



## CHAPTER TWO

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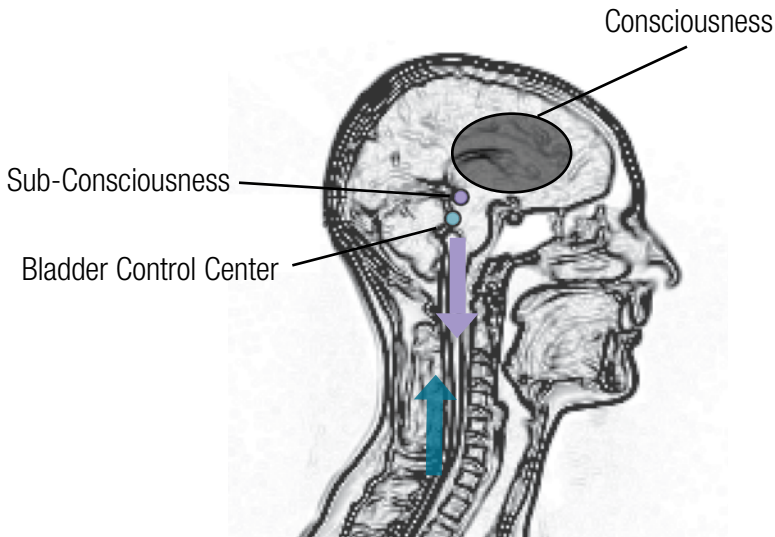
### **How Parkinson's Disease Affects the Bladder**

From the preceding chapter, you will understand that a disease of the nervous system is highly likely to upset bladder control, although which of all those processes described is actually affected depends very much on which part of the nervous system malfunctions. What is clear is that in Parkinson's disease several things seem to go wrong.

Until recently, it was thought that the major fault was the loss of dopamine-producing cells which in normal health serve to hold the bladder switch "off" during storage and prevent it from contracting. This is certainly a big part of the problem. However, it now appears as if it is more complicated than merely the loss of certain cells.

What we know is that commonly in patients with Parkinson's disease the bladder becomes overactive and develops unwanted contractions which are difficult or impossible to stop. These often happen at a low volume of filling, resulting in the complaint of frequency and urgency. If the bladder contraction causing the sensation of urgency is too strong, leakage may occur, resulting in the complaint "I can't hold on."

Something that also bothers patients and their partner or caregiver is night-time frequency. Although this might be expected because the bladder can only hold a small amount and is overactive, the extent to which disturbed sleep also contributes to this problem is not clear. Difficulty sleeping is also a common problem for patients with Parkinson's disease. Whether it is that which causes them to wake often and want to pass urine, or their bladder



which wakes them up, is uncertain. But getting up often at night has recently been shown to be the most common, non-motor symptom affecting patients with Parkinson's disease. This can be very tiresome for both patients and their caregivers, and it is often a complaint for which medical help is sought. Furthermore, the risk of falls and resulting bone fractures are serious concerns for an individual with Parkinson's disease, particularly in light of accompanying difficulties in walking and the possibility of problems with perception.

In addition to symptoms that are due to poor storage of urine, many patients with Parkinson's disease complain also of difficulty in getting their urine flow started followed by a weak stream. This seems to be neurological too. If someone has been on levodopa (also called *L-dopa*) treatment for many years and is experiencing "on and off" trouble, it may be noticed that passing urine is easier and more efficient when the patient is "on" and the medication is working, compared with "off" times when the medication benefit has worn off. This "on and off" expression refers to the patient experience whereby the individual is okay one minute, then suddenly unable to move the next.

Not all patients with Parkinson's disease experience bladder troubles, perhaps only about one third of those attending a neurology clinic, although it seems clear that bladder problems become worse if a patient's general neurological troubles worsen. In fact, if urinary symptoms occur and are very troublesome at a stage of Parkinson's disease when movement disorders are minor or slight, the question may arise as to whether the patient might have some other cause. Common things are common, and in men the effects of prostatic obstruction should be considered. This is not an easy problem for the urologist to work out. The question may be asked: Does this man with Parkinson's disease also have an obstruction and should he have surgery or other treatment of the prostate to relieve the obstruction? In fact, the prostate need not be enlarged to cause symptoms. It can be particularly difficult if a man has a poor stream since this is an abnormality which can be seen in both conditions. Women can have co-existent Parkinson's disease and stress urinary incontinence (leakage on coughing or sneezing) or a gynecological problem such as organ prolapse which may affect bladder function. There is, however, another disease which in itself is often mistaken for Parkinson's disease called Multiple System Atrophy (MSA), or Shy-Drager Syndrome, and urinary symptoms in men and women are often one of its earliest features.

