

# CLINICAL REVIEW

## Obsessive-compulsive disorder

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Obsessive-compulsive disorder (OCD) is characterised by the presence of obsessions or compulsions, or commonly of both. OCD is the fourth most common mental disorder after depression, alcohol/substance misuse, and social phobia, with a lifetime prevalence in community surveys of 1.6%.<sup>1</sup> The severity of OCD differs markedly from one person to another. People are often able to hide their OCD, even from their own family, although it can cause problems in relationships and interfere with the ability to study or work. Health consequences can also occur: fear of contamination can, for example, prevent the accessing of appropriate health services or lead to dermatitis from excessive washing. When the disorder starts in childhood or adolescence, young people may avoid socialising with peers or become unable to live independently. The World Health Organization ranks OCD as one of the 10 most handicapping conditions by lost income and decreased quality of life.<sup>2</sup> This clinical review summarises the evidence on how to recognise, assess, and manage people with OCD.

### Who gets OCD?

OCD occurs all over the world, although cultural factors may shape the content. (For example, religious obsessions are more common in some communities.) The sex ratio in epidemiological surveys across the world is equal,<sup>1</sup> but more women have compulsive washing, and more men have sexual obsessions, magical numbers, or obsessional slowness.

The mean age of onset is late adolescence for men and the early 20s for women. However, OCD can also present in older people, either after a long history of the condition hitherto undiagnosed or with symptoms that are more recent in onset. OCD occurs with a point prevalence of about 1% of the population.<sup>3 4</sup> Children and adolescents can also have OCD, with a prevalence of about 0.25% in 5-15 year olds.<sup>5</sup> They have a similar presentation to adults.<sup>6</sup> The differences reflect developmental stages (for example, more sexual and religious obsessions in adolescents than in children and more fears of death of a parent for young people than for adults).<sup>6</sup> Rarely, children may develop a sudden onset of obsessive-compulsive symptoms with an episodic course and the presence of motor tics, hyperactivity, or choreiform movements. This is associated with various

infectious agents and other environmental factors in several case series of children with OCD.<sup>7</sup>

### What are obsessions and compulsions?

An obsession is defined as an unwanted intrusive thought, doubt, image, or urge that repeatedly enters the mind. Obsessions are distressing and ego-dystonic (that is, they are repugnant or inconsistent with the person's values). The person usually regards the intrusions as unreasonable or excessive and tries to resist them. A minority of obsessions are regarded as overvalued ideas and, rarely, delusions.<sup>8</sup> Obsessions do not concern day to day worries, which occur in generalised anxiety disorder; perceived defects in appearance, which occur in body dysmorphic disorder; or fear of having a serious disease, which occurs in health anxiety.

Compulsions are repetitive behaviours or mental acts that a person feels driven to perform in response to an obsession. They are largely involuntary and are seldom resisted. A compulsion can take the form of either an overt action observable by others (such as checking that a door is locked) or a covert mental act that cannot be observed (such as repeating a certain phrase in the mind). Covert or mental compulsions are generally more difficult to resist or monitor than overt ones, as they are "portable" and easier to perform. The table lists common obsessions and compulsions. A compulsion in OCD is not in itself pleasurable, which differentiates it from impulsive acts such as shopping, gambling, or paraphilias that are associated with immediate gratification.

The term "ritual" is synonymous with compulsion but usually refers to motor acts. "Rumination" in OCD refers to mental acts repeated endlessly in response to intrusive ideas and doubts. The term "pure O" is sometimes used by patients to describe ruminations without observable compulsions. To warrant a diagnosis of OCD, obsessions and compulsions must be time consuming (for example, more than one hour a day) or cause significant distress or functional impairment (see box).<sup>9 10</sup> Hoarding is a compulsion in OCD, but "hoarding disorder" is now planned to be a separate diagnosis in ICD-11 (international classification of diseases, 11th revision). It refers to the

### Summary points

The World Health Organization ranks obsessive-compulsive disorder (OCD) as one of the 10 most handicapping conditions by lost income and decreased quality of life

OCD occurs across all ages but most commonly presents in young people

Shame often prevents people with OCD seeking help and causes delays in effective treatment

Non-specialists should ask screening questions if OCD is suspected

OCD is a treatable condition—children and adults should initially be offered cognitive behavioural therapy

For moderate to severe OCD in children and adults, selective serotonin reuptake inhibitors may also be offered

### Sources and selection criteria

We referred to published systematic reviews, including the treatment guideline from the National Institute for Health and Care Excellence (2005) and the obsessive compulsive disorder evidence update (2013). We identified reviews by searches for “compulsive behavior”, “obsessive-compulsive disorder”, “obsessive behavior”, “compulsions”, “obsessions”, “obsessive compulsive neurosis”, “scrupulosity”, “symmetry”, “recur\$ adj obsession\$”, “recurr\$ adj thought\$”, “symmetr\$ or count\$ or arrang\$ or order\$ or wash\$ or repeat\$ or hoard\$ or clean\$ or check\$ (adj compulsi\$)”

excessive acquisition and marked difficulty in discarding of items, regardless of their actual value, leading to significant distress or handicap.

Although tics may be mistaken for compulsions, they can be differentiated by the focal uncomfortable somatic sensations that precede and are relieved by the tic. Motor tics vary from simple abrupt movements to more complex and apparently purposive behaviours (such as clapping or touching an object). Phonic or vocal tics range from simple throat clearing sounds to more complex vocalisations in speech. The behaviour is considered a compulsion rather than a tic if it is performed a certain number of times or in a certain order or at a particular time of day, is done in response to an obsession, and is intended to reduce anxiety or prevent harm. However, the boundaries between a complex tic and a tic-like compulsion can be blurred.<sup>11</sup>

## How can we identify and diagnose obsessive-compulsive symptoms?

Simple screening questions for OCD take only a few minutes and may indicate a need for onward referral. Guidance from the National Institute for Health and Care Excellence (NICE)<sup>12</sup> suggests that the following questions can be used clinically to help to diagnose OCD when the symptoms are significantly distressing or interfering in a person's life:

- Do you wash or clean a lot?
- Do you check things a lot?
- Is there any thought that keeps bothering you that you would like to get rid of but cannot?
- Do your daily activities take a long time to finish?
- Are you concerned about putting things in a special order or are you very upset by mess?
- Do these problems trouble you?

If a person responds affirmatively to one of the above questions, a more formal diagnostic interview would be conducted. The diagnosis of OCD uses the ICD-10 criteria (see box). This will not fundamentally change in ICD-11.

Some people's OCD symptoms are easily observed or reported. They may wash repeatedly to prevent contamination, check plugs to prevent fire, or avoid harm in more idiosyncratic ways, using symmetry, order, or actions repeated to a lucky number. Some patients do not realise that they have OCD or feel too ashamed and stigmatised to seek help. They may present to a general practitioner with dermatological symptoms (from

excessive washing), genital or anal symptoms (from excessive checking and washing), general stress (for example, from losing a job as a result of repeated lateness), or doubts about contracting HIV.

Other themes concern intrusions about sexuality, blasphemy, morality, or mistakes. OCD is more difficult to recognise when the compulsions are covert or stigmatising. Observers may notice simply that the person seems preoccupied or anxious or takes a long time to respond to questions. They would not be able to see the person trying mentally to replace unacceptable sexual thoughts with “safe” or “correct” thoughts, praying, or trying to reassure him or herself that a particular action is safe. Thus OCD is often hidden, as patients believe that their own intrusive thoughts or images are too shameful. They may refuse to reveal the content of their intrusive thoughts to a health professional, owing to the fear of being misunderstood or being reported to social services. Generalists may not need to know the exact content of intrusive thoughts, and reassuring a person with OCD that having unacceptable or senseless thoughts is extremely normal may be sufficient before onward referral.

Health visitors or social workers may, however, raise concerns about whether sexual or violent thoughts might mean that a person with OCD is dangerous. Each case needs to be assessed individually, but no recorded cases exist of people with OCD acting on their thoughts. In these situations, it is more important that health professionals assess the unintended risk (for example, a parent neglecting to change a nappy owing to fears of being a paedophile).<sup>13</sup>

A person with OCD is likely to terminate a compulsion when he or she feels “comfortable” or “just right.” In the long term, this is a criterion that may be impossible to achieve or take a very long time to obtain. What is important in recognising and understanding OCD is not the behaviour but the intended aim of the behaviour. Thus the intended aim of a compulsion in OCD is to verify whether a threat exists (for example, a checking ritual) or to get rid of a threat by “undoing” it (for example, by compulsive washing or replacing a thought).

Avoidance is an integral part of OCD. Common examples are taking care not to touch toilet seats, door handles, or taps used by others; hiding all sharp objects or knives; and making sure never to be left alone with a child or suppressing intrusive unwanted images of having sex with a child if there are fears of being a paedophile. As well as anxiety, associated emotions in OCD include disgust (especially in contamination OCD), shame (especially with forbidden thoughts), and a distressing sense of “incompleteness” until things feel “just right.”

**ICD-10 diagnostic criteria for obsessive compulsive disorder**

For a definite diagnosis, obsessional symptoms, compulsive acts, or both, must be present on most days for at least two successive weeks and be a source of distress or interference with activities. The obsessional symptoms should have the following characteristics:

- (1) Either obsessions or compulsions (or both) present on most days
- (2) Obsessions (intrusive thoughts, images, or doubts), which are repetitive, persistent, unwanted, and unpleasant and cause marked distress in most people
- (3) Compulsions are repetitive behaviours or mental acts that the person feels driven to perform
- (4) There are usually attempts to resist a compulsion (although resistance may be minimal in some cases)
- (5) Carrying out a compulsive act is not intrinsically pleasurable, but there may be some relief from distress

Generalists should also assess the degree of family involvement in the OCD, attitudes to treatment, and any restrictions that have been placed on family members—being banned from using certain rooms, for example, or having to change clothes and shower when they enter the house. More often, patients are engaged in endless seeking of reassurance about whether an activity is safe. Relatives may accommodate the person's OCD or be overprotective, aggressive, dismissive, or avoidant. People with OCD may also react with aggression when a family member does not adhere to their compulsions. Family members are likely to use different ways of coping, resulting in further discord. Finally, the family may seek help for the patient, who may be unwilling to take this step him or herself.

**What causes OCD?**

A genetic predisposition to OCD is likely on the basis of twin and genome-wide linkage studies.<sup>14</sup> Developmental factors may include emotional, physical, and sexual abuse or neglect, social isolation, teasing, or bullying.<sup>15 16</sup> Psychological factors that maintain OCD include an over-inflated sense of responsibility and magical thinking, an intolerance of uncertainty, and a belief in the controllability of intrusive thoughts.<sup>17</sup> Stressors include pregnancy and the postnatal period.<sup>18</sup> Examples of postnatal obsessions are worries about harming or abusing the baby or not being careful enough (for example, with bottle sterilisation). Common avoidance behaviour and compulsions include hiding knives, repeatedly seeking reassurance, or checking that the baby is still breathing while asleep. Compulsions and avoidance then “work” by reducing anxiety and perceived harm in the short term (and are therefore reinforcing), but this become a vicious circle with unintended consequences in the long term.

Very rarely, obsessive-compulsive symptoms can present in adults as a consequence of certain neurological conditions such as a brain tumour, Sydenham's chorea, Huntington's chorea, or frontotemporal dementia or as a complication of brain injury to the frontal lobe or basal skull. A rare presentation of OCD has also been described in children (paediatric autoimmune neuropsychiatric disorders associated with streptococcal infection, or PANDAS). It is characterised by a rapid onset and fluctuating symptoms of OCD or a broader set of neuropsychiatric symptoms, and it may be mediated by autoimmune antibodies in the basal ganglia after a streptococcal infection. However, no laboratory tests are available to help to make the diagnosis.<sup>19 20</sup>

**What other conditions are associated with OCD?**

The most common comorbid diagnoses in surveys of people with OCD are depression (in about a third), social phobia (in a third), alcohol misuse (in a quarter), specific phobias (in a quarter), generalised anxiety disorder (in about 10%), and other related obsessive-compulsive disorders such as body dysmorphic

disorder (in about 10%).<sup>21</sup> OCD is more common than would be expected in people with schizophrenia (in about 10%),<sup>22</sup> bipolar disorder (in about 10%),<sup>23</sup> anorexia and bulimia nervosa (in about 20%),<sup>24</sup> and Tourette's disorder (in about 20%).<sup>23</sup> Lastly, OCD symptoms are common in autistic spectrum disorder, but such patients are more likely to have repeating, hoarding, touching, tapping, and self damaging behaviours compared with those without autistic spectrum disorder.<sup>25</sup> However, symptoms of OCD in autistic spectrum disorder can also be confused with symptoms of excessive rigidity and a need to maintain “sameness,” which is not fear driven as in OCD.

**What treatments are available and how successful are they?**

Research shows that people can spend 10 years or more struggling with OCD before they get the appropriate help.<sup>26</sup> The role of shame and stigma is common to many mental health problems but can be particularly problematic for people with OCD who have ego-dystonic sexual or violent thoughts. People with OCD also describe getting very skilled at hiding their compulsions in an attempt to carry on functioning as normal.

**Psychological treatment**

NICE's guidance on efficacy and tolerability is based on 17 controlled studies and concludes that cognitive behavioural therapy that includes “exposure and response prevention” is an effective treatment for OCD.<sup>12 27</sup> A key message to people with OCD is that it is not their fault that they have developed OCD and that this is a recognised condition that can be treated.

Therapy fundamentally consists of patients repeatedly testing out their fears and expectations and learning to tolerate anxiety, while not performing any compulsive or safety seeking behaviour. This can be done gradually as planned exposure or as part of a behavioural experiment to test whether the results best fit the theory that they have a problem with worrying that a bad event will happen (rather than a problem with causing a bad event to happen). Good quality cognitive behavioural therapy will provide this in the context of a supportive and empathic relationship and a shared understanding of the problem (for example, having a good understanding about how the things people do to keep themselves feeling safe are actually counterproductive and make things worse).<sup>17</sup>

Follow-up studies of cognitive behavioural therapy show that about 30% of people refuse treatment, leave early, or do not respond.<sup>28</sup> Other studies have shown that up to 50% of people have residual symptoms after treatment.<sup>29</sup> A recent systematic review attempted to identify predictors of drop-out and poor response, but only hoarding was a poor predictor.<sup>30</sup> A common belief exists that people who have had the problem for a long time need very long term treatment, but a recent meta-analysis found that the duration of treatment was unrelated to outcome.<sup>30</sup> No evidence of efficacy or effectiveness exists for

psychoanalysis in the treatment of OCD, and insufficient evidence is available to support the use of other psychological therapies, hypnosis, or homeopathy.<sup>12</sup>

## Drug treatment

Good evidence exists for the benefit of selective serotonin reuptake inhibitors (SSRIs) and clomipramine in the short term and in the longer term for prevention of relapse. SSRIs are acknowledged as the first line drug treatment of choice because of better tolerability than clomipramine. A dose-response relation exists with SSRIs, so that higher doses are better for OCD than is the standard dose of an SSRI needed for depression. A trial of an SSRI at the highest tolerated dose lasts for at least 12 weeks. However, discontinuation of an SSRI or clomipramine, in the absence of cognitive behavioural therapy, usually leads to a high rate of relapse.

Drug treatments beyond SSRIs are unlicensed and should be preceded by specialist assessment. For those patients for whom SSRIs and cognitive behavioural therapy have been ineffective, the evidence for adjunctive antipsychotic drugs in the short term is weak and an increased risk of adverse events is seen in the long term. Thus a recent controlled trial of patients resistant to one SSRI found that cognitive behavioural therapy was more effective than either risperidone or a placebo.<sup>31</sup> Meta-analyses show no significant benefit for augmentation with quetiapine or olanzapine, a small effect size for risperidone, and a modest effect size for aripiprazole.<sup>32</sup> Antipsychotics are thus recommended only in patients who are refractory to cognitive behavioural therapy and SSRIs. When an antipsychotic is prescribed, it should be given at a low dose for a four week trial to determine whether it is effective. Novel compounds with some evidence for refractory cases include lamotrigine, topiramate, and acetylcysteine.<sup>33</sup>

## Other treatment

Ablative lesion neurosurgery is used very rarely for extremely refractory patients, although no controlled trials have been done. Deep brain stimulation is being investigated as an alternative to ablative neurosurgery for very severe refractory cases. A systematic review of transcranial magnetic stimulation found it to be ineffective in OCD.<sup>12</sup> No evidence exists of a benefit of antibiotics in children with PANDAS, as the antibodies are the cause of the problem not the bacteria themselves. Plasma exchange or immunoglobulin might be used in the most severe children only.<sup>34</sup>

## Where and how do I refer?

The NICE guidelines on OCD suggest that the first point of referral is to a service where people may be offered either low intensity interventions such as guided self help or computerised cognitive behavioural therapy with a psychological wellbeing practitioner.<sup>35 36</sup> However, most patients would be offered 12 to 20 sessions of individual cognitive behavioural therapy.

People who have failed a course of cognitive behavioural therapy or SSRI (or a combination of the two), or who have more complex OCD or present with significant risks, should be referred to secondary care under the principle of stepped care. A stepped care model seeks to treat patients at the lowest appropriate service tier in the first instance, only "stepping up" to a specialist service when clinically required. This does not mean that everyone has to slavishly start at the lowest level of intervention, as sometimes immediate referral to a secondary care is clinically appropriate. If secondary care is ineffective,

they should be referred to specialist outpatient services where particular emphasis should be put on prolonged, active exposure and experiments with the therapist, including home based treatment, which local, non-specialist services often do not have the capacity to deliver. Alternatively, the patient may benefit from more intensive cognitive behavioural therapy in a specialist residential or inpatient setting.<sup>37</sup> OCD can have a chronic and fluctuating course, so if someone has been previously seen for treatment they should be re-referred as a priority.<sup>12</sup>

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**Questions for future research**

- Is low intensity or computerised cognitive behavioural therapy effective for mild to moderate obsessive-compulsive disorder (OCD)?
- Is intensive cognitive behavioural therapy (same duration delivered over one week) as effective as standard cognitive behavioural therapy (delivered once a week)?
- What are the most effective treatments for severe OCD refractory to treatment?
- What is the best way help a family cope with OCD?
- How can we predict who will respond to cognitive behavioural therapy or drug treatment?
- How can the risk of relapse be reduced (given the chronic and fluctuating course in some people with OCD)?

**Additional educational resources***Resources for health professionals*

- Veale D, Freeston M, Krebs G, Heyman I, Salkovskis P. Risk assessment and management in obsessive-compulsive disorder. *Adv Psychiatr Treat* 2009;15:332-43 (<http://apt.rcpsych.org/content/15/5/332.full>)—Describes risk assessment in OCD
- NICE guidelines on treating obsessive-compulsive disorder (OCD) and body dysmorphic disorder (2005) (<http://publications.nice.org.uk/obsessive-compulsive-disorder-cg31>)—Remains the best resource for treating OCD using stepped care
- NICE evidence update on OCD (2013) (<http://arms.evidence.nhs.uk/resources/hub/1028833/attachment>)—Latest update on treating OCD

*Websites for people with OCD and their carers*

- Maternal OCD ([www.maternalocd.org](http://www.maternalocd.org))—Information on OCD presenting in the perinatal period
- OCD Action ([www.ocdaction.org.uk](http://www.ocdaction.org.uk))—National charity in the UK
- Obsessive Compulsive Foundation ([www.ocfoundation.org](http://www.ocfoundation.org))—US national charity
- OCD UK ([www.ocduk.org](http://www.ocduk.org))—National charity in the UK
- OCD Youth ([www.ocdyouth.info](http://www.ocdyouth.info))—Information on OCD for young people and their carers

*Books for people with OCD and their carers*

- Challacombe F, Oldfield V, Salkovskis P. *Break free from OCD*. Vermilion, 2011
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## Table

Table 1 | Common obsessions and compulsions

Obsessions	Related compulsions
Fears of contamination from dirt, germs, bodily fluids or faeces, chemicals, or dangerous material (for example, asbestos)	Washing and cleaning compulsions and avoidance of triggers
Fears of causing harm to self or others	Checking (for example, doors being locked) and reassurance compulsions
Excessive concern with symmetry or being "just so"	Ordering and repeating compulsions
Forbidden thoughts or images (for example, being a paedophile, blasphemy, or violence such as stabbing one's baby)	Checking one's memory and avoidance of triggers