as he is so often called, is a fund of vast but indiscriminate knowledge. People with health anxiety regard themselves as the ‘one in a million’ who is destined to get a disease, so to list a disorder as extremely rare is hardly noticed – it almost serves as a beacon. It is also important to avoid reassurance, both from doctors and other professionals and from relatives, as this intervention is the most evanescent of placebo reactions; most patients have a recurrence of anxiety within 12 h. People with health anxiety monitor their bodies continuously and are hypervigilant. Often, this can be illustrated and managed by asking the patient to keep a daily diary of their anxiety levels and instructing them not to monitor or check their bodies on certain days of the week. Days on which they were specifically asked not to monitor or check their bodies characteristically show much lower levels of anxiety.

Further information about CBT-HA and health anxiety is available in two CPD Online modules from the Royal College of Psychiatrists (Tyrer 2016b, 2017b).

**Internet CBT-HA**

Internet CBT-HA has proved to be highly effective, and probably cost-effective, for patients who recognise that they have health anxiety and want treatment, and in this respect it is better than stress management (Hedman 2015, 2016b). It is becoming much more widely used as the internet becomes universal.

**Cost-effectiveness of treatment**

It might be expected that successful treatment of health anxiety would lead to a great reduction in healthcare costs. This has not yet been satisfactorily proved, probably because there are deficiencies in the current way in which economic analyses are done. What is clear is that the costs of treatment are largely or completely offset by savings in reduced out-patient and accident and emergency department attendance (Seivewright 2008; Tyrer
2014b, 2017c; Hedman 2016a), but as many people in secondary medical care have both medical disorders and superadded health anxiety the savings are difficult to identify. When patients have both medical or surgical interventions quite independently of health anxiety (e.g. hip replacement), the costs of these far outweigh the savings made by treating health anxiety. Savings are much clearer in primary care (Fink 2010).

What has become apparent in recent years is that to exclude patients with health anxiety from psychiatric treatment on the grounds that they have an existing medical illness is not justified. In fact, there is evidence that those people who are older and have health anxiety respond better to treatment than those who are younger (Tyrer 2017a, c).

Conclusions
In writing this article we recognise that what we have described elsewhere as a silent epidemic (Tyrer 2016a) cannot be resolved by mental health interventions alone. There needs to be a fundamental shift in attitudes towards the management of psychological distress in medical settings, in both primary and secondary care. This is doubly important as these disorders are not only distressing, but also persistent (Bass 2016). To paraphrase Locke, they are nasty, brutish and long. Inaction should not be tolerated, especially as we have treatments available that are effective, have very few adverse effects and maintain their benefit over time.

References
American Psychiatric Association (2013) Diagnostic and Statistical Manual of Mental Disorders (5th edn) DSM-5). APA.
MCQs
Select the single best option for each question stem

1 You suspect that a patient in your clinic has excessive health anxiety. What is the next question you put to them?
   a Have you any mental health problems?
   b How many times have you consulted over this trouble?
   c Do you think the investigations you have had are really necessary?
   d Do you worry a lot about your health?
   e Have people ever suggested you are a hypochondriac?

2 A patient comes to you with a complaint of pain in the chest, but investigation finds no organic cause. When is health anxiety the most likely explanation for the presentation?
   a When the patient admits they are anxious about the pain
   b When the patient has a recent heart attack
   c When the patient checks their heart rate repeatedly
   d When the pain is continuous
   e When the pain is not helped by analgesics.

3 Antidepressant drug treatment is of limited benefit in health anxiety because:
   a most patients are not depressed
   b it takes too long before positive changes are noticed
   c the dose has to be raised to high levels to be effective
   d to drug effects tolerance develops very quickly
   e health-anxious patients are very nervous about the possible adverse effects of drugs.

4 The prevalence of health anxiety is highest in:
   a primary care
   b psychiatric out-patient clinics
   c out-patient clinics in medical secondary care,
   d accident and emergency departments
   e in-patients.

5 Patients with health anxiety respond well to cognitive-behavioural therapy when they realise that:
   a they have excessive worry and fear of disease
   b they are under the age of 40
   c they no longer need reassurance
   d they trust what the doctor tells them
   e they have to die of something.

Working beyond your job plan
Alex Till & Jan Wise

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In the article by Till (2017), an error occurred in the author information for Jan Wise. The author details are reproduced below.

Jan Wise is a consultant psychiatrist with Central and North West London NHS Foundation Trust. He chairs and sits on several BMA committees involved in trade union duties, caring for doctors so that they can care for patients.

Reference