

# information

## IMPULSE CONTROL DISORDER AND DOPAMINE DYSREGULATION SYNDROME IN PARKINSON'S

Parkinson's is a progressive neurological condition, which is characterised by both motor (movement) and non-motor symptoms.

Dopamine is a neurotransmitter which is diminished in Parkinson's due to the gradual loss of dopamine producing cells within the substantia nigra in the mid brain. Dopamine is vital in the regulation of movement but it is also important in the reward or pleasure systems of the brain.

The most common medical treatments used in the management of Parkinson's are dopamine replacement therapy and dopamine agonists which act by replacing the diminished dopamine or by mimicking dopamine. There appears to be a connection between the medications used in the treatment of Parkinson's and Impulse Control Disorder (ICD).

ICD is defined as a diverse group of behaviours characterised by a loss of voluntary control over impulses that result in possibly self-destructive behaviour. Risk factors for developing ICD in Parkinson's include but are not limited to:

- History of addictive and/or compulsive behaviour
- Male gender
- Young Onset Parkinson's

Most health professionals involved in the management of Parkinson's will regularly screen people with Parkinson's for ICDs particularly if dopamine agonists are prescribed.

A number of ICDs have been identified in Parkinson's and these include but are not limited to:

- Compulsive shopping
- Hypersexuality

- Overeating
- Pathological (addictive) gambling
- Punding (compulsive hobbyism)

### Compulsive shopping

This is a preoccupation with shopping and purchasing. The person may experience an irresistible urge to buy more than they need, more than they can afford or make unnecessary purchases. Often the urge may be focused on a particular category of items for example, stationary or hats. The ability to shop on line has heightened this addiction and makes it difficult to monitor. Imposing a limit on a credit card may assist in controlling this problem. Awareness of the problem and discussing it with family and the treating medical specialist is recommended.

### Hypersexuality

The link between Parkinson's medications and hypersexuality has been well documented. Hypersexuality is defined as being preoccupied with sexual feelings and thoughts. Sexual impulses may become more intense, spontaneous and compulsive - this may cause distress to both the person and their partner. It is essential to clarify if the behaviour is mutually acceptable or distressing for the couple. Hypersexuality may also become apparent as accessing pornography on line or in a printed format. It is recommended that this problem be discussed openly with the treating medical specialist or a Parkinson's Nurse Specialist if available. Adjustment of medication may help resolve the problem.

### Overeating

People with Parkinson's often enjoy a 'sweet tooth' and this adds to the tendency to overeat due to medication side effects. Compulsive overeating may occur during the night especially if sleep disturbance is experienced. If weight gain is evident then overnight behaviours should be investigated.

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your state Parkinson's organisation:  
Freecall 1800 644 189 [www.parkinsons.org.au](http://www.parkinsons.org.au)

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Discussion with the treating medical specialist and referral to a dietician is advised.

## **Pathological (addictive) gambling**

Pathological gambling is the most extensively studied impulse control disorder in both the Parkinson's and non-Parkinson's populations. It is defined as persistent and recurrent maladaptive gambling behaviour. Online gambling has increased the opportunities to act on this irresistible urge.

Acknowledging that gambling is a problem is essential. Open communication with the spouse or partner may lead to limiting access to funds or credit cards. Voluntary exclusion from gambling venues can be arranged.

An honest discussion with the treating specialist is essential. Adjustment of medications often corrects the tendency to gamble.

## **Punding (compulsive hobbyism)**

Punding was first associated with psychostimulant abuse in the 1970's and was described in relation to Parkinson's in 1994. Punding is an intense fascination with complex, excessive, repetitive non goal directed behaviours. These can range from less complex actions such as shuffling papers or sorting handbags to more complex acts such as hobbyism (gardening, painting or computer use). Punding can lead to neglect of physiological needs such as sleep or hunger. There may be a lack of insight into the effect of the punding behaviour and often people feel that the behaviour is soothing and resent being interrupted. Others derive no satisfaction from the behaviour and become distressed by it.

Recognising the behaviour and discussing it with the relevant health professionals is essential.

The above behaviours are most commonly associated with dopamine agonists. The adjustment or withdrawal of the dopamine agonist may be difficult for the person with Parkinson's. Withdrawal may result in a decrease in symptom control, increased anxiety and a desire for

reintroduction of the medication under review. An increase in the dosage of levodopa to compensate the change in dopamine agonist may not address the effects of the withdrawal.

## **Dopamine Dysregulation Syndrome (DDS)**

Dopamine dysregulation syndrome is a rare condition affecting less than 4% of people with Parkinson's. It is defined as the compulsive use of Parkinson's medications in excess to what is necessary to control motor symptoms- this can result in medication induced movement and behavioural side effects usually occurring during the 'on' phase. They may present as euphoric.

It is essential to follow the instructions given by the treating medical specialist in regard to Parkinson's medications and to adhere to the prescribed regime. Avoidance of self-prescribing is crucial to prevent the development of DDS. Young Onset males are more at risk of developing this syndrome. Often the person affected will not recognise or acknowledge the problem therefore it is vital that family members monitor and take note of excessive use of Parkinson's medications.

Treatment strategies for all the points outlined may involve a review of Parkinson's medications and must be done under the treating medical specialist.

**Parkinson's Australia** is a federation of member organisations including Parkinson's ACT, Parkinson's Queensland, Parkinson's SA & NT, Parkinson's Tasmania and Parkinson's WA.

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