A welcome from the DDA Chief Executive Matthew Isom

Welcome to the latest of our educational supplements brought to you in association with Actavis.

This issue will go to print before the DDA Annual Conference, which will be part of the Best Practice Show at the NEC on October 21-22. It is free to attend, so I do hope that you will be able to join us. It is one of the few events in the country where you will find like-minded people grappling with familiar problems. A problem shared is a problem halved, as the old saying goes, so why not come along?

We have a great line up of speakers, including the Chief Inspector of General Practice at the CQC, Professor Sir Steve Field. There was a lively debate about the CQC inspections regime last year and I suspect that we will have a similar one this year.

If you want to learn how you can make your dispensary more profitable, then we have laid on special session just for you. At a time of falling discounts and reduced funding for general practice, every penny counts so we hope that this session will be great use to you.

The issue of pharmacists working in general practice has found itself near the top of the agenda lately. Many dispensing practices have been employing pharmacists for many years, adding enormous value to the patient care and the practice team. DDA Board Member and pharmacist Mark Stone, who has many years' experience working in a dispensing practice in Cornwall will be on hand to share his experiences with delegates. There is something for everyone in the practice at the DDA conference. The DDA Board will be on hand to answer your questions too. I do hope that we will see you.

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The Training Resource

DISPENSING DOCTORS' ASSOCIATION
EDUCATIONAL SUPPLEMENT ONLINE

DDA conference update..

Best Practice
21-22 October 2015
Birmingham NEC

The DDA's 2015 annual conference is now just a few weeks away – so register now, to take advantage of the few remaining delegate places. Taking the theme 'Dispensing Practice: A Change for Good', the conference takes place at the NEC, Birmingham, on October 21-22.

The theme of the conference aims to reflect the unprecedented changes taking place in the NHS across the country, as dispensing GP practice teams grapple with the implications of a new Government, new commissioning/provider models, integrated working, and the GP/nursing workforce crises – not to mention the unrelenting pressure on dispensing margins.

in addition to presentations by the CQC and pharmacist Mark Stone, other information on offer at the conference includes:

- Impact of the Five Year Forward View on small rural practice by Sir Sam Everington, chair, Tower Hamlets CCG and GP advisor to NHS England on new models of care
- GP premises, networks and new models of care by Dr Brian Balmer, GPC executive team, GPC lead on practice finance
- Unlocking the benefits of smart procurement and stock control by Dr Wayne Turner, dispensing GP in Leicestershire and director of Dispensing Doctor Solutions Ltd

Come along to the conference and be the first to take home a copy of the DDA's new 2016 Dispensing Guidance, with its special chapter on CQC inspection hints and tips – as well as our other show-only goodies.

To register your place, visit: www.dispensingdoctor.org/conference/

Political party conferences host event on winter resilience

At the recent political party Autumn conferences, the Dispensing Doctors' Association teamed up with pharmacists' and wholesalers' representative organisations to present a fringe event on rural winter resilience.

The fringe event, entitled: Winter Pressures: How can we get the NHS ready? took place at the Conservative and Labour party conferences and was seen by health ministers including Ben Gummer. It showed politicians how dispensing practices, pharmacies and wholesalers are preparing for winter, the role of dispensing practices in reducing unnecessary emergency admissions, and pressures on the rural medicines supply chain. DDA Board members Dr David Baker and Dr Richard West attended the Labour and Conservative party conferences (respectively), and they were joined at the fringe event by Sue Sharpe, chief executive officer of the Pharmaceutical Services Negotiating Committee, and Martin Sawer, executive director, British Association of Pharmaceutical Wholesalers.

October Category M

The quarter 3 (October) Category M adjustments reveal a balanced picture of price rises and falls.
In summary:

- Eight additions
- One deletion: chlorphenamine 2mg/5ml oral 150ml: £2.49 (Piriton syrup - after September amendment switching to Cat C)
- 248 products with price rises
- 280 products with price falls
- five products with price falls of over £10
- two products with price rises of over £10

To view the full October 2015 price changes, visit DDA Online at: **www.dispensingdoctor.org/resources/dispensary-management-zone/category-m-updates/**

Additions	Pack size	Sept price (£)	Oct Cat M (£)	% -/+
Duloxetine 20mg gastro-resistant capsules	28	18.48	18.35	-0.7
Duloxetine 30mg gastro-resistant capsules	28	22.40	21.82	-2.6
Duloxetine 40mg gastro-resistant capsules	56	36.96	36.14	-2.2
Duloxetine 60mg gastro-resistant capsules	28	27.72	26.65	-3.9

Additions	Pack size	Sept price (£)	Oct Cat M (£)	% -/+
Eplerenone 50mg	28	38.47	33.58	-12.7
Oxcarbazepine 300mg tablets	50	19.03	7.95	-58.2
Risperidone 1mg/ml oral solution sugar free	100ml	37.11	6.27	-83.1
Sevelamer 800mg tablets	180	167.04	135.81	-18.7

Biggest price rises	Size	Jul-15	Oct-15	Price Change	% price Change
Baclofen 10mg tablets	84	£1.92	£6.37	£4.45	232%
Omeprazole 40mg gastro-resistant tablets	7	£1.83	£5.74	£3.91	214%
Fosinopril 20mg tablets	28	£5.65	£17.43	£11.78	208%
Mefenamic acid 500mg tablets	28	£2.58	£7.57	£4.99	193%
Glyceryl trinitrate 500microgram sublingual tablets	100	£3.74	£10.44	£6.70	179%
Biggest price falls	**Size**	**Jul-15**	**Oct-15**	**Price Change**	**% price Change**
Exemestane 25mg tablets	30	£37.72	£19.72	-£18.00	-48%
Aripiprazole 5mg tablets	28	£76.64	£43.99	-£32.65	-43%
Aripiprazole 15mg tablets	28	£75.47	£43.37	-£32.10	-43%
Aripiprazole 10mg tablets	28	£74.69	£43.81	-£30.88	-41%
Isosorbide mononitrate 40mg tablets	56	£5.38	£3.63	-£1.75	-33%

Wavedata price trend analysis

Buying advantages even out as drug markets reach parity

ONLINE EXCLUSIVE!

Generics and parallel imports prices for dispensing GPs and pharmacists appear to have reached parity, Wavedata's purchase price analysis for September has shown. Although there are differences, they are small when compared with those of just a few months ago. A possible explanation may lie in a seasonal policy by the short-line wholesalers to make the same offer to both types of account - however, this didn't happen last year.

In its exclusive monthly analysis for the DDA, aripiprazole tabs stand out strongly among the price fallers, with four packs falling in price. Other headline fallers include two packs each of propranolol and sertraline tabs. Headline risers include two packs each of cimetidine, diclofenac, paracetamol soluble and quinapril tabs.

Risers

September saw the average dispensing doctor price of cimetidine tabs 200mg x60 rise by an average of 514% as the usual suppliers stopped advertising and only Mawdsleys remained. Pharmacists saw a similar trend with many suppliers' price lists disappearing and only Phoenix, Numark, Lexon, Waymade, Ethigen, Edinpharm and Eclipse continuing to advertise.

Celiprolol tabs 200mg x28 appeared on the PSNC's NCSO in August and September, and prices to dispensing doctors rose by an average of 449%. Although most suppliers increased their prices, Numark, Eclipse Ethigen and Edinpharm continued to offer low prices to pharmacies.

Another price concession from the PSNC resulted in trazodone oral solution S/F 50mg/5ml x120ml rising for dispensing GPs by 228% on average. Very few suppliers continued to advertise stock to pharmacies or dispensing doctors in September and the only prices below £100 were on offer from AAH and Ethigen.

Fallers

Metformin tabs 500mg x28 fell on average for dispensing doctors by 45% in September as Actavis, Teva and others reduced their prices. Pharmacists saw a similar picture, with wholesalers following the price down.

During the month, aripiprazole tabs 30mg x28 fell by 40% on average for dispensing GPs as Actavis and Teva reduced prices. The same trend was seen for pharmacists, with Alliance, AAH, Waymade, Sigma, Trident, Phoenix, OTC Direct, Numark, Mawdsleys and others all reducing prices.

Dispensing GPs also benefitted from a 38% average price drop for aripiprazole tabs 15mg x28 as the market followed the same trend seen with the 30mg aripiprazole.

Brought to you exclusively by the Dispensing Doctors' Association

Be the first to see it! Full analysis of pricing trends during October will be available to DDA members in the first week of November – but only on DDA Online. The full September purchase price analysis data is now available to DDA members in the Dispensary Management Zone of DDA Online at: **http://www.dispensingdoctor.org/resources/dispensary-management-zone/monthly-purchase-price-analysis/**

Co-commissioning and dispensing practice

DDA board member, Dr David Jenner discusses the implications for dispensing practice of new commissioning models

From April, 2015, GPs have been encouraged to take a role in co-commissioning – a commissioning model that aims to enable local providers to plan local services more coherently, and remove some of the funding and management complexities created by the health service redesign. It is hoped that with more influence over the wider NHS budget, CCGs will be able to more easily move funding from acute services and invest in primary care. The key document communicating this change is entitled: 'Next steps towards primary care co-commissioning', published in November 2014.

New responsibilities

From April this year, CCGs can take one of three layers of responsibility for co-commissioning. It will be important for GPs to know at which level their CCG is operating now, and at which it plans to operate in 2016. The three levels of co-commissioning responsibility are as follows:

Greater involvement in decision-making: This scenario basically maintains the status quo but shows a clear policy intent to devolve most of general practice commissioning to CCGs over time.

For dispensing practices little changes: Local variations to national contracts could be negotiated between the CCG and NHSE but these are unlikely.

Joint commissioning arrangements: CCGs (or local groups of CCGs) will need to establish joint committees and decision-making forums with NHS England area teams. In this scenario they could make significant changes to elements of the GP contract, for example, local variations of the QOF. Other NHSE commissioned services, for example, the unplanned admission Directed Enhanced Service (DES) could be re-negotiated and adapted into a local option offered as an alternative to the national QOF and DESs. In dispensing practice, changes may include alterations to the DSQS scheme, and the initiation of medicine management initiatives including Medicine Use Review (MUR) or New Medicine Services (NMS).

Delegated commissioning arrangements: In this model CCGs will be responsible to NHSE for the full range of responsibilities for general practice commissioning (minus those responsibilities expected to stay with NHSE). This model suggests 'devo-max' commissioning – where local CCGs (or groups of CCGs) are responsible for a wide range of services but NHSE holds accountability and reserved powers to impose new, 'must-do' national policies or to direct CCGs to meet gaps in provision.

Pros and cons

GPs who are involved with co-commissioning should be aware of the following implications:

Pros

- For dispensing practices recognition of their role, and potential for local commissioning of schemes nationally currently reserved for pharmacy, eg, NMS
- Local redesign of GP contracts, incentive schemes DESs and contracted services
- GP service redesign decisions are more accountable to local populations through CCGs.

Cons

- There is no guarantee of any extra resource (human or financial) for CCGs
- For practices more local contracts could result in reduced financial security – although for now nationally negotiated GMS entitlements will remain
- GP workforce and premises issues need national solutions; devolvement of responsibility to CCGs could reduce central responsibility for these solutions.

Action points for dispensing practices

- Understand at which level of co-commissioning your CCG is operating this year and is intending to operate next year
- Define which committee is responsible for making decisions and understand your sphere of influence
- Ask to see any primary care investment strategy
- Acquaint yourself with your CCG's commissioning intentions and any specific primary care investment proposals
- Engage with any local discussions on CCG reinvestment of the PMS premium released following PMS review processes
- Require your CCG or NHSE to clarify who will be responsible for making decisions about pharmaceutical services, in particular, decisions about pharmacy and dispensing applications and the extent of your sphere of involvement
- Check with your LMC who will be responsible for negotiating on behalf of practices for any new locally designed services
- Consider specific business proposals for local incentive schemes or contracted services that you could provide to the benefit of local patients and to meet CCGs commissioning intentions
- If your CCG is taking on delegated commissioning be sure to understand how they intend to performance manage your contract and seek support from the LMC to ensure fairness and proportionality
- Be aware of any conflicts of interest you may hold, especially if your practice has representatives on the CCG board or primary care committees, and be sure to declare these and act with probity at all times as required by the GMC.

The full version of this feature is available to DDA members from the DDA website at:

www.dispensingdoctor.org/resources/dispensary-management-zone/clinical-news-features-dispensary-management-zone/co-commissioning-of-general-practice/

Dispenser Education Modules: Test your knowledge

DDA Dispenser Education Module (DEM) training is designed to provide practice dispensary staff with information to improve the way patients manage their conditions. Available free and exclusively to DDA members, each DDA DEM includes various activities and multiple choice questions to help dispensers put the theory of their learning into practice, and to help staff identify any areas needing a quick recap. DDA Members can find activities and questions relating to this DEM on the menopause in the DEM library, located on the DDA Website at: **www.dispensingdoctor.org/resources/clinical-zone/dispenser-education-modules/**

Photodisc

Exercise is good for bone density and muscle mass in the menopausal woman

The menopause is a fact of life for all women. While "the change", as it is sometimes referred to, brings with it freedom from periods and therefore the risk of pregnancy, it can also be a time of stress and anxiety due to the physical and emotional changes experienced by many, and which can last for years. These symptoms are a result of falling oestrogen production, which, once stabilised, has its own long-term effect on health.

Aims

By the end of this article, you will:

- know what the term menopause means, and appreciate what happens inside a woman's body at this time be able to list the main symptoms that women experience during the menopause, and describe the longer-term impact on health
- be able to explain the lifestyle measures that women can adopt to try and manage their menopause symptoms and protect their future health
- be aware of the treatment options, when they are appropriate and some of their side effects
- know how often women on medication for the menopause should be reviewed by their prescriber.

What is the menopause?

In simplest terms, the menopause is the permanent end of menstruation. However, to understand the symptoms experienced by many women at this time – for it does not usually happen overnight – it is sensible to look at what is happening at a physiological level, ie, inside the body.

When a woman reaches the age of around 50 years, the ovaries stop their monthly release of eggs, or follicles as they are also known. Because the ovaries make oestrogen, the drop in ovarian activity means that the level of this hormone starts to fall, which in turn makes a woman's periods become less regular. It can also cause symptoms such as hot flushes, night sweats, mood swings, heart palpitations, insomnia, loss of libido, difficulty concentrating, vaginal dryness and urinary problems, for example recurrent infections or incontinence. This period of time is known as the perimenopause, and usually lasts around four years, though it may continue for up to a decade or even longer.

The menopause itself is regarded to have happened once a woman has experienced her last menstrual period. When a year has elapsed, she is considered to be post-menopausal, with her oestrogen levels remaining low. This means that the amounts of two related hormones, follicle stimulating hormone (FSH) and luteinising hormone (LH), are persistently high in the body.

The age at which the menopause occurs varies hugely. In the UK, the average is 51 years of age, but it may be considerably earlier or later than this. Someone who experiences it before the age of 40 is said to have had a premature menopause. This may be anticipated – as a result of a hysterectomy and/or oophorectomy (operation to remove the womb and ovaries), for example, or following chemotherapy or radiotherapy for cancer – or it may be unexpected, perhaps, as a result of an infection such as mumps, tuberculosis or malaria. There may be a family history of premature menopause or ovarian failure at a young age due to a chromosome abnormality, autoimmune disease or enzyme deficiency. However, in some cases, no cause can be found.

Menopause that happens abruptly, rather than slowly, tends to cause worse symptoms. However, that isn't to say that many women find it an easy time. Research points to around 80 per cent of women in the UK experiencing menopause symptoms, and 45 per cent of them will find them distressing. Yet, despite this, only a minority seek medical advice.

The effects of the menopause last for the rest of a woman's life: increased risks of osteoporosis, atrophy (shrinkage) of parts of the genitourinary tract, cardiovascular disease, stroke and a decline in cognitive functioning. Life expectancy can also be affected, with women who have experienced premature menopause living an average of two years less than someone who goes through it after 55 years of age.

Diagnosis

Menopause is diagnosed by its symptoms and their history. The first sign is usually a change in the menstrual cycle, which may shorten or lengthen, and amount of menstrual loss, which tends to increase slightly before dwindling. The most commonly complained about symptoms are hot flushes (a sudden sensation of heat in the neck, chest and face that spreads and is followed by sweating and a raised heart rate). Sleep can be disturbed (often due to night sweats but sometimes as a result of mood disorders) which can lead to the woman becoming short tempered and noticing problems with concentration and memory, and there can be urinary and vaginal issues such as vaginal dryness and discomfort which may cause painful sex (dyspareunia).

Before reaching a diagnosis, the doctor will also exclude other conditions that could be causing the symptoms, such as a gynaecological problem that is leading to irregular bleeding, which may involve a pelvic examination. A pregnancy test may be conducted to eliminate pregnancy as a reason for the symptoms, and body mass index and blood pressure are generally measured plus a urine sample tested for protein and bacteria if the woman is experiencing any bladder symptoms. Blood tests are usually only conducted if premature menopause is suspected, when FSH and LH may be measured.

Self-management

Although many women experience symptoms as they go through the menopause, many are able to ease them and protect their future health by making simple lifestyle changes:

- Diet is key to continuing good health. A balanced diet that follows the usual rules of cutting down on saturated fat, reducing salt and sugar intake and increasing the quantity of fibre, lean protein, fruit and vegetables can help, but the main thing that women at this stage of life need to be careful about is ensuring they get a decent amount of calcium. This is because the drop in oestrogen experienced during the menopause can have a detrimental effect on bone health

- Exercise is also vital for healthy bones and to maintain muscle mass. Both aerobic and strength and flexibility activities should be undertaken for a minimum of 150 minutes per week

- Pelvic floor exercises can help with bladder control and sexual enjoyment, which may have dwindled due to vaginal dryness.

- Hot flushes and night sweats can be improved by wearing layers of light clothing that are easily removed and replaced, reducing stress levels by using relaxation techniques, keeping bedrooms cool at night and avoiding potential triggers such as smoking, alcohol, caffeine and spicy food.

Medication

If the symptoms of the menopause start interfering with a woman's everyday life, the GP may advise medication. The main licensed options, which will depend on the individual's symptoms and preferences, are:

- Hormone replacement therapy works by, as its name suggests, replacing the oestrogen that naturally drops off during the perimenopause. Products that contain progesterone as well as oestrogen are used for women who still have their womb, whereas women who have had a hysterectomy can take oestrogen-only forms. HRT is available in various formulations, from creams and gels to implants and patches, as well as the more commonly recognised tablets. HRT is an effective treatment for many of the menopause symptoms women find distressing such as hot flushes, night sweats and vaginal dryness, and it can also reduce the risk of osteoporosis. However, it can cause side effects, ranging from weight gain, nausea and headaches to mood changes and breast tenderness, which deter many. Some types of HRT (and in some scenarios) can also increase the risk of uterine cancer although this risk can also be reduced. Women experiencing problems or concerns with HRT should be advised to return to their prescriber, as a simple change of dosing or product can make a big difference.

- Tibolone is a synthetic hormone that acts in the same way as HRT and has similar effectiveness. However, it is linked to an increase in the risk of breast and uterine cancer and stroke, and is not suitable for women aged over 60 years.

It is worth noting that although HRT and tibolone are hormonal products, they are not contraceptives. While fertility decreases during the menopause, pregnancy is still possible so contraception should be used for a year after a woman's last period if she is over 50 years old, and for two years if she is under this age.

- Clonidine is sometimes used to reduce hot flushes and night sweats in women who don't want to take a hormonal product. Initially, it should be taken for two to four weeks so the woman can see if it provides relief and how she feels about any side effects she experiences (these commonly include dry mouth, drowsiness, fluid retention and constipation).

- Vaginal lubricants can make a significant difference to symptoms such as vaginal dryness, which may be causing sexual problems.

Alternative remedies and therapies for the menopause are widely marketed, but are not recommended because their efficacy and safety have not been established and the quality may vary considerably.

Anyone on medication for the menopause should have it reviewed by their GP at least once a year. Hormonal treatments should additionally be followed up three months after the woman starts taking them. Once symptoms have resolved for a year or two, the GP may suggest stopping treatment.

Photodisc

Diet is key to continuing good health

Dispenser Education Modules: Test your knowledge

Each DDA DEM includes various activities and multiple choice questions to help dispensers put the theory of their learning into practice, and to help staff identify any areas needing a quick recap.

Activities and questions relating to this DEM on Parkinson's Disease can be found on the DDA Website, DDA Online at:
www.dispensingdoctor.org/resources/clinical-zone/dispenser-education-modules/

Dispenser Education Module 6:

Photodisc

Patients with Parkinson's Disease need to be prepared for progressively developing symptoms

Brought to you exclusively by the Dispensing Doctors' Association

Parkinson's disease is a progressive neurological condition that affects around one in every 500 people. The vast majority of sufferers are older – aged 50 years or over – which means PD is often regarded as a disease of ageing, but younger people can and do get it too.

Aims

By the end of this article, you will:

- understand what parkinsonism and Parkinson's disease are
- know the main symptoms of PD and how the condition is diagnosed
- be aware of the medication options have an appreciation of some of the issues that affect the everyday lives of people with PD.

What is Parkinson's disease?

Parkinson's disease occurs as a result of nerve cells being lost in the brain's substantia nigra, which leads to a reduction in the amount of dopamine being produced. Dopamine is the chemical in the body that helps control movement, and reduced production leads to the development of the main symptoms of PD: tremor, rigidity, slow movement. The condition was first described in the early 19th century by a British doctor called James Parkinson who termed it "the shaking palsy", and it wasn't long before the disease bore the name of the man who had published a paper on the topic.

It isn't known what causes the destruction of dopamine-producing nerve cells in some people and not others. Unlike many conditions, PD does not appear to have a strong genetic link. Environmental factors, such as exposure to certain pesticides, may play a part, but at the moment pretty much all that is known is that men are more likely to develop PD than women, and symptoms don't usually appear until after the age of 50 years, though around one in 20 patients will be diagnosed before they are 40.

Parkinson's disease falls under the umbrella term – and is the most common form – of "parkinsonism", which describes the main symptoms listed above. Other conditions include:

- Vascular parkinsonism, which affects people with restricted blood supply to the brain as the result of a stroke, perhaps, or diabetes complications. Other symptoms may include speech and swallowing problems, poor memory and cognition, confusion and incontinence
- Drug-induced parkinsonism is most common following treatment with drugs that block dopamine receptors, such as haloperidol for schizophrenia. Stopping the medication causing the problem usually resolves symptoms
- Dementia with Lewy bodies leads to PD symptoms accompanied by problems with memory, concentration, attention and language.

PD is progressive, and so it becomes more severe over time, but this varies from person to person. The life expectancy of a PD sufferer is less than someone who doesn't have the condition, and patients are also much more likely to go on to develop dementia.

Symptoms

The main symptoms of PD, and those that characterise the condition are:

- Tremor, usually worse on rest, and most commonly affecting the hand, wrist or leg
- Rigidity, which may be constant (sometimes referred to as 'leadpipe') or intermittent (often termed 'cogwheel') when a limb is flexed
- Slow movement, known as bradykinesia, which may manifest as difficulties with fine motor skills such as doing up buttons or unusually small handwriting, reduced facial expressions or limb movements such as arm swinging when walking, or walking with slow, shuffling steps.

Collectively, these are known as motor symptoms, and generally affect only one side of the body in early PD. However, they may be preceded or be accompanied by reduced sense of smell, disturbed sleep, constipation, cognitive impairment, fatigue, anxiety and depression. Later in the condition, the patient may experience poor balance, postural hypotension, swallowing difficulties, dementia and psychosis.

Other symptoms may include nerve pain, urinary problems, erectile dysfunction in men and sexual dysfunction in women, and excessive sweating and saliva production.

Diagnosis

There is no definite test for PD, rather the condition is diagnosed based on the patient's symptoms and medical history plus the outcome of some simple physical and mental tasks such as walking around, doing some writing and resisting limbs being moved or being pushed when standing.

If PD is suspected, the GP will refer the patient to a specialist. A single photo emission computed tomography (SPECT) scan may be carried out to rule out other causes.

Managing PD

While all patients with PD should be given an individualised care plan, not all will be medicated. In early disease, symptoms may be sufficiently mild that they don't interfere with everyday life whereas introducing drug treatment puts the individual at risk of side effects which may be more debilitating. All PD patients should be regularly monitored, however, and have a point of contact within their specialist team to answer questions or concerns about their condition, or management and any associated issues.

Supportive therapies can make a considerable difference to symptoms and should be made available if the patient and clinician feels they will be beneficial. These include physiotherapy to help relieve stiffness and pain, and improve fitness and flexibility, occupational therapy to provide practical solutions to problems affecting everyday life and maintain independence, speech and language therapy to tackle difficulties with talking and swallowing, and dietetics to suggest dietary changes such as increasing fibre and fluid intake to combat constipation.

If symptoms are proving problematic, drug therapy is used. In younger patients with milder symptoms, a dopamine agonist is likely to be tried first. These help replace the dopamine that is missing in the brain, thus helping to control movements. Nausea is a very common side effect at first, so the patient will usually be prescribed a very low dose which is then gradually increased over weeks or even months, and may need antiemetic medication. Other side effects can include fatigue and dizziness.

Dopamine agonists can also cause problems such as confusion and hallucinations, particularly in older people who are more susceptible to the adverse effects of medication. At high doses, compulsive behaviours may develop, such as addictive gambling and promiscuity. Careful monitoring is therefore needed. There are two types of dopamine agonists: the newer agents: **pramipexole, ropinirole** and **rotigotine**, and the older agents: **bromocriptine, cabergoline** and **pergolide,** which are rarely used.

Apomorphine is also a dopamine agonist but is only used under specialist supervision because of its potency and due to the fact that it requires subcutaneous injection. It is reserved for patients with advanced disease in whom levodopa is not providing good symptom control.

Levodopa is probably the best known PD drug and the vast majority of patients will take it at some point. It works by replacing the missing dopamine in the brain, but because it is broken down very quickly in the body, it is administered with another drug called a dopa-decarboxylase inhibitor in order that a lower dose can be taken. Again, a very small dose will be prescribed initially and then gradually increased as needed.

Levodopa preparations are effective at controlling PD symptoms, but careful dosing is required to find the balance between relieving motor issues and experiencing problems such as movement disorders. Response fluctuations are not uncommon, and are characterised by an individual going through good periods of normal functioning but also bad spells when they feel weak and have restricted mobility. These are known as "on" and "off" periods. This is particularly prevalent in younger patients, so levodopa therapy is usually only used in older or frail patients with more severe symptoms and perhaps other concurrent health problems.
Other classes of drugs used in PD include:

Monoamine oxidase B inhibitors. Examples such as rasagiline and selegiline block an enzyme that breaks down dopamine in the brain, so are sometimes used in early PD or – because they only control symptoms to a small degree – in combination with levodopa to reduce the amount needed or to make its effect last longer. Side effects and interactions with other medicines restrict their use.

Catechol-O-methyltransferase (COMT) inhibitors. These are also sometimes used in combination with levodopa products as they prevent its breakdown and boost its efficacy. They are particularly useful at reducing "off" periods. Entacapone is the main COMT inhibitor used, but there is also tolcapone. As this latter drug can cause liver toxicity, it is reserved for patients in whom entacapone doesn't work.

Glutamine antagonists. The mode of action of amantadine is not well understood, but the drug is occasionally used alongside others in the management of PD-associated tremor and stiffness.

Anticholinergics, sometimes called antimuscarinics, such as orphenadrine and procyclidine have been used in PD, particularly for patients in the early stages for whom tremor was proving troublesome. However, the side effects of this class of drugs, which can include constipation, dry mouth, nausea, raised heart rate, dizziness, confusion, anxiety, urinary retention and blurred vision, can be so problematic as to outweigh the benefits of the treatment.

Surgery is occasionally carried out for PD, but usually only when symptoms cannot be controlled by medication. Even then, PD treatment will still be required afterwards.

Living with Parkinson's disease

The reality of living with PD differs from person to person, which is why is important that sufferers are able to access support that deals with them as an individual. For example:

- Exercise is vital in keeping muscles strong and maintaining mobility, as well as helping to stave off the depression that all too often affects PD patients
- Driving is not off the menu for PD sufferers, but they do need to notify the relevant authority, eg the DVLA, and insurer in case an assessment is required
- Relationships may be affected by a diagnosis of PD, and it is important to keep communicating in order to best tackle issues as they arise, for example, fears about loss of independence.

Photodisc

Supportive therapies can make a considerable difference to symptoms

Health set to take centre stage as Wales and Scotland plan government reform

May 2016 will see Scotland and Wales go to elections to vote for their new regional administrations. Health, and in particular, the role of NHS general practice are set to be a key election issues, as revealed by the programmes for the Autumn party conferences for the SNP and Plaid Cymru to be held later this month.

The 2016 elections for the National Assembly for Wales and the Scottish Government both take place on May 5, 2016, when current AMs and MSPs vacate their seats and voters go to the polls to choose their new parliamentary members. The current seating plan for both governments is shown below.

Nicola Sturgeon addresses SNP members ahead of the Scottish elections next year

2015 Scottish Parliament members

Party	Total
Scottish National Party	64
Scottish Labour	38
Scottish Conservative and Unionist Party	15
Scottish Liberal Democrats	5
Scottish Green Party	2
Independent	3
No Party Affiliation	1
Total number of MSPs	**128**

2015 Welsh Assembly members

Party	Total
Welsh Labour	30
Welsh Conservatives	14
Plaid Cymru	11
Welsh Liberal Democrats	5
Total number of AMs	**60**

At its Aberystwyth conference taking place on October 23-24, Plaid Cymru plans to discuss various aspects of the health agenda in order to inform its 2016 election campaign. Plaid Cymru's proposals will see the creation of five to seven combined regional authorities. These would deliver current regional functions such as transport, economic development and planning but would also have the scale and capacity to deliver other public services such as education improvement and health and social care effectively.

Party of Wales leader Leanne Wood is also expected to announce plans to increase capacity in the health service, through the training and recruitment of a thousand extra doctors and financial incentives to boost recruitment in employment 'not-spots'.

Scotland

At its Autumn party conference in Aberdeen on October 15-17, the SNP is expected to detail plans for a healthier Scotland. Among its stated ambitions for the nation, the SNP has pledged to protect the NHS budget in Scotland for the duration of the next Parliamentary term – and add £826 million to the health revenue budget. Other pledges include to:

- reduce waiting times
- offer more flexible access to healthcare and services that more closely reflect the realities of family and working life.

Labour and Lib Dems set out fight-back plans

Meeting their members since September 19, the three leading English parties have used their Autumn party conferences to discuss plans for the NHS.

The Labour party, as well as electing a new leader, has pledged to repeal David Cameron's Health and Social Care Act - removing enforced competition, and conflicts of interest – to integrate health and social care services into a system of "whole-person care". This would comprise a single service coordinating all of a person's needs – physical, mental and social – with illness prevention, party members were told.

Other plans include committing to a GP appointment within 48 hours – and on the same day for those who need it, as well as named GP appointments for those who can plan their care.

In his first party conference as leader of the Liberal Democrats, Tim Farron was expected to launch a campaign to oppose the Conservative Government's cuts to public health budgets. Other plans include to eliminate unacceptable health inequalities.

Fresh from his May 2015 election success, returning prime minister David Cameron told his party conference that the Conservatives planned to spend at least an additional £8 billion by 2020 over and above inflation to fund and support the NHS's own action plan for the next five years and that they would ensure seven-day access to a GP – with same-day appointments for the over-75s. There were also specific pledges on mental health, domiciliary care and cancer and prevention of diabetes.

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