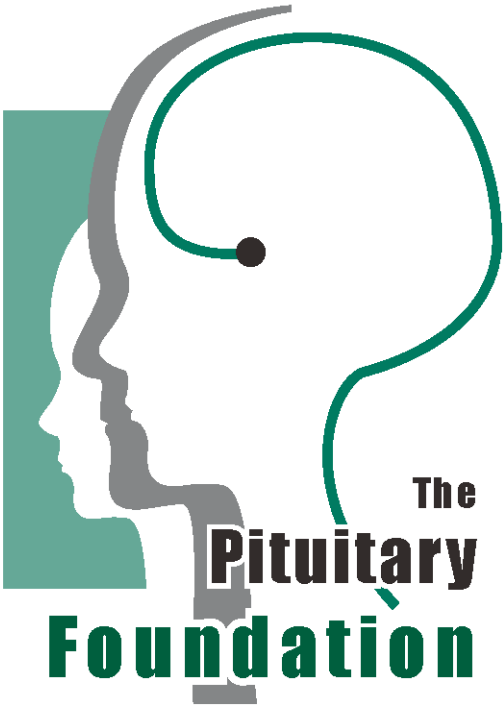
THE PITUITARY FOUNDATION INFORMATION LEAFLETS

ACROMEGALY



The Pituitary Foundation

Working to support pituitary patients, their carers & families

SERIES : CONDITIONS

The Pituitary Foundation

The Pituitary Foundation is a charity working in the United Kingdom and Republic of Ireland supporting patients with pituitary conditions, their carers, family and friends.

Our aims are to offer support through the pituitary journey, provide information to the community, and act as the patient voice to raise awareness and improve services.

About this leaflet

The aim of this leaflet is to provide information about **Acromegaly**.

You may find that not all of the information applies to you in particular, but we hope it helps you to understand your condition better and offers you a basis for discussion with your GP and endocrinologist.

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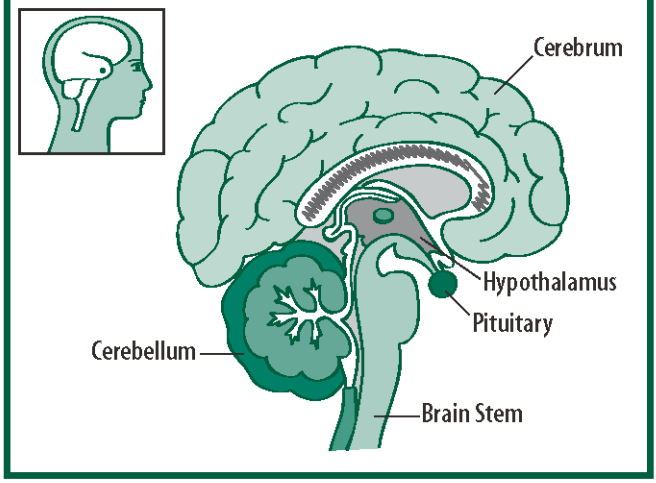
What is Acromegaly?

The name "Acromegaly" comes from the Greek words for "extremities" (acro) and "great" (megaly).

Acromegaly is a hormonal disorder that results from too much **Growth Hormone (GH)** in the body. The pituitary, a small gland situated behind the bridge of your nose and at the base of the brain, makes GH. Acromegaly is caused by a benign (non-cancerous) tumour of the pituitary gland, which is called an adenoma and this produces too much GH.

Growth hormone-releasing hormone is made by the hypothalamus, a gland in the brain situated just above the pituitary, which stimulates the pituitary gland to produce GH. Secretion of GH by the pituitary into the bloodstream stimulates the liver to produce another hormone called **Insulin-like Growth Factor 1 (IGF-1)**. IGF-1 is what actually causes tissue growth in the body. Growth hormone has effects on many different parts of the body; in adults it is important to maintain normal energy levels and to keep body tissues, such as muscle and bone, healthy. In children, of course, it is essential to reach normal growth.

The Pituitary & Hypothalamus



Acromegaly usually develops in adults between the ages of 30 and 50, but symptoms can appear at any age. If acromegaly develops before you have stopped growing (which usually occurs between the ages of 15 to 17) it can cause gigantism, where people are very tall, because GH promotes growth of legs and arms. As the growth of bones stops after puberty, excessive GH in adults won't result in increased height, but may cause various other changes outlined on the next page. Acromegaly is a rare condition with only around 4 - 6 new cases per million of the population being diagnosed each year. The diagnosis is often delayed as the symptoms develop gradually over time, and patients and families may not notice the changes. Patients may have had acromegaly for several years before the condition is recognised.

Symptons of Acromegaly

What are the Symptons of Acromegaly?

Early symptoms may involve tiredness and sleep disturbance and swelling of the hands and feet.

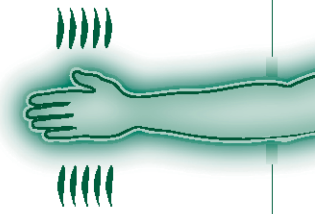
Patients may notice a change in ring or shoe size, and particularly the width of their feet.

Gradually, bone changes alter the patient's facial features with the brow and lower jaw protruding.

The nasal bone enlarges and teeth may be spaced out.

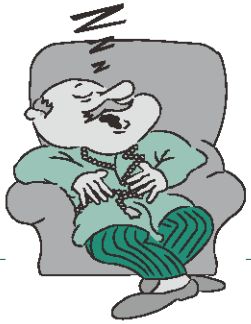
An overgrowth of bone and cartilage can lead to arthritis and when tissue thickens it may trap nerves, causing carpal tunnel syndrome which results in weakness, numbness or pain in the hands.

Organs in the body, such as the heart may enlarge.



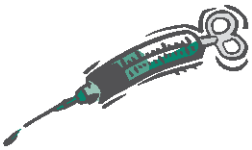
Other symptoms of acromegaly can include:

- Enlarged lips, nose and tongue
- Deepening of the voice due to enlarged vocal cords and sinuses
- Thicker, coarse, oily skin
- Joint aches
- Excessive sweating and skin odour
- Skin Tags - tiny flesh-coloured finger-like projections on the skin
- Loss, or lack of libido
- Erectile dysfunction in men
- Abnormalities of the menstrual cycle and sometimes breast discharge in women
- Headaches
- Fatigue and Weakness
- Impaired Vision
- Sleep Apnoea - breaks in breathing during sleep due to obstruction of the airway
- High Blood Pressure



Diagnosis of Acromegaly

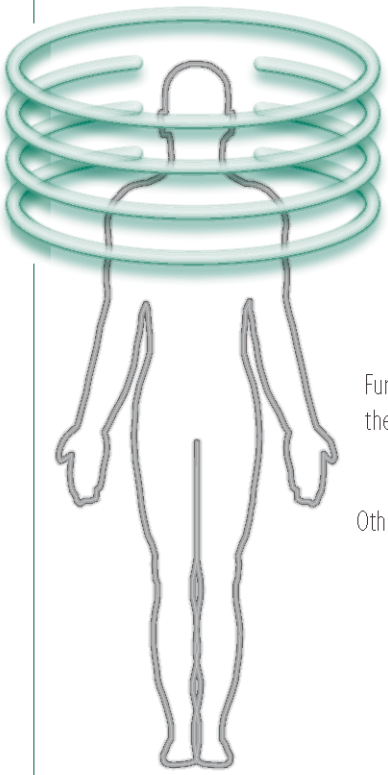
How is Acromegaly Diagnosed?



If your doctor suspects acromegaly, the Growth Hormone (GH) level in your blood would be measured. However, a single blood test of an elevated GH level is not sufficient to diagnose acromegaly as GH is secreted by the pituitary in spurts and results can vary widely from minute to minute.

A more accurate test for GH to be measured is by using a suppression test, or oral glucose tolerance test. This involves drinking a glucose solution which in healthy people would lower GH levels, but in those with acromegaly this suppression of GH levels does not occur.

IGF-1 levels can also be used, as high levels are a sign of excess GH activity, which is the hallmark of acromegaly.



After acromegaly has been diagnosed by the above testing, a **Magnetic Resonance Imaging (MRI) Scan** of the pituitary is used to locate and detect the size of the tumour causing excessive GH production. Usually an area of pituitary abnormality is seen on the MRI scan but occasionally the tumour is too small to be seen. Very rarely, if a brain scan completely fails to detect a pituitary growth, the doctor would look for an "ectopic" tumour which may cause GH production from elsewhere in the body.

Further tests such as field of vision tests may be carried out to assess whether the tumour is causing any pressure on the optic nerve, as this nerve passes very close to the pituitary gland.

Other blood tests may be taken to check if other pituitary hormones are affected such as as cortisol, thyroid and sex hormones.

Treatment of Acromegaly

How is Acromegaly treated?

Treatment options include surgery, medical therapy and radiotherapy. The goals of treatment are to:

- Reduce excess GH to normal levels
- Relieve any pressure that the growing tumour may be exerting
- Preserve normal pituitary function, or to treat any hormone deficiencies
- Improve the symptoms of acromegaly

Studies show that untreated acromegalic patients are more likely to suffer from diabetes, high blood pressure and heart problems with a reduced life expectancy compared to the normal population. These can be improved after the successful treatment of acromegaly.

Acromegaly may be treated by surgery to the pituitary gland to remove or reduce the size of the tumour, by radiotherapy, by drug treatment, or a combination of these. Nowadays for many patients the first treatment is surgery, although in some centres drug treatment to reduce the size of the tumour is given first. The aim of all treatments is to reduce growth hormone and IGF-1 levels to normal, in order to improve the specific symptoms of acromegaly in addition to general well-being.

Surgery

The operation is usually carried out by making a small cut in front of the upper teeth behind the upper lip, or through the nose. This is called Transsphenoidal Surgery. By going behind the nose like this, the surgeon can see your pituitary gland without having to operate on the main part of your head. In some centres an Endoscopic approach is used - fine tubes called endoscopes are pushed through the back of the nose, involving a small incision.

Most patients can be treated very successfully this way, although results are usually better if your tumour is small. The operation takes about an hour and a half. You will normally be in hospital for about five days. For the best results it is important to be referred to an experienced pituitary surgeon and your endocrinologist will be able to advise whom you should see.

See our leaflet entitled **Pituitary Surgery and Radiotherapy** for further details about the operation.

Surgery will normally lower your growth hormone levels considerably, but in some instances the acromegaly is not cured. In such cases, consideration will be given to treating you further with radiotherapy and/or drug therapy.

Radiotherapy

Radiotherapy (treatment with radiation) might be needed if your surgery has not been completely successful (not all the tumour could be removed) or if it was not possible for you to have an operation. The most common reason for incomplete tumour removal is proximity to the important blood vessel supplying the brain (internal carotid artery). In this situation the surgeon may decide that it is safer to leave some of the tumour behind and rely on other ways of lowering GH. If you are given radiotherapy, it will be planned and carried out with extreme care. Using the images from your MRI or CT scans; the radiotherapy team will spend time planning exactly where the X-rays will be aimed.

You will attend the clinic on two or three occasions to have a special mask or fixation device made. This is a clear plastic mask or device which is used to hold your head still and ensure the radiation beams are correctly aligned. Treatment - very low doses of radiation - is usually given through three parts of the head - one on top of your scalp, and one area just beside each ear. The treatment itself usually comprises 5 - 6 weeks of daily treatment (Monday to Friday). It may take several months, or even years, after the treatment for the effects of radiotherapy to be complete. While you are waiting for this, you may be given drug treatment to improve control of GH levels.

Improvements in pituitary scanning and computerised control of radiotherapy mean that new forms of finely focused, high dose radiotherapy (stereotactic) are being developed. This treatment is not suitable for all pituitary tumours and its benefit is being evaluated. Stereotactic radiotherapy allows much higher doses of radiation to be given to a part, or occasionally the whole, of the tumour often in a single session. The larger dose of radiation means that your GH levels come under control much more quickly, maybe months rather than years. The Gamma Knife, the best-known form of stereotactic radiotherapy, is currently not widely available.

For more information about radiotherapy, see our leaflet entitled **Pituitary Surgery and Radiotherapy**.

Treatment of Acromegaly

Drug Treatment

There are three types of drugs for treating acromegaly - each acts by different mechanisms:

Somatostatin Analogues work on specialist markers (somatostatin receptors) to inhibit GH release from the tumour

There are two somatostatin analogues available for the treatment of acromegaly:

Octreotide (brand name Sandostatin, manufactured by Novartis)
Lanreotide (brand name Somatuline, manufactured by Ipsen)

Dopamine Agonists work on alternative markers (dopamine receptors) on the surface of the tumour to inhibit GH release from the tumour by a different mechanism

Pegvisomant A new drug which works differently and blocks the action of GH and reduces IGF-1 levels

Somatostatin Analogues

Somatostatin analogues require injections. Octreotide can be given once a month deep into muscle (intramuscularly) for the long-acting preparation (Sandostatin LAR, Novartis), fortnightly or, occasionally, three times a day under the skin (subcutaneously). The short-acting preparation of octreotide is provided as ampoules or vials, which can be used for several doses. It is normally kept in the fridge, but must be removed and come naturally to room temperature before use. The long-acting preparation is usually given by a nurse at your GP surgery.

Lanreotide (Somatuline Autogel, Ipsen) is available as a once per month depo injection.

Octreotide and Lanreotide help the symptoms of acromegaly by reducing growth hormone levels into the target range of less than 1.8/2 ug/l in more than half of patients (units of measure for growth hormone changed from mU/l to ug/l, therefore all values ug/l are approximately 1/3 of previous mU/l values). When you first start taking somatostatin analogues, it may give you stomach colic or diarrhoea, but these effects usually wear off within a few days. Some patients find that stomach problems improve if they do not inject for about two hours after eating. In the longer term both may cause gallstones, but these very seldom cause problems.

In general the effectiveness and side-effects of long-acting somatostatin preparations are similar to the three times daily octreotide but you may prefer the convenience of only having to have an injection once a fortnight or once a month. The injection into muscle needs to be given by a nurse.

Dopamine Agonists

There are several dopamine agonists available, all are taken by mouth but only two are widely used:

Cabergoline (brand name Dostinex, manufactured by Pfizer)

Bromocriptine (brand name Parlodel, manufactured by Novartis)

Cabergoline, a newer long-acting dopamine agonist that causes fewer side-effects than **bromocriptine**, appears to be more effective in lowering GH and IGF-I levels, and needs to be taken only twice weekly. It is not licensed for the treatment of acromegaly but is an accepted and widely used treatment. Recent findings of patients using **dopamine agonists** in large doses have shown some heart problems, although it is not clear how much of a problem this really is in acromegaly. Therefore, patients using **Cabergoline** for pituitary conditions will need to have regular **echocardiograms** (heart scans). Your endocrinologist or GP will arrange this for you. **Bromocriptine** usually needs to be taken two or three times a day.

Unfortunately, although **dopamine agonists** are taken by mouth, they are often less effective than **somatostatin analogues** which have to be injected. They may cause you to be constipated, although this can be alleviated by increasing the fibre in your diet. At the beginning of treatment, you may also suffer nausea or dizziness when you first stand up. These effects also tend to wear off with time.

Pegvisomant

Pegvisomant (Somavert, Pfizer) is a completely different way of treating acromegaly. All current forms of treatment attempt to lower the amount of GH released by the pituitary gland. **Pegvisomant** is a blocker of the action of GH. It does not try to inhibit the release of GH from the pituitary into the blood but instead stops the GH leaving the blood to stick to cells throughout the body. This should block all the unwanted effects of GH and studies in patients with acromegaly suggest it is very effective. It is given as a daily subcutaneous (under the skin) injection. It is currently used for patients in whom the more traditional treatments have not been successful.

Some patients experience difficulty in obtaining funding for Pegvisomant.
Advice can be obtained at **The Pituitary Foundation**.

What effects will I see from my Treatment?

Effects of Treatment

Once treatment is successful, you should notice that the soft tissue in your hands and feet decrease in size and patients often notice that their facial features gradually return towards normal. This may take some time, but do not despair - improvements will happen once treatment is successful. If you were suffering from excess sweating this should decrease and if you had sugar diabetes, it should improve, or disappear altogether. Your headaches will usually improve and so will any visual disturbances that may have been present beforehand. If you snored, it should be improved. Any increase in bones may revert slowly back to normal but you may need to prepare yourself for the possibility that this reversal could be incomplete.

How is my Progress Monitored?

All patients with acromegaly should be looked after by a specialist in this condition (an endocrinologist). Ideally your endocrinologist will have access to specialist nurses and radiology plus access to a neurosurgeon specialising in pituitary disease.

The success of the treatment of your acromegaly needs to be monitored. The aim of treatment is to lower your average GH level to less than 1.8/2.0 ug/l and have your IGF-1 level in the normal range for your age.

Your endocrinologist will ask you how your symptoms have changed, in particular whether there has been any change in your ring size and facial appearance. It is also important for you to have regular blood tests to check your GH and IGF-1 levels, as well as the function of the rest of the pituitary gland. GH & IGF-1 can be measured either during a glucose tolerance test (see above) or by means of tests known as a "day curve" when blood samples are taken several times during a single day. In order to determine its effect, these blood tests will need repeating when there has been any change in your treatment.

Aftercare

It is possible that your condition will require long-term monitoring with regular blood tests and this will be shared by your endocrinologist and GP. Your endocrinologist will ask you how your symptoms have changed, in particular whether there has been any change in your ring size and facial features. Because acromegaly is relatively rare, you may find that you are the only patient with this condition in your GP's surgery, and the practice may find it helpful to have a copy of our **Pituitary Disease Fact File for General Practitioners**.

People with acromegaly have an increased chance of developing bowel polyps (small benign growths) and bowel cancer. You will normally be offered a routine colonoscopy, and usually every 3 to 5 years if you are over 40. A colonoscopy is a test where a doctor looks into your colon (large bowel) using a flexible telescope; this test can diagnose bowel problems and is carried out to ensure earliest detection, even before symptoms develop, so that the chance of a complete cure is high. However, always tell your doctor if you develop any new symptoms from your bowel, such as persistent diarrhoea, passing mucus, passing blood or abdominal pain.

NB: If you are taking hydrocortisone, it is important to tell the doctor before the colonoscopy procedure. You do not need to increase your dose but it is recommended you drink lots of water to prevent dehydration. For more information, see our **Hydrocortisone, Advice for the Pituitary Patient** leaflet.

Coping with the stress of Acromegaly

In addition to physical changes in acromegalics, many find their illness emotionally traumatic - particularly if they were unwell for some time before a correct diagnosis was made. There may be stress caused either by specific physical aspects (for example: loss of libido, exhaustion, joint pain) or by factors such as changes to your body, face and anxiety. In addition, both the fear of anticipated surgery, so close to the brain and the fact that for some people recovery can take quite a while, can be stressful. All of these issues can be just as difficult for family and close friends as for the patients themselves.

Your GP will be able to arrange counselling if this is required. You may also find it useful to make contact with the **Patient Support Team** on **0845 450 0375** and/or with your nearest local support group (details from our website or **0845 450 0376**) where you will find many people who are keen to help and support you. If you wish to speak to a fellow acromegalic who has had similar experiences, we have trained Telephone Buddies available to support you.

The University of the West of England (UWE), in partnership with The Pituitary Foundation, has conducted research which has identified several psychosocial issues related to pituitary disease. These include: increased levels of depression, anxiety; appearance-related concerns; a reduced quality-of-life and well-being. These are associated with impact of diagnosis, treatment, and the realisation that their condition is a long-term condition.

Please see our Psychological Leaflet Series.

Employment

For your stay in hospital if you have had surgery, the ward staff will give you a certificate for your employer and advise you how long you will be expected to remain off work. Your GP can issue further certificates if you require these.

If you are experiencing any difficulties in retaining or returning to your employment, at any stage of your pituitary condition we suggest that you contact The Foundation's HelpLine or your local **Citizens Advice Bureau** for the most up-to-date information about employment rights and where to get advice about benefits. If you need extra employment support because of a disability your local Jobcentre Plus can put you in touch with one of their **Disability Employment Advisers**. Our website forum has a section where you can read about employment queries and receive other patient's experiences if you wish to register and post your own messages.

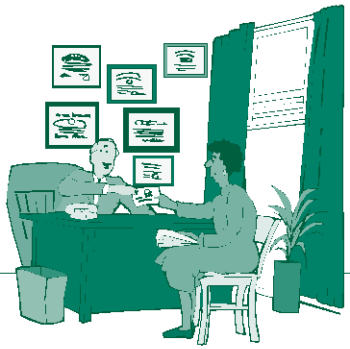
Prescriptions

Prescriptions for drug treatment of acromegaly are not free-of-charge unless you need replacement therapy because your pituitary gland has become under active - see exempt medication below.

If you have to take any of the following: hydrocortisone, thyroxine or desmopressin permanently you will receive free prescriptions for all medicines. Ask at your GP's, pharmacist or endocrine clinic for form **FP92** or **EC92A** if you live in Scotland.

The form (which will need to be signed by your doctor) tells you what to do to apply for exemption and you will receive an exemption certificate. These certificates need to be renewed and you should receive an application when this is due for renewal. The full list of medical conditions and information about free prescriptions can be found in leaflet **H11**, available from pharmacies and main post offices or on **www.dh.gov.uk**.

If you aren't sure whether you are entitled to free prescriptions, you must pay for your prescription and ask for a NHS receipt (form **FP57** in England or **EC57** in Scotland) when you pay; you can't get this at a later date. The above form will explain how to claim your money back and must be within three months of paying.



If you don't qualify for free prescriptions and need more than five prescription items in four months, or more than 14 in a year, ask your pharmacist about a pre-payment certificate, which is more economical for you.

For Wales: All patients registered with a Welsh GP, who get their prescriptions from a Welsh pharmacist, will be entitled to free prescriptions.

Insurance & Pensions

Your current insurance provider will require medical reports and each case will be assessed individually to make any adjustments found to be necessary on your premiums. Company policies do vary widely and you may need to shop around. Don't be disheartened if the first response is disappointing.

Please call The Foundation or see our website for up-to-date insurers contact information (other patients have used, and told us about these companies) also for travel information we can provide.

Driving

You have a legal obligation to advise the Driver and Vehicle Licensing Agency (DVLA) if there is any reason why you should not drive. Many patients with acromegaly will find there are no restrictions, but you should check with your GP. The only condition likely to affect patients is having a problem with your eyesight. Transsphenoidal surgery does not in itself limit your entitlement to drive and your doctor or specialist will give you full advice. You may also seek further advice from the DVLA by consulting the

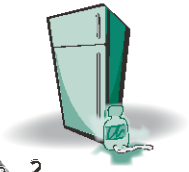
Medical Adviser, The Drivers' Medical Branch, 2 Sandringham Park, Swansea Vale, Llansamlet, Swansea SA6 8QD. Telephone: 0870 0600 0301.
There is an out of hour's answering machine.

Personal Medical Identification

If you are taking hormone replacement medication, it is a good idea to wear a medical information bracelet or equivalent as the information will help doctors if you have an accident and are unconscious.

There are various medical emblems available; our website includes contact details for several organisations.

Common Questions



Q What happens if my octreotide/lanreotide has been left out of the fridge?

A These preparations can be left out of the fridge for up to 2 weeks, provided they have been kept away from direct sunlight and excessive heat. However you should keep them in the fridge as much as possible.

Q What should I do if I can't remember whether I have taken my medication?

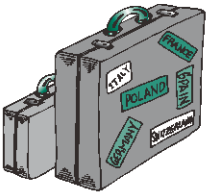
A Don't risk taking a double dose; wait until your next dose is due and carry on as normal.

Q Is it safe to take other prescribed medicines alongside octreotide/lanreotide?

A Octreotide can interact with other medicines; make sure your doctor knows you are taking octreotide.

Q What should I do if I want to travel abroad?

A Ask your doctor for a letter to say that you need to carry needles and syringes with you for medical purposes.



Q How do I keep my octreotide cool during the journey?

A As mentioned earlier, it is not a problem if your octreotide is kept out of the fridge for a while. However, many patients like to keep their supply in a cool bag whilst travelling.

Q Can I drink alcohol?

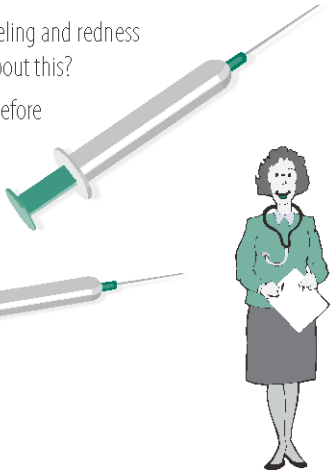
A Moderate alcohol intake should not cause problems, but you should speak to your consultant for advice.

Q My lifestyle means that it is inconvenient for me to take octreotide/lanreotide at the prescribed times. What can I do?

A You should not alter the times that you take drugs, or their dose, without speaking to your consultant first. If you would like further advice about issues you may have due to work or lifestyle, please call The Pituitary Foundation HelpLine.

Q After I have injected my octreotide/lanreotide, I tend to get a stinging feeling and redness around the injection area for about 15 minutes. Can anything be done about this?

A If you take care to ensure your injection has reached room temperature before injecting, this effect should be minimised.



Q How do I obtain syringes and needles?

A This varies from area-to-area. In many cases your doctor will provide these when prescribing octreotide. If not, contact your consultant.

USEFUL ADDRESSES

Tall Persons Club

This is a club which provides its members with advice and information on practical matters such as clothing, beds, cars etc and medical and social matters.

They can be contacted at www.tallclub.co.uk or by calling 07000 825512

Long Tall Sally

Specialises in women's clothing for ladies of 5'8" and above, with sizes ranging from 10 to 20. Mail order catalogue and branches available.

Contact details are: www.longtallsally.com or by calling 0870 990 6885

Emotion Shoes

For wider fitting and fashionable ladies shoes and boots.

Contact details: www.emotionshoes.co.uk or by calling 01642 807090

High and Mighty

For men's clothes and shoes – clothes to fit males up to 7' tall and shoe sizes go up to a 15.

Contact details: www.highandmighty.co.uk or by calling 0845 601 0212

Walk Tall

For men's shoe size up to a 20.

Contact details: www.walktall.co.uk or by calling 01458 449020

Changing Faces

Is a charity offering counselling advice and information for those who have facial changes. Their specialist team can provide practical and sensitive counselling and advice to help you handle your emotions, experiences and any social situations with knowledge and confidence.

Contact details: www.changingfaces.org.uk or 0845 450 0275

Living with Acromegaly

- One Patient's Story

My pituitary journey began in the mid-1980's although, in retrospect, I can see that it started some years earlier. I started to suffer a series of health problems which, at the time, did not appear to be connected. My shoe size had increased over about five years from size 9 to size 12 and I had to have my ring enlarged twice because my fingers had become larger and fleshier; indeed, my fingers had become so fleshy, I could no longer fold them flat against my palms.

Then I suffered pain in both knees, mild at first but growing in intensity until I was having difficulty in walking. My GP could find nothing wrong and he suggested I take more exercise. I remember joking that it was growing pains - little did I realise how close to the truth I was! The pain moved down into my shins before easing and finally disappearing. A few months later, a similar thing happened to my elbows but I decided not to bother my GP. The next area to be affected was my jaw, where I developed an ache just below my right ear and then one morning I awoke to find that I could barely open my mouth. My GP referred me to my dentist who, after examination and X-rays, said it was not a dental problem. Once again, my GP seemed at a loss to know the cause and over the next fortnight the pain slowly eased until I could open my mouth fully once again.

By early 1985, I knew there was something wrong with me. I had a general, indefinable feeling of "not being right" but nothing I could pinpoint or put a name to. My lips had become much fleshier and I was starting to have difficulty pronouncing some words. In June of 1985, I went to my GP for a medical relating to my HGV driving licence. I passed this without any problem but, as I was leaving, my GP asked to look at my hands and feet again and asked various questions. He then dropped the bombshell by saying he would like me to attend the local hospital for some tests because he felt I might be suffering from something called acromegaly. I do not know whether he had recently read an article on acromegaly but, after all those months and visits, he had finally diagnosed my problem!

The hospital tests confirmed that I was acromegalic and the endocrinologist stressed that it was a rare condition and my GP had been very good in spotting it - this went some way to alleviating my feelings towards my GP over all the dismissed aches and pains. The endocrinologist estimated, from a series of family photographs, that it had probably started around 1978/79 when I was about 27. My treatment began with a course of bromocriptine tablets to control and shrink the tumour and in February 1988, I had transsphenoidal surgery to remove the tumour and part of my pituitary gland. It took until September before I felt completely over the operation and able to return to work. In 1992, my growth hormone level started to rise and an MRI scan revealed that the tumour might be returning. I underwent six weeks of daily radiotherapy which left me feeling tired and lethargic.

Overall, I have improved greatly since the operation. My facial features have softened, my lips are normal, my nose is less fleshy and the ridges over my eyebrows have receded. Some days I feel normal and achieve a lot, but on other days all I want to do is sit around and do nothing in particular. I tire easily and find it difficult to maintain physical activities for very long. My weight has increased considerably, especially the upper body, which I suspect is a combination of the steroids and a less-active lifestyle. Thanks to the radiotherapy, I eventually became growth hormone deficient and started replacement therapy - this has improved my energy level and also reduced my weight a little.

Although my acromegaly is "cured" because I no longer produce excess growth hormone, the removal of my tumour has left me with medical problems which I did not have before. The weight gain and increase in fatty tissue is one aspect, the chronic fatigue and exhaustion is another.

Steve.

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Being a subscribed member of The Pituitary Foundation will greatly help our awareness efforts, assist The Foundation's aims to be the 'voice' of the patient and quite simply allow us to do the work that needs to be done. If you would like to become a subscribed member, please complete the form below and send to us at:

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The Pituitary Foundation

Working to support pituitary patients, their carers & families

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