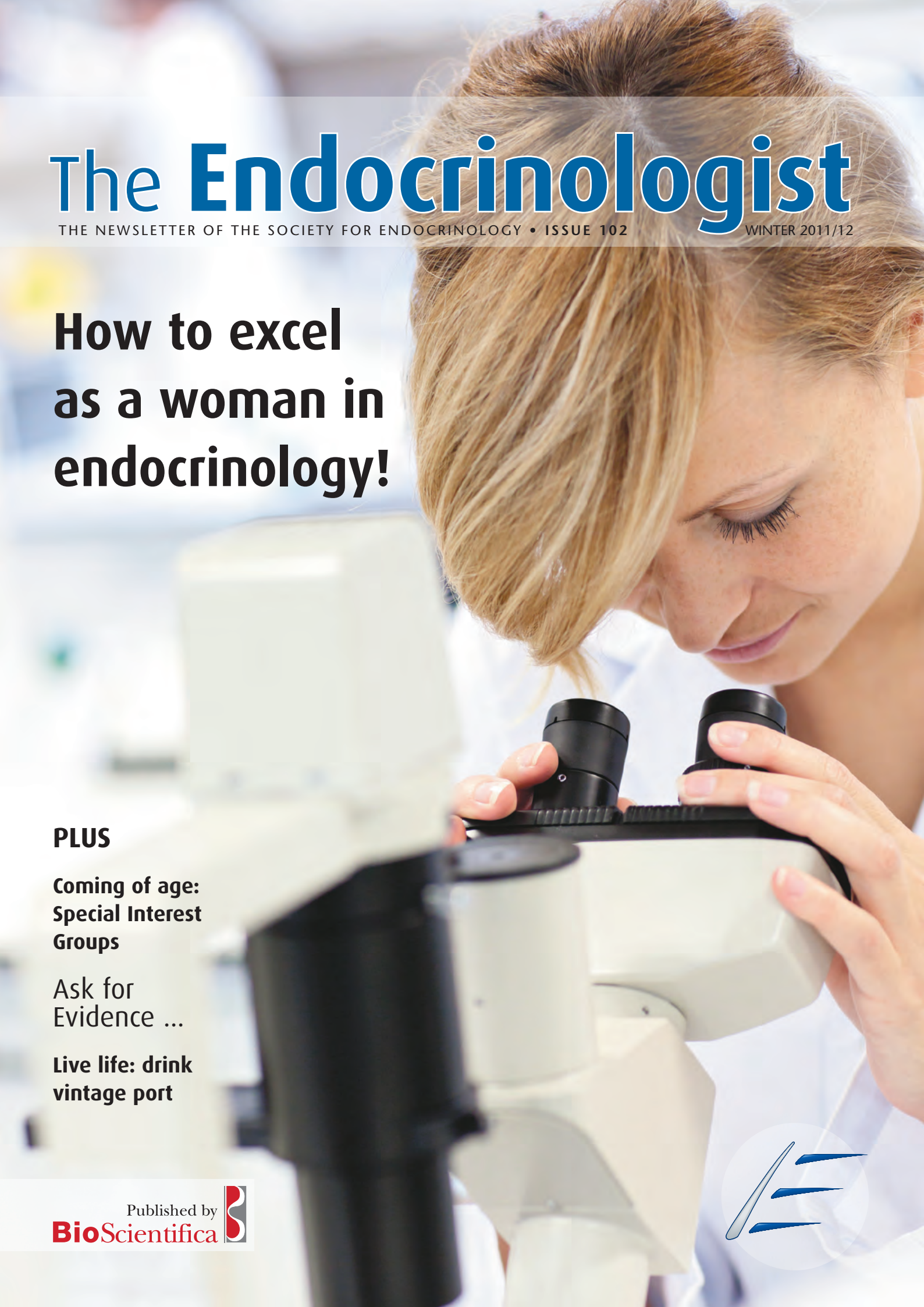
The Endocrinologist
THE NEWSLETTER OF THE SOCIETY FOR ENDOCRINOLOGY • ISSUE 102 WINTER 2011/12

How to excel as a woman in endocrinology!



PLUS

Coming of age: Special Interest Groups

Ask for Evidence ...

Live life: drink vintage port

Published by BioScientifica

EDITORIAL

Is there anybody there? In the last issue we announced a new feature for *The Endocrinologist* – Letters to the Editor. But despite highlighting meaty issues such as the challenging career paths and job prospects facing basic scientists and clinical trainees, the Society's strategic review and the upcoming changes to the commissioning of endocrine clinical services, we've not heard a peep from anyone! Perhaps the contents of this issue will stimulate you to put pen to paper (or, more probably, finger to key).

On page 11 Anne White considers a career in Endocrinology from the female perspective and asks whether the discipline is particularly suited to women or whether female endocrinologists suffer from a male-medic dominated environment. I have always been surrounded by strong female role models. In my own institution, women have held prominent positions at School, Faculty and University level and I have certainly benefitted from the support and mentoring of wonderful male, as well as female, colleagues. So I have never experienced any form of discrimination as a female scientist; in fact, my only anecdote on the matter is of my husband, a clinical academic, being patronisingly asked when introduced to a male professor at a work dinner as my partner, "so what do you do?". It did make me wonder whether academic snobbery plays a greater part than gender. Judging by some of the contributions to Anne's article, not everyone has been so fortunate but perhaps we should follow Hotspur's lead and be more optimistic for the future (page 14). Now surely this is a topic that's worthy of a Letter to the Editor!

Of course our Society has a long history of electing women to key roles – just look at the current and past Council and Committee membership – and it's good to see that Karen Chapman will Chair the Science Committee from January next year. On page 4 she contemplates her new role and the purpose of the Committee; it will be interesting to see how one of the major issues Karen has identified – retaining the interest and membership of basic scientists over the coming years – is tackled.

Anyone involved or interested in the care of adolescents and young adults should turn to page 6 to find out about the Society's newest Special Interest Group (SIG) and the benefits of becoming a member. Convened by Helena Gleeson and Paul Dimitri, the Group's manifesto includes a national audit, training and support for clinicians and engaging young people in their care provision. Another way the Society helps develop patient support is through the award of grants to groups dedicated to supporting patients with specific endocrine conditions. These are very much appreciated and can make a real difference, as illustrated on page 8, in reports from four recent grant recipients.

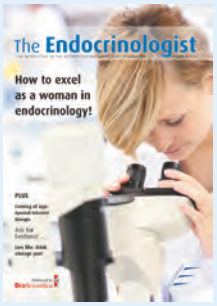
Louise Chambers-Davies, one of our Nurse Members, is also exploring ways to support patients; on page 9 she describes her demanding but satisfying role as a neuroendocrine tumour clinical nurse specialist and describes her plans to develop the role to improve care pathways for patients. Another new nurse-led venture is the introduction of the first module in adult endocrine nursing to a B.N. degree programme in the UK. Maggie Carson (University of Edinburgh) hopes the course will prompt more nurses to think of developing careers in endocrinology and maybe hearing of her success will inspire other nurses to set up something similar in their own institution?

The Society for Endocrinology is supporting a new national campaign, 'Ask for Evidence', launched by Sense About Science, which aims to reduce the number of misleading claims about science and medicine in the media. They are hoping to harness the power of the public as "evidence hunters" and encourage them to ask advertisers, companies, government bodies and other organisations to substantiate their claims. If the public's enthusiasm (and ability) for helping to progress other aspects of science, such as galaxy spotting, are anything to go by, this new venture should be a great success!

So come on, don't be shy – let us know what you think about the issues raised in these articles, or anything else endocrinological for that matter; see page 4 for information on how to get in touch.

MELISSA WESTWOOD

The Society welcomes contributions and article suggestions; contact the Editorial office at info@endocrinology.org. Deadline for news items for the Spring 2012 issue: 21 December 2011. Deadline for news items for the Summer 2012 issue: 23 March 2012.



Editor: Dr Melissa Westwood
Associate Editor: Dr Miles Levy
Co-ordination and sub-editing: Andrew Lowe
Design: Martin Harris

Society for Endocrinology
22 Apex Court, Woodlands,
Bradley Stoke, Bristol BS32 4JT, UK
Fax: 01454-642205
Email: info@endocrinology.org
Web: www.endocrinology.org

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NEW PUBLIC ENGAGEMENT GRANTS *UP TO £1000 AVAILABLE*

In August, the Society launched its new Public Engagement Grant scheme, designed to provide funding for outreach activities to schools and the general public. If you've got a great idea that will capture the public's imagination and reveal just what it is that drives you as a scientist, from hosting an event at a science festival to bringing a class of children into your lab, find out how to make it a reality at www.endocrinology.org/grants. A limited number of these grants will be awarded to paid members with rounds running 1 August–31 July each year.

SfE BES meetings

Don't forget

Next year's meeting is on 19–22 March in Harrogate.

Travel grants deadline: 15 December 2011

Early bird registration deadline: 13 February 2012

And planning has started for 2013

We are keen to receive a good number of suggestions for the programme. Please submit your ideas by 31 January 2012 using the online form at www.endocrinology.org/meetings/ScientificSessions/index.aspx

COMMITTEE MEMBERSHIP NEWS

Following the call for nominations earlier this year, and a ballot within each committee, we are delighted to welcome the new committee members:

Dr Helena Gleeson, Dr Aled Rees *(Clinical Committee)*

Dr Mark Gurnell *(Finance Committee)*

Ms Nadia Gordon, Mrs Jean Munday *(Nurse Committee)*

Ms Lisa Shepherd *(Vice Chair, Nurse Committee)*

Dr Liz Crowne, Dr Colin Duncan, Professor Bill Farrell, Dr Robert Semple, Dr Andy Toogood *(Programme Committee)*

Professor John Wass, Lord Robert Winston *(Public Engagement Committee)*

Dr Anthony Coll, Dr Peter King, Professor Philippa Saunders *(Science Committee)*

Also, Professor Saffron Whitehead becomes Chair of the Public Engagement Committee in January.

Our thanks go to those retiring committee members for providing their invaluable expertise and their hard work during their term of office:

Professor Ashley Grossman *(Chair, Public Engagement Committee)*

Professor Alan McNeilly *(Chair, Science Committee)*

Dr Alastair McLellan, Dr Andy Toogood *(Clinical Committee)*

Professor Brian Walker *(Finance Committee)*

Ms Christine Gibson *(Vice Chair, Nurse Committee)*

Ms Anna Hawkins, Ms Lisa Shepherd *(Nurse Committee)*

Professor Peter Clayton, Professor Waljit Dhillo, Professor Karim Meeran *(Programme Committee)*

Professor Karim Meeran, Dr Stephen Orme, Professor Richard Ross, Professor Stephen Shalet, *(Public Engagement Committee)*

Dr Ruth Andrew, Dr Paul Chapple, Professor Waljit Dhillo *(Science Committee)*

Have your say – voting for Council members

An online ballot will be held early in 2012 to decide on one new Council member. Please note that you will only be able to participate in the ballot if your membership subscription is in good standing.

New undergraduate careers resource

The Society for Endocrinology, in partnership with other biological learned societies, has produced a new careers resource for undergraduate bioscience students. The booklet, *Next steps: options after a biosciences degree*, is aimed at helping bioscience students plan their careers and make the most of the opportunities available to them. It includes information on: job seeking strategies; the importance of skills; postgraduate study opportunities; making applications; interview technique; and a list of useful resources. The booklet is available, free of charge, at: www.endocrinology.org/careers/undergradres.html

Access to Society journals

The Society offers its members free online access to its official journals. We would like to remind you of the conditions of use: access to the journals is for your personal use only and passwords must not be shared with others. This access is not intended for use by institutions; if institutional access is required, please contact Ceredig Williams (ceredig.williams@endocrinology.org).

SOCIETY CALENDAR

29 February 2012
National Clinical Cases
The Royal Society of Medicine, London, UK

19–22 March 2012
Society for Endocrinology BES 2012
Harrogate International Conference Centre

10 July 2012
Regional Clinical Cases
Oxford, UK

5–7 November 2012
Clinical Update 2012
Stratford-upon-Avon, UK

We are pleased to welcome Lord Robert Winston to Honorary Membership of the Society.

Congratulations to Professors Mehul Dattani and Wiebke Arlt for their success in the 2011 Clinical Excellence Awards round. The Society was delighted to support their nominations.

Your new Science Committee Chair

Professor Karen Chapman will become Chairman of the Science Committee in January. We welcome her as she contemplates her new role and shares her thoughts with us here. Our thanks go to retiring Chairman Professor Alan McNeilly.

I am honoured to serve as the next Chairman of the Science Committee, and look forward to it with eager anticipation mixed with a little trepidation. As a member of the Science Committee from 2006 to 2009 I have had two excellent tutors: firstly in Barry Brown, and more recently in Alan McNeilly, whose term of office comes to an end this year. They are hard acts to follow, but I know I will have continuing support and guidance from the Bristol staff, especially Rachel Evans, who I am confident, will keep me on the right track.

Since I first became a member of the Science Committee in 2006, I have seen the group move from strength to strength. In particular, the introduction of research grants (now the Early Career grant scheme), which aim to assist emerging researchers to establish their career and become independent, has been a major success of the committee. The Society's Autumn Endocrine Retreat, another innovation from the Science Committee, has also benefited a number of young endocrinologists. It is important to build on these successes, but we can only do that with constructive feedback from you, the members, and especially the Young Endocrinologists.

What do I see as the main issues facing the Science Committee? A big concern for me, as for previous Chairmen of the committee, is retaining the interest and membership of basic scientists, particularly those in their postdoctoral and junior fellowship years. The Society grants play a key role in this, but it is also important to keep the conferences – and especially the Society BES meeting – relevant and interesting to the basic science membership. The Science Committee is responsible for organising symposia on topical subjects for the Society BES meeting and other meetings, and this is a crucial part of keeping the Society relevant to scientists. Again, any comments or ideas from the membership on this subject are very welcome.

The next few years are likely to see major changes around us: in higher education, in the National Health Service, and in society in general. The Society for Endocrinology is in good shape to meet the substantial challenges ahead, and I look forward to the Science Committee playing its role in keeping the Society a natural home for all those interested in basic research relevant to endocrinology.

KAREN CHAPMAN

Sponsored Seminar Grant

We used this grant from the Society to invite seven school students from East London to spend two days in Oxford. These students come from a fairly underprivileged area: some had not left Bow before. We showed them the Department of Endocrinology and and introduced them to patients with various endocrine diseases including acromegaly, thyrotoxicosis and Addison's disease; they applied their knowledge of biology when discussing symptoms. They enjoyed talking to our young doctors, medical students and nurses, and we were able to give them some valuable interview practice.

The students were completely fired up by their visit to Oxford. Six out of seven ended up wanting to do endocrinology! I think this is just the sort of thing that the Sponsored Seminar Grants should be doing for endocrinology and I have little doubt that we have some young converts into our specialty as a result of the visit.

JOHN WASS

SCE results

A total of 143 candidates sat the Specialty Certificate Examination in endocrinology and diabetes this year; 66% passed. Next year's timetable is:

1 February – 24 April 2012: UK registration period

1 February – 1 March 2012: Overseas registration period

30 May 2012: Exam

SUMMER STUDENTSHIPS 2012

A number of summer studentships are available to assist undergraduate students in gaining experience by working in a research environment. Applications are invited from students whose host supervisor is a Society member. A stipend of £185 per week is offered for a period of study of up to 10 weeks, together with £1000 for host department consumables.

For further details, see www.endocrinology.org/grants/grant_summerstudentships.html

Deadline: 12 March 2012

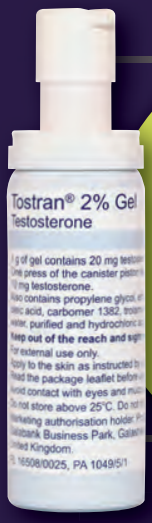
Synthetic ACTH (Synacthen) use in asthma patients

The Society for Endocrinology has issued a position statement that supports amendments that appear in the section on Tetracosactide (Tetracosactrin; section 6.5.1) in the current issue of the British National Formulary (http://bnf.org). Professor Ashley Grossman (University of Oxford) wrote the statement on behalf of the Society in the hope that it would be of help to endocrinologists in their practice. The position statement is available at www.endocrinology.org/policy

Letters to the Editor

Sometimes it's difficult to know what you're all thinking about. We'd like to open the floor to the discussion of contentious or important issues in endocrinology, or direct feedback on the newsletter, via The Endocrinologist's Letters to the Editor page. Contact info@endocrinology.org.

Hypogonadism – an endocrine issue which causes significant morbidity and substantial reduction in quality of life[1]



control
concentration
cost
convenience

Tostran® – a simple solution to a serious problem

Control

- Tostran® returns and maintains hypogonadal patients T levels to normal[2]
- The metered dose system allows for easy dose titration

Concentration

- Tostran® is the only 2% testosterone gel

Cost

- Tostran® represents a 14% cost saving compared to Testogel® at the lowest and highest approved doses[3,4]

Convenience

- Tostran® – easy to use, metered dose canister[5]

The first metered dose
Tostran
2% testosterone gel
A simple solution to a serious problem

Tostran Abbreviated Prescribing Information
Tostran (testosterone) 2% Gel Prescribing Information
Please refer to Summary of Product Characteristics (SPC) before prescribing.
Presentation
Tostran 2% Gel, contains testosterone, 20 mg/g.
Indications
Replacement therapy with testosterone for male hypogonadism when testosterone deficiency has been confirmed by clinical symptoms and laboratory analyses.
Posology
The starting dose is 3 g gel (60 mg testosterone) applied once daily at approximately the same time each morning to clean, dry, intact skin, alternately on the abdomen or to both inner thighs. Adjust dose according to clinical and laboratory responses. Do not exceed 4 g of gel (80 mg testosterone) daily. Patients who wash in the morning should apply Tostran after washing, bathing or showering. Do not apply to the genitals. Do not use in women, or children under the age of 18 years.
Contraindications
Known or suspected carcinoma of the breast or the prostate; hypersensitivity to any of the ingredients.
Special warnings and precautions for use
Tostran should not be used to treat non-specific symptoms suggestive of hypogonadism if testosterone deficiency has not been demonstrated and if other aetiologies responsible for the symptoms have not been excluded. Not indicated for treatment of male sterility or sexual impotence. All patients must be pre-examined to exclude a risk of pre-existing prostatic cancer. Perform careful and regular monitoring of breast and prostate. Androgens may accelerate the development of subclinical prostatic cancer and benign prostatic hyperplasia. Oedema with/without congestive heart failure may be a serious complication in patients with pre-existing cardiac, renal or hepatic disease. Discontinue immediately if such complications occur. Use with caution in hypertension as testosterone may raise blood pressure. Use with caution in ischemic heart disease, epilepsy, migraine and sleep apnoea as these conditions may be aggravated. Care should be taken with skeletal metastases due to risk of hypercalcaemia/hypercalcuria. Androgen treatment may result in improved insulin sensitivity. Inform the patient about the risk of testosterone transfer and give safety instructions. Health professionals/carers should use disposable gloves resistant to alcohols.
Interactions
When androgens are given simultaneously with anticoagulants, the anticoagulant effect can increase and patients require close monitoring of their INR. Concurrent administration with ACTH or corticosteroids may increase the likelihood of oedema and caution should be exercised.
Undesirable effects
Very common (≥1/10): application site reactions (including paresthesia, xerosis, pruritis, rash or erythema); common (≥1/100, <1/10): increased haemoglobin, haematocrit; increased male pattern hair distribution; hypertension; gynaecomastia; peripheral oedema; increased PSA. Certain excipients may cause irritation and dry skin. Consult SPC for other undesirable effects of testosterone.
Pack Size and Price
Packs containing one or three 60 g metered-dose canisters per pack. Price £26.67 per canister.

Legal Category POM
Further information is available from the Marketing Authorisation Holder ProStrakan Limited, Galabank Business Park, Galashiels, TD1 1QH, UK.
Marketing Authorisation Number PL16508/0025

 Date of PI Preparation: September 2010

Adverse events should be reported. Reporting forms and information can be found at www.yellowcard.gov.uk. Adverse events should also be reported to ProStrakan Limited on 01896 664000.

References:
1. Nieschlag E et al. Hum Reprod Update 2004; 10: 409 - 419
2. Dumas C. Poster presented at the 25th Scandinavian Meeting of Urology, Göteborg, June 2005
3. MIMS June 2011
4. Tostran® data calculation - ProStrakan data on file 2011
5. Tostran® Summary of Product Characteristics June 2010

ProStrakan

M015/1131 Date of preparation June 2011

Special Interest Groups 'Coming of Age': Young Adult and Adolescent Special Interest Group

Dr Helena Gleeson introduces the Society's newest SIG

Do you know what the current trends in smoking, mental health problems and sexually transmitted infections are in adolescence?[1] Are you comfortable discussing these issues with the teenagers and young adults attending your clinics? Do you have the skills to work with teenagers and young adults to change behaviour or improve engagement?

"The effects of poor health during the teenage years can last a lifetime. Keeping adolescents healthy is a valuable investment in the nation's future"[2]

As clinicians we feel comfortable in dealing with patients in the context of their endocrine condition. Comfort levels can change if we consider patients in the context of their age: how do you feel with those outside your core patient group?

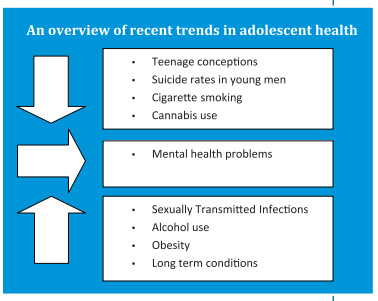
"One of the main cultural obstacles for young people is the lack of recognition of them as distinctly different from children as well as from adults"[3]

Adolescents and young adults frequently attend endocrine services either with long-term endocrine conditions or presenting for the first time. The real challenges around working with this age group are often lost in the enthusiastic push to improve the process of transitional care. Despite this enthusiasm many endocrinologists struggle to feel that they are providing a quality service for adolescents and young adults. This is partly explained by a lack of training in managing this age group, current health service design, not to mention time and funding shortages.

"Young people should have easy access to health services they trust, for example accredited 'You're Welcome' young people friendly services"[4]

With the RCPCH and RCP working on providing more age-appropriate care, this is an ideal time for endocrinologists to be actively involved through a dedicated SIG: the Adolescent and Young Adult SIG (AYASIG).

Our aim is to recruit from all regions in the UK; we would like our members to be trained in adult or paediatric endocrinology, as endocrinologists, endocrine specialist nurses or trainees, and membership can be active or virtual (from those with an interest, to those keen to keep pace with or develop age-appropriate care).



A busy work programme for the SIG is planned, with Clinical Endocrinology Trust funding in place for a national audit, and the possibility of the development of a website to champion the experiences and opinions of young people. AYASIG will also work on training, sharing good practice, raising awareness at BSPED and Society for Endocrinology events, and the participation of young people in their care provision. By joining AYASIG you will receive a newsletter full of useful resources to assist with your local service.

To register interest with the AYASIG and to receive communications from convenors about relevant issues and forthcoming meetings, please visit www.endocrinology.org/sig

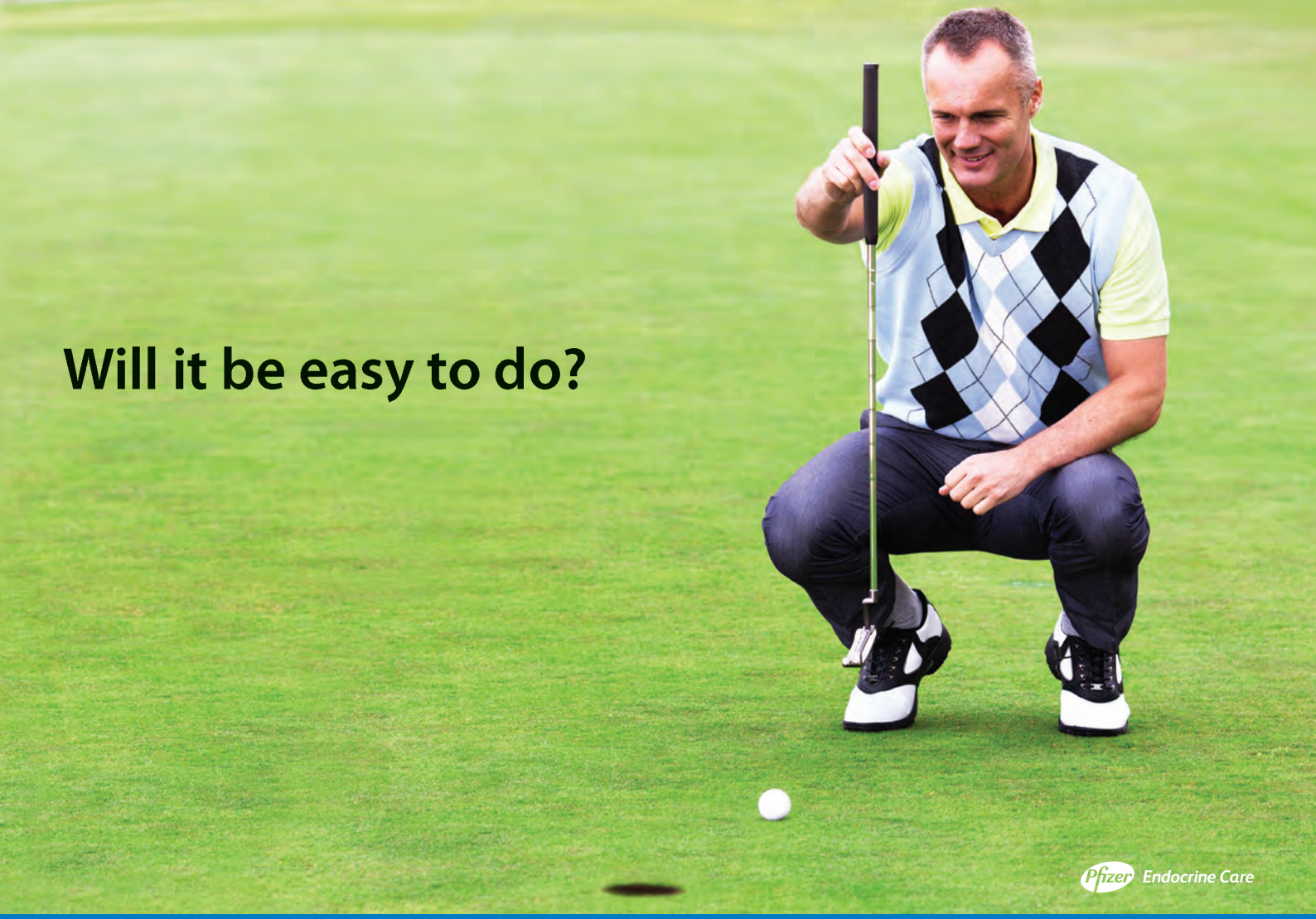
REFERENCES

1. Coleman J 2011 Adolescent health in the UK Today: Where Next? Association of Young People's Health; Child and Maternal Health Observatory: Loman Street, London, UK.
2. Donaldson L 2007 Chief Medical Officer's Annual Report. Department of Health: Stationery Office, London, UK.
3. Kennedy I 2010 Getting it right for children and young people. Department of Health: Stationery Office, London, UK.
4. Department of Health 2010 Healthy Lives, Healthy People: our strategy for public health in England. Department of Health: Stationery Office, London, UK.

Have you got the write stuff?
Undergraduate Essay Prize 2012

A £1000 first prize will be awarded for the winning essay on an aspect of endocrinology. Extra credit will be given for readability, originality and the topicality of the subject chosen. Submission details and conditions of entry are available at www.endocrinology.org/grants. For any further information please contact grants@endocrinology.org.

Closing date: 13 February 2012



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Genotropin® (somatropin, rbe). Abbreviated Prescribing Information Genotropin 5.3 mg Pre-filled pen (GoQuick). Genotropin 12 mg Pre-filled pen (GoQuick). Genotropin 5.3 mg Two-chamber cartridge. Genotropin 12 mg Two-chamber cartridge. Genotropin MiniQuick 0.2 mg. Genotropin MiniQuick 0.4 mg. Genotropin MiniQuick 0.6 mg. Genotropin MiniQuick 0.8 mg. Genotropin MiniQuick 1.0 mg. Genotropin MiniQuick 1.2 mg. Genotropin MiniQuick 1.4 mg. Genotropin MiniQuick 1.6 mg. Genotropin MiniQuick 1.8 mg. Genotropin MiniQuick 2.0 mg. Please refer to the SmPC before prescribing Genotropin. **Presentation: Genotropin Pre-filled Pen (GoQuick):** Two-chamber cartridge sealed in a disposable multidose pre-filled pen GoQuick. The cartridges contain either 5.3 mg or 12 mg somatropin (rbe). Each cartridge also contains 0.3% metacresol as preservative. The 5.3 mg pre-filled pen GoQuick is colour coded blue. The 12 mg pre-filled pen GoQuick is colour coded purple. **Genotropin Cartridge:** Two-chamber cartridge for use in a re-useable injection device, Genotropin pen, or in a reconstitution device. The cartridges contain either 5.3 mg or 12 mg somatropin (rbe). Each cartridge also contains 0.3% metacresol as preservative. The Genotropin Pens are colour coded, and must be used with the matching colour coded Genotropin two-chamber cartridge to give the correct dose. The Genotropin Pen 12 (purple) must be used with Genotropin 12 mg cartridge (purple). Instruction on reconstitution plus use of devices is supplied separately as are the Pen and Genotropin Mixer devices and any necessary consumables. **Genotropin MiniQuick:** Two compartment cartridge in single dose syringe containing powder and solvent for injection together with an injection needle. Each device contains either 0.2 mg, 0.4 mg, 0.6 mg, 0.8 mg, 1 mg, 1.2 mg, 1.4 mg, 1.6 mg, 1.8 mg or 2 mg somatropin (rbe). **Indications: Children:** Treatment of growth disturbance due to insufficient secretion of growth hormone (growth hormone deficiency, GHD) or associated with gonadal dysgenesis (Turner Syndrome) or chronic renal insufficiency (CRI) or in short children born Small for Gestational Age (SGA) with a birth weight and/or length below –2SD, who failed to show catch-up growth by 4 years of age or later. Prader-Willi syndrome (PWS), for improvement of growth and body composition. The diagnosis of PWS should be confirmed by appropriate genetic testing. **Adults:** Replacement therapy in adults with pronounced GH deficiency. Adult onset: Patients who have severe growth hormone deficiency associated with multiple hormone deficiencies as a result of known hypothalamic or pituitary pathology and who have at least one known deficiency of pituitary hormone not being prolactin. Childhood Onset: Patients who were growth hormone deficient during childhood as a result of congenital, genetic, acquired, or idiopathic causes. **Dosage and Administration:** Dose should be personalised for each individual. The subcutaneous injection site should be varied to prevent lipoatrophy. **Insufficient Secretion of GH in Children:** 0.025–0.035 mg/kg body weight per day. Higher doses have been used. Where childhood onset GHD persists into adolescence, treatment should be continued to achieve full somatic development (e.g. body composition, bone mass). For monitoring, the attainment of a normal peak bone mass defined as a T score > –1 (i.e. standardised to average adult peak bone mass measured by dual energy X-ray absorptiometry taking into account sex and ethnicity) is one of the therapeutic objectives during the transition period. **Prader-Willi Syndrome:** 0.035 mg/kg body weight per day. Daily doses of 2.7 mg should not be exceeded. **Gonadal Dysgenesis (Turner Syndrome):** 0.045–0.050 mg/kg body weight per day. **CRI:** A dose of 0.045–0.050 mg/kg body weight per day. Higher doses can be needed if growth velocity is too low. Dose correction can be needed after 6 months treatment. **Short children born SGA:** 0.035 mg/kg body weight per day until final height is reached. **GH Deficient Adults:** In patients who continue growth hormone therapy after childhood GHD, the recommended dose to restart is 0.2–0.5 mg per day. The dose should be gradually increased or decreased according to individual patient requirements as determined by the IGF-I concentration. In patients with adult-onset GHD, start with low dose, 0.15–0.3 mg/day. The dose should be gradually increased as determined by the IGF-1 concentration. Clinical response and side effects may guide dose titration. It is recognised that there are patients with GHD who do not normalise IGF-I levels despite a good clinical response, and thus do not require dose escalation. The maintenance dose seldom exceeds 1.0 mg per day. Women (especially those on oral oestrogen) may require higher doses than men. As normal physiological growth hormone production decreases with age, dose requirements are reduced. In patients above 60 years, therapy should start with a dose of 0.1–0.2 mg per day and should be slowly increased according to individual patient requirements. The minimum effective dose should be used. The maintenance dose in these patients seldom exceeds 0.5 mg per day. **Contra-indications, Warnings etc:** Hypersensitivity to the active substance or to any of the excipients. Any evidence of tumour activity exists. Anti-tumour treatment must be complete. Genotropin should not be used for growth promotion in children with closed epiphyses. Patients with acute critical illness suffering complications following open heart surgery, abdominal surgery, multiple accidental trauma, acute respiratory failure or similar conditions should not be treated with Genotropin. Hypersensitivity to the active substance or to any of the excipients. **Precautions:** Diagnosis and therapy should be initiated and monitored by suitably qualified and experienced doctors. Somatropin may induce insulin sensitivity and in some patients diabetes mellitus. Patients with diabetes, glucose intolerance, or additional risk factors for diabetes should be monitored closely during somatropin therapy. As thyroid function may be affected, monitoring of thyroid function should be conducted in all patients. In patients with hypopituitarism on standard replacement therapy, the potential effect of growth hormone treatment on thyroid function must be closely monitored. Signs of any relapse of malignant disease should be monitored. In patients with endocrine disorders, slipped epiphyses of the hip may occur. In case of severe or recurrent headache, visual problems, nausea and/or vomiting, a funduscopy for papilloedema is recommended as some rare cases of benign intracranial hypertension have been reported and if appropriate treatment should be discontinued. Leukaemia has been reported in a small number of growth hormone deficiency patients, some of whom have been treated with somatropin. However, there is no evidence that leukaemia incidence is increased in growth hormone recipients without predisposition factors. As with all somatropin containing products, a small percentage of patients may develop antibodies to Genotropin. The binding capacity of these antibodies is low and there is no effect on growth rate. Testing for antibodies to somatropin should be carried out in any patient with otherwise unexplained lack of response. Experience in patients above 80 years is limited. Elderly patients may be more sensitive to the action of Genotropin, and therefore may be more prone to develop adverse reactions. In acute, critically ill adult patients, GH may increase mortality. In CRI, renal function should be below 50% of normal before institution of therapy and growth should be followed for a year preceding institution of therapy. Conservative treatment for renal insufficiency should have been established and be maintained during therapy. Discontinue GH after renal transplantation. There have been reports of fatalities associated with the use of growth hormone in paediatric patients with Prader-Willi syndrome who had one or more of the following risk factors: severe obesity (those patients exceeding a weight/height of 200%), history of respiratory impairment or sleep apnoea, or unidentified respiratory infection. Patients with one or more of these factors may be at increased risk. Before initiation of treatment with somatropin in patients with Prader-Willi syndrome, signs for upper airway obstruction, sleep apnoea, or respiratory infections should be assessed. Patients should be monitored for signs of respiratory infections, which should be diagnosed as early as possible and treated aggressively. All patients with Prader-Willi syndrome should also have effective weight control before and during growth hormone treatment. Scoliosis is common in PWS and signs for scoliosis should be monitored. Experience of prolonged therapy in adults and patients with PWS is limited. In short children born SGA other medical reasons or treatments that could explain growth disturbance should be ruled out before starting treatment. Not recommended to initiate treatment in SGA patients near onset of puberty. **Interactions:** Concomitant treatment with glucocorticoids may inhibit the growth-promoting effects of somatropin containing products. Therefore, patients treated with glucocorticoids should have their growth monitored carefully to assess the potential impact of glucocorticoid treatment on growth. The clearance of compounds metabolised by cytochrome P450 3A4 (e.g. sex steroids, corticosteroids, anticonvulsants and ciclosporin) may be increased resulting in lower plasma levels of these compounds. The clinical significance of this is unknown. In diabetes mellitus, insulin dosage may need adjustment. Somatropin has been reported to reduce serum cortisol levels, possibly by affecting carrier proteins or by increased hepatic clearance. The clinical relevance of these findings may be limited. Corticosteroid replacement therapy should be optimised before initiation of Genotropin therapy. **Pregnancy and Lactation:** Animal studies are insufficient with regard to effects on pregnancy, embryofoetal development, parturition or postnatal development. There are no clinical studies available on exposed pregnancies. Therefore, somatropin containing products are not recommended during pregnancy and in women of childbearing potential not using contraception. There have been no clinical studies conducted with somatropin containing products in breast-feeding women. It is not known whether somatropin is excreted in human milk, but absorption of intact protein from the infant GI tract is unlikely. Therefore caution should be exercised when somatropin containing products are administered to breastfeeding women. **Overdosage:** Acute overdosage could lead initially to hypoglycaemia and subsequently to hyperglycaemia and Long-term overdosage could result in signs and symptoms consistent with the known effects of human growth hormone excess. **Side Effects:** In adult patients, common adverse effects related to fluid retention; such as peripheral oedema, stiffness in the extremities, paraesthesia, arthralgia and myalgia. These effects are mild to moderate, arise within the first months of treatment and subside spontaneously or with dose reduction. Formation of antibodies of low binding capacity in approximately 1% of patients; *in vitro* chromosome aberrations of unknown clinical significance. Very rare cases (< 1/10,000) of leukaemia have been reported in GH deficient children treated with somatropin, but the incidence appears to be similar to that in children without GH deficiency. In Prader-Willi syndrome patients treated with somatropin rare cases of sudden death have been reported, although no causal link has been established. **Pharmaceutical Precautions:** Keep Genotropin in the outer carton to protect from light. **Before Reconstitution:** Store in the refrigerator (2–8°C). *Genotropin Miniquick:* Solely for ambulatory use, only, the product may be stored at or below 25°C by the end user for a single period of not more than 6 months. During and/or at the end of this 6 months period, the product should not be put back in the refrigerator. *Genotropin Cartridge:* Storage up to 1 month at or below 25°C allowed. **After Reconstitution:** *Genotropin Miniquick:* Use immediately or within 24 hours. *Genotropin Cartridge:* Store in a refrigerator (2°C– 8°C), do not freeze. Keep the container in the outer carton in order to protect from light. Use within 4 weeks. **Legal Category:** CD (Sch 4, Part I), POM. **Pack/Basic NHS Price/PL No:** Genotropin 5.3 mg Pre-filled pen (GoQuick) x 1 £122.87 00022/0085. Genotropin 12 mg Pre-filled pen (GoQuick) x 1 £278.20 00022/0098. Genotropin 5.3 mg Two-chamber cartridge x 1 £122.87 00022/0085. Genotropin 12 mg Two-chamber cartridge x 1 £278.20 00022/0098. Genotropin MiniQuick 0.2 mg x 7 £32.46 00022/0186. Genotropin MiniQuick 0.4 mg x 7 £64.91 00022/0187. Genotropin MiniQuick 0.6 mg x 7 £97.37 00022/0188. Genotropin MiniQuick 0.8 mg x 7 £129.82 00022/0189. Genotropin MiniQuick 1.0 mg x 7 £162.28 00022/0190. Genotropin MiniQuick 1.2 mg x 7 £194.74 00022/0191. Genotropin MiniQuick 1.4 mg x 7 £227.19 00022/0192. Genotropin MiniQuick 1.6 mg x 7 £259.65 00022/0193. Genotropin MiniQuick 1.8 mg x 7 £292.11 00022/0194. Genotropin MiniQuick 2.0 mg x 7 £324.56 00022/0195. **PL Holder:** Pfizer Limited, Ramsgate Road, Sandwich, Kent, CT13 9NJ, UK. Further information is available on request from Medical Information Department at Pfizer Limited, Walton Oaks, Dorking Road, Tadworth, Surrey, KT20 7NS, UK. **Date of Preparation:** March 2011. **Company Reference:** GN21_0

Adverse events should be reported. Reporting forms and information can be found at www.yellowcard.gov.uk. Adverse events should also be reported to Pfizer Medical Information on 01304 616161.

Date of preparation: September 2011

GEN3332

SUPPORTING PATIENT SUPPORT

Patient support groups carry out vital work by supporting patients with a wide range of conditions, and creating a sense of community for patients and their families. There are many groups in the UK dedicated to supporting patients with specific endocrine conditions; as many of these conditions are relatively rare, the groups are often small and run by dedicated staff and volunteers. The Society for Endocrinology is committed to assisting these endocrine patient support groups to carry out their valuable work through a variety of channels.

The Patient Support Grant scheme, which currently runs every other year, is one of the main ways the Society supports these groups. Through this scheme, we provide grants of up to £4000 to fund specific projects. Any project is considered, though the group must always show evidence of a direct patient benefit, with a clear focus on information and education. Projects funded in the past include website redesigns, the production of patient information leaflets, training days for group volunteers, and attendance at endocrine clinics to provide support to newly-diagnosed patients. All applications for funding are marked by a dedicated judging panel who meet to examine the value of the project itself (assessing both the need for the project and how well it has been planned) and the work and running structure of the organisation as a whole.

The Society for Endocrinology is delighted to be able to support patient groups through this initiative; opposite is feedback from some of the groups we supported in the last grant round, and how the projects benefited patients. Applications are now closed for the 2011 round of this grant scheme and the successful applicants will be announced soon. If you are interested in finding out more about the Society's work with endocrine patient support groups, please email public@endocrinology.org or go to www.endocrinology.org/public

In the 2010 grant round, grants were provided to the following groups:

- **ALD Life** – www.aldlife.org
- **Anorchidism Support Group** – www.asg4u.org
- **Association for Multiple Endocrine Neoplasia Disorders** – www.amend.org.uk
- **Hypoparathyroidism UK** – www.hpth.org.uk
- **Klinefelter's Syndrome Association UK** – www.ksa-uk.co.uk
- **National Association for Premenstrual Syndrome** – www.pms.org.uk
- **Pituitary Foundation** – www.pituitary.org.uk
- **Prader-Willi Support Association (UK)** – http://pwsa.co.uk
- **Thyroid Eye Disease Charitable Trust** – www.tedct.co.uk

'I cannot thank the Society for Endocrinology enough for awarding a grant to the Anorchidism Support Group towards the running cost for our small group. As we are such a small support group, funding for the basic items such as telephone line rental, upgrading equipment and postage costs can become a struggle at times, but with the help of the grant, it has made providing our services and support to patients much easier. We made sure that every penny counted.'

LORRAINE BOOKLESS, ANORCHIDISM SUPPORT GROUP

'This grant was used to review, revise and amalgamate two of our flagship publications, 'What is PWS?' and 'How can we help?'. It has enabled the Association to produce a leaflet featuring modern, positive images of people with Prader-Willi syndrome (PWS) and their families, which will inform parents with newly-diagnosed children about the main characteristics of PWS in simple language, and to provide them with hope, via statements from other parents, that things may not be as bad as they feared. We had very positive feedback about the new leaflets and would like to thank the Society for Endocrinology for making this possible.'

JACKIE WATERS, PRADER-WILLI SYNDROME ASSOCIATION

'Thanks to the grant awarded to the Association for Multiple Endocrine Neoplasia Disorders (AMEND) from the Society for Endocrinology, we have been able to completely update, redesign and reprint our very popular series of patient information books on multiple endocrine neoplasia 1, 2a and 2b, FMTC and MTC. These updated booklets have enabled both registered AMEND patient members and non-member patients alike to better engage in their care pathways by becoming better informed about their disorder. The more professional appearance of the publications has encouraged increased interest from patients, medical professionals and potential new patient groups through the world, not just for the information they contained, but also in the association itself and the other services we provide.'

JO GREY, ASSOCIATION FOR MULTIPLE ENDOCRINE NEOPLASIA DISORDERS

'The Society for Endocrinology Patient Support Grant has assisted greatly in the Pituitary Foundation Leaflet Project. The leaflet project not only aims to update current titles, but also to add new much needed titles, thus addressing the concerns our community communicated to us through the social research projects we undertook recently. Since we made the request, we have accomplished a great deal with this project. The grant, by way of our booklets, has provided vital information to patients and their families. The 'well-being series' in particular, derived from our social research programme, has been extremely popular and we are pleased to have completed the series to date.'

PAT MCBRIDE, PITUITARY FOUNDATION

You & Your Hormones

The Society thanks the new contributors to our exciting new public website, You & Your Hormones. For a full list of contributors, visit www.yourhormones.info/about

Dr H Haniff (Leeds); Professor M Korbonits (London); Dr N Krone (Birmingham); Dr J Kyaw Tun (Leeds); Dr J Lynch (Leeds); Dr I Pernicova (Leeds); Dr M Westwood (Manchester)

Nurses' News

This year's Endocrine Nurse Update, again held at Stratford-upon-Avon in September, was well attended and received very positive feedback, despite a last minute panic when several speakers dropped out due to ill-health. I am very grateful to those brave people who stepped in at the last minute, thus ensuring that the sessions could go ahead as planned. It was a busy two days but, judging by the comments received, it was enjoyed by all. See you all in Stratford next September! Congratulations to Alice Jordan (South Tyneside District General Hospital, Newcastle upon Tyne) who was presented with her Certificate of Adult Endocrine Nursing at the meeting.

Thank you to Louise and Maggie for writing articles for this issue – all without any coercion from me! Louise has given us an interesting article on neuroendocrine tumours and how her role as a specialist nurse supports the patient. It is great to see that Maggie is busy training undergraduate nurses in endocrinology, and it is hoped that this will prompt more nurses to think of developing careers in endocrinology. Keep up the good work Maggie!

Finally, Chris Gibson and Anna Hawkins will be leaving the committee at the end of this year and I would like to take this opportunity to thank them both for all their hard work over the last four years. I hope you all have a very happy holiday season, and a happy and healthy new year.

NIKKI KIEFFER, CHAIR, NURSE COMMITTEE

Adult Endocrine Nursing: new honours option offered by Edinburgh University

This September saw the introduction of the first undergraduate module in adult endocrine nursing in the UK. The course, developed and run by Maggie Carson, is offered as an honours option (Level 10) for the University of Edinburgh Bachelor of Nursing (Hons) programme. Fifteen students enrolled this year, stating that 'the lecture content looked very interesting' and that they wished to explore endocrinology further, having enjoyed it in previous modules.

The ten-week course is delivered as a series of lectures and tutorials alongside optional clinic visits. While the majority of content is delivered by Maggie, several visiting speakers from Edinburgh and Glasgow assist. These include Helen Cook and Wendy Young (Edinburgh Western General Hospital), nurses with a specific interest in pituitary surgery.

The module content covers specific endocrine conditions; alongside these specifics, issues such as compliance with prescribed treatment, quality of life, psychological support and patient self-management are explored. Two of the students have registered to attend the Pituitary Foundation's national conference in Sheffield, and one of the students has based her dissertation on an endocrine topic.

For further information about the course please contact Maggie at m.n.carson@ed.ac.uk

NURSING FOR NEUROENDOCRINE TUMOURS

NETs: a brief overview

Neuroendocrine tumours (NETs) are a complex rare cancer: the prevalence is approx 2–5 per 100 000.[1] Derived from the diffuse neuroendocrine system, NETs are most common in the digestive system and lung. The management of NETs is complex, requiring input from many different specialities, including endocrinology, hepatology, liver surgery, nuclear medicine, oncology and radiology. NETs are usually classified according to their location in the body and the type of hormones they produce.

The nursing role

The NET clinical nurse specialist role is complex and challenging, as it involves working across many different disciplines, but I find it very rewarding.

My role is to counsel, advise and support NET patients. I also discuss treatments, timelines and the sequence these treatments may occur with patients. For example, a patient may be prescribed a somatostatin analogue (SSA) injection every 4 weeks to combat diarrhoea and flushing; this treatment may take 2–5 years, sometimes even longer. As the NET clinical nurse specialist, I often advise patients on which medications to purchase to counteract the most common SSA side effects, including diarrhoea immediately after eating, flatulence and stomach cramps. Loperamide-based products (often branded 'Imodium' in the UK) are an effective relief for diarrhoea, but I advise patients to take it only in the first month or two as it is necessary to determine if the SSAs are having any effect on symptom control. Stomach cramps could be a result of excess flatulence, but if the pain does not ease then I arrange an urgent clinic appointment, or if out of hours, I suggest the patient seeks medical advice. Pancreatic enzymes can be prescribed if the patient reports diarrhoea immediately after eating, as this could be an absorption problem.

Alice Jordan (left) receiving her certificate from Nikki Kieffer at the Endocrine Nurse Update

The future

As the NET clinical nurse specialist I am hoping to set up a 'drop in' day once a month, so that NET patients can meet each other, as such patients can feel an overwhelming sense of isolation: I feel an important part of my role is to find ways to support all patients.

LOUISE CHAMBERS-DAVIES, QUEEN ELIZABETH HOSPITAL BIRMINGHAM

REFERENCES

1. Gueorguiev M & Grossman AB 2011 Gastroenteropancreatic neuroendocrine tumours: advances in therapy. *Oncology News* **6** 48–51.

ICE/ECE 2012:

15th International Congress of Endocrinology & 14th European Congress of Endocrinology

5–9 MAY 2012, FORTEZZA DA BASSO, FLORENCE, ITALY

▶ On behalf of the International and European Societies of Endocrinology, we are delighted to invite you to the 15th International and 14th European Congress of Endocrinology. It is a very great pleasure to be hosting this prestigious joint meeting which will enable us to discuss the latest advances in endocrinology, and will also provide an opportunity for participants to meet and network with colleagues from across the globe.

Our joint programme promises to be challenging and stimulating: our 400-strong faculty will present lectures, workshops, expert sessions and debates covering a wide range of topical issues. The Programme Organising Committee (POC) have established clinical, translational and basic science strands for the programme, and introduced a dedicated nurses' strand this year.

The full scientific programme is now available online at www.ice-ece2012.com. Holding the congress jointly with the International Society of Endocrinology and European Society of Endocrinology allows us to significantly increase the number of sessions offered across a diverse range of subjects. The scientific programme will be complemented with new data abstracts; online abstract submission is now open and the deadline is 6 January 2012. Online registration and payment is also now open: ESE members receive a reduced registration rate. Early bird registration rates are available until 16 March 2012.

IMPORTANT DATES

Abstract submission deadline:
6 January 2012

Early bird registration deadline:
16 March 2012

CONGRESS SECRETARIAT
BioScientifica Ltd
ice-ece2012@bioscientifica.com
+44 (0) 1454 642240

The POC would also like to invite you to join the congress a day early to take advantage of one of the hands-on pre-congress courses on medical writing and thyroid ultrasound.

A new congress blog is available at www.ice-ece2012.blogspot.com and a congress smart phone 'app' will be joined by two features successfully introduced at ECE 2011 in Rotterdam: the personal programme planner and i-posters.

To use social networking sites for the latest news, visit:
www.facebook.com/EuropeanSocietyofEndocrinology
www.twitter.com/ESEndocrinology

If you are tweeting about the congress, we ask that you use #iceece12 to allow interested parties to follow the feed of tweets about the meeting.

We hope you will join us in Florence for what promises to be a vibrant and significant joint congress.

MARTIN REINCKE, CHAIR OF THE PROGRAMME ORGANISING COMMITTEE
GIANNI FORTI, CHAIR OF THE LOCAL ORGANISING COMMITTEE
PHILIPPE BOUCHARD, PRESIDENT OF ESE
PAUL STEWART, SECRETARY GENERAL OF THE ISE

Ask For Evidence

The Society for Endocrinology is supporting Sense About Science's new national campaign 'Ask for Evidence', which highlights the need for consumers, patients and voters to ask companies to substantiate any scientific claims they make. The aim of the campaign is to encourage more members of the public to ask advertisers, companies, government bodies and other organisations to set out the evidence they have for their claims. It is hoped this will help reduce the number of misleading claims about science and medicine that appear in the media and prompt people to question and evaluate the evidence behind these claims for themselves.

'We have been working with scientists and the public for some years to challenge misinformation,' said Tracey Brown, Director of Sense About Science, on launching the campaign, 'it's often very effective but no sooner is attention turned elsewhere than misleading claims creep back up again. To make a permanent difference, we need the public to be evidence hunters.'

The campaign is also supported by high profile representatives from the worlds of science and celebrity including Sir Paul Nurse, Professor Colin Blackmore, Lord Krebs, Derren Brown, Jonathan Ross and Dara Ó Briain. To read their views on the campaign and find out how you can get involved, visit the campaign website at www.senseaboutscience.org/askforevidence.

"Asking for and examining evidence is of the utmost importance in science and medicine. In order for us to know whether a medicine is effective and safe to use, we need to make sure it has been properly tested in a rigorously designed clinical trial. If you don't ask for evidence that a company can substantiate its scientific claims, you risk being taken in by incorrect statements and wasting your money. Worse still, untested medical treatments can cause real damage to the body, lead to unpleasant side-effects and may delay a patient from receiving the correct medical diagnosis and treatment."

PROFESSOR JULIA BUCKINGHAM, PRESIDENT, SOCIETY FOR ENDOCRINOLOGY

Endocrinology from the female perspective!

There are numerous articles and web sites devoted to women in science and to the issue of 'getting to the top' in your chosen career path.[1–4] There is also plenty of evidence that women are now in the majority as medical students, and that more women are applying to do non-clinical PhDs. However, in many areas of biomedical research the statistics suggest that there are fewer women in senior roles, in particular, fewer female professors and even fewer female professors with children!

In endocrinology, I think that there are a lot of women with successful research careers both in laboratory-based research and in the clinical setting. So is it just chance or is it that endocrinology is a good career choice for women?

I would argue that endocrinology lends itself to collaborative research, and that women are good at collaborating, whereas some research disciplines are more 'testosterone driven'. But it's not all down to hormones; in endocrinology, the majority of our male colleagues are incredibly supportive and teamwork is an essential feature of all our working lives.

That said, I would advise all women wanting to carve out a career in research to read *'Walking out on the boys'* by Frances K Conley.[5] This is one woman's account of a career in academic neuroscience, and while this is only one side of the story, I am sure many of my female colleagues will identify with at least some of the situations described in the book. The moral of the story may be that despite all the progress, we can't prevent injustices happening. So when they happen it's how a woman deals with the situation and the calibre of her colleagues in supporting her, which often leads to a successful outcome.

We have some wonderful examples of very successful women who have worked in the field of endocrinology. Rosalyn Yalow was one lady who made a huge contribution to endocrinology: her obituary details just how much harder she had to fight than her male colleagues for recognition.[6]

We need highly intelligent scientists to lead endocrinology research and, if we only support the careers of the men, we miss 50% of the population. So if you are a young female endocrinologist thinking of making your career in the discipline, what barriers are there and how might the Society for Endocrinology support you? At the beginning of your training, your decisions are focussed on which area to specialise in, but if you have a partner then where you are based is a big issue. If you then decide to have children, the ability to juggle your career with other commitments is really challenging. For those of you struggling with young children and wondering if it is all worth it, I would argue that it is very important for you to keep going. Science needs researchers who can multi-task, and those with the range of skills that comes from bringing up a family are very valuble. I have a sticker that says 'I can cope with anything – I've got children!'

In our Faculty at the University of Manchester we recognise that women tend not to put themselves forward for promotion, so we have an informal group that meets to share ways of improving CVs, discuss child-care issues and highlight top tips for making us more efficient.

Another concern which can affect female endocrinologists is the barrier to promotion for non-clinical scientists in a clinical setting. This is partly because they can't choose endocrinology as a first degree, so come into endocrine research needing to learn the discipline. More importantly they are often working in a clinical department, which may focus only on career progression for its clinical staff: if you are a female scientist and more reticent to fight your corner, this is a 'double whammy'!

One of my role models when I started as a research fellow was Professor Lesley Rees. I loved her enthusiasm for research and we had a common interest in the hypothalamic–pituitary–adrenal axis. But it was the high-heeled shoes she wore at conferences and her anecdote about answering an important business call while at the Elizabeth Arden beauty salon that made me realise that I could enjoy research and still 'shop 'til I drop'!

So, I'm convinced that endocrinology as a discipline needs a strong contingent of women in research, but how do we prevent all our female trainees from having to rediscover the wheel? I asked a number of women to give me their tips on how to have a successful career in endocrinology. Their anecdotes (continued overleaf) have been most enlightening!

ANNE WHITE, UNIVERSITY OF MANCHESTER

REFERENCES

1. http://royalsociety.org/about-us/equality/activities/
2. http://royalsociety.org/grants/schemes/dorothy-hodgkin/
3. www.athenaforum.org.uk/
4. www.athenaswan.org.uk/html/athena-swan/
5. Frances K Conley 1999 *Walking out on the boys*. ISBN-13: 978-0374525958. Farrar, Straus and Giroux: New York, NY, USA
6. www.nytimes.com/2011/06/02/us/02yalow.html

Endocrinology from the female perspective!

QUESTION & ANSWER

Q What makes a young female endocrinologist successful?

A I feel more stubborn than successful!
Anonymous

A My survival/success has largely been down to a 'bloody–minded' attitude and not taking 'no' for an answer.
Philippa Saunders, MRC Centre for Reproductive Health, Edinburgh

Q Are women scientists over-sensitive or just more perceptive?

A Women are perhaps reluctant to ask for help for fear it will be seen as a sign of weakness; a sign that we are not as capable as our male colleagues. In his book '*Advice to A Young Scientist*' Nobel Laureate Dr Peter Medawar reminds us to 'never be afraid to ask our friends for help' …
Laura Maille, University of North Carolina at Chapel Hill, NC, USA

Q Is endocrinology a good choice of discipline for female scientists?

A Of course it is! Life for the female (or male for that matter) endocrinologist is never going to be boring! The breadth of the topic gives plenty of scope for imagination and diversity of interests – in my research time I have studied large animals, rodents, human tissues switched from female to male and back again, looked at development, maturation, molecular changes, and been blown away by the insight gained from techniques such as live cell imaging and confocal imaging of tissues stained with four different antibodies.
Anonymous

A 'Spirit is a condition of perfect functioning of the endocrine glands' said Lin Yutang in 1937; it took me quite some time working in the field of endocrinology to realise that this is true. I also believe that there is no other sub-specialisation in medicine which supports our instinct for curiosity so well; allowing us to freely and playfully explore our diseases. Although much hard work and knowledge is needed, there is always a new experiment to be done, bringing great mental exercise and pleasure. Women in endocrinology need to: be realistic, have patience, desire to care, and have a personal outlook on things without many doubts.
Vera Popovic, Belgrade, Serbia

A Endocrinology needs witty, intellectual, hard-working clinicians and researchers who are good at combining lexical knowledge with complex issues and lateral thinking; these are attributes women often develop.

From the clinical point of view, endocrinology is a good discipline for women to choose as a substantial proportion of the patients can be diagnosed and treated as outpatients, so it's possible to do it part-time, many of the patients are tied to the clinic long-term and need 'looking after'; an aspect women are usually excellent at.

From the research point of view one of the most important things, which is more and more difficult in today's difficult financial climate, is to allow young colleagues to attend conferences. I think conferences are crucial for scientific development; they present many opportunities and encourage 'free thinking', which will eventually lead to new ideas in both clinical and basic research.
Márta Korbonits, Barts and the London Medical School, London

Q Do female endocrinologists suffer from lack of career choices, job security and a male-medic dominated environment?

A Well yes I guess we all have horror stories to tell of bosses saying 'you don't really want to do a PhD, surely you would be happy as a technician?' (first boss), 'you are quite ambitious aren't you?' (recent boss during appraisal). The second comment was said in a shocked tone – I doubt anyone would have said that to a male professor!

I have derived huge support and encouragement from fellow female staff and from outstanding childcare (which took most of my wages for many years, but something must have gone right because the children consider their 'carer' a friend and extra mentor). When I got my first proper job (age 38, and pregnant for the second time) the people who were most pleased were contemporary female scientists who said 'it is wonderful to see a woman succeed in getting a job for a change'.

I wish I'd had a mentor when I was a postdoc wondering if I was doing the right thing, working flat out trying to keep my career alive. My conviction is that the only way forward is to support our fellow female endocrinologists in every way possible – collaborate, share experiences, share our horror stories, apply for grants together, and nominate other women for positions and promotion.

Some of the most useful time I have spent in the last few years has been as a mentor to postdocs who are taking their first steps on the career ladder, juggling pregnancy and work pressures: if we want to make a long-term difference mentorship and networking are key, especially when times are tough for all.
Philippa Saunders, MRC Centre for Reproductive Health, Edinburgh

Q Would positive discrimination help female scientists?

A Positive discrimination does not help the cause of women in any way, but the absence of negative discrimination is key. Women may be less 'pushy' in terms of demanding promotion, and we need to be supported by our peers – both male and female – in terms of promotion applications and taking on senior roles. Women are

generally excellent organisers, not least because they're experienced in juggling the demands of family and work. The culture of making decisions 'over a pint in the bar' is all too commonplace and doesn't help the female cause. If women are good, they'll make it to the top.
Anonymous

Q What do female researchers need to get ahead?

A To get ahead you need (or at least I needed):

- The 'right' partner
- Reliable childcare
- The availability of part-time work
- Children who are never ill
- Children who are good at school so instead of sitting with them to do homework, you can have fun
- An understanding and supportive boss 'Congratulations, you are pregnant … again' (A boss with 6 daughters is a special advantage)
- Great colleagues
- An ability to function without much sleep
- Lots of luck

I was preparing a clinical study for many months (protocol design and writing, ethics permission, patient identification etc.) and everything was ready when I left for maternity leave, so I was expecting to start the study when I returned (a unique opportunity for somebody who is a female, working part-time, on no proper pay, from abroad, with qualifications not fully accepted). However, I was told by the big boss on my last day at work (baby already well overdue) that a young male colleague would be taking over, running and writing up the study while I was away. Of course I was devastated … but when I returned it turned out that the male colleague had not done much and the study was at exactly the same point that I had left it several months earlier. So then the study was run, written and published in no time … by me. This taught me to realise that if I do things properly and believe in them, then somehow, despite sometimes unfavourable circumstances, they will actually happen the way I hope they will happen.
Márta Korbonits, Barts and the London Medical School, London

A Personally, I am fortunate to have encountered supportive mentors throughout my career at laboratories in Glasgow, Paris and Edinburgh. This, combined with my very cooperative parents and in-laws have been of enormous help in enabling me to balance my parenting and work roles. For its part, the University of Glasgow shows little evidence of gender bias: the Head of the College of Medical, Veterinary & Life Sciences, the Head of the Graduate School and our new Head of Institute are all women. However, given that a high percentage of PhD students and postdoc staff both here and in many other universities are women, it is undeniable that a relatively small number continue to senior academic positions. Why is this? I believe their departure is attributable, at least in the initial stages of such careers, to the unpredictable nature of the postdoc position and the lack of career structure. Once women have children, the short-term contract nature of postdoc positions is unsettling and provides no medium- or long-term security. The lack of affordable on-site nursery provision, the long hours and a lack of flexibility in working hours make it extremely difficult to combine work and family life. Conducting a career on a part-time basis is considered by many, including myself, to be almost impossible because of the requirements of experimental work and various other elements of the job. This situation does not look set to improve: recent draft proposals drawn up by the UK higher education funding bodies for the forthcoming Research Excellence Framework require researchers who are taking maternity leave to produce the same number of publications as their colleagues. This does not inspire confidence that anything will be done to actively encourage women in science, and merely ensures that such women will have to maintain the same level of productivity as their colleagues, only over a shorter time period and for less reward.
Eleanor Davies, University of Glasgow

A My Top 5 Pet Peeves:

1. Mean spiritedness.
2. Charlatans with titles in important positions.
3. Women in academia killing other women.
4. Academic politics.
5. Women academics must achieve 10-fold (even 100-fold) more to obtain equal recognition as men in academia.

Charis Eng, Cleveland Clinic Genomic Medicine Institute, OH, USA

A Science has come a long way since the days when women had to leave toilet windows open to be able to climb back into a building, in order to carry out their research work after hours (www.guardian.co.uk/news/2001/jul/30/guardianobituaries.physicalsciences). Yet there is still some way to go to achieve real parity.

Serendipity, networking and seizing the right opportunities are all key, but peer and management support are essential for retaining women in science, particularly after a career break – one friend took a 13 year career break to bring up her 3 children, during which time PCR was invented! It takes real effort and a great deal of support and confidence to re-enter the profession after a break. Even returning to work after a 6 month maternity leave can be a hurdle. Greater recognition of the barriers and more support has made a difference in recent years, but women with young children at an early career stage are still leaving the profession in droves. What are the biggest issues now? How can we improve things through the Society? Any ideas are very welcome, please forward them to info@endocrinology.org!
Karen Chapman, University of Edinburgh, Scotland

Optimism and staying alive

▶ There are many outstanding and remarkable medically qualified women who have managed to make significant contributions both to medicine and to society at large. Rita Levi-Montalcini, aged 102 years, is one such woman; she is a Nobel Laureate, a Knight Grand Cross and a life member of the Italian Senate.

Born in Turin, Levi graduated as a doctor and soon went into research but her career was interrupted by Mussolini's 1938 *Manifesto of Race* and the subsequent introduction of laws barring Jews from academic and professional careers. She decided to remain in Italy and continued her neurological research in a home laboratory.

In 1946 she began a long stay in the USA, where she isolated nerve growth factor, NGF, for which, in 1986, with colleague Stanley Cohen, she received the Nobel Prize.

In 1961 she returned to Italy to become director of the Research Centre of Neurobiology in Rome and later founded the European Brain Research Institute. In 1999 she was appointed Ambassador to the Food and Agriculture Organisation of the United Nations, and wrote and engaged in public activity to combat world hunger.

Since 2001, she has served in the Italian Senate as a Senator for Life. She takes an active part in debates, taking a centre-left position, and recently, despite being hard of hearing and nearly blind, vowed to remain a political force in the country.

She remains an extraordinary person, blessed with great longevity: a subject, which given my age of 67 years, is of more than academic interest. There are many reasons why a man in the third age might wish to live until the age of 100 years or more, and these include: watching the grandchildren grow up, writing the book that one had always promised to write, and even more obviously, as Woody Allen might have said, "it beats the alternative". To this list we can now add 2009 vintage Port … about which, more later.

Recent studies have provided even more reasons to be positive about life as they have indicated that both men and women who remain optimistic have a lower risk of heart disease and death. The latest study, on nearly 100 000 women, published in the journal Circulation, found pessimists had higher blood pressure and cholesterol; even taking these risk factors into account, attitude alone altered risk. Optimistic women had a 9% lower risk of developing heart disease and a 14% lower risk of dying from any cause after more than 8 years of follow-up. In comparison, cynical women who harboured hostile thoughts about others or were generally mistrusting of others were 16% more likely to die over the same timescale.

I have always tried to follow the commandment 'love thy neighbour as thyself' but now I have an extra incentive to do so, longevity. So why mention Port? Well 2009 has been declared a Port vintage year; such declarations are only made when the shippers are convinced that the quality of the wines is outstanding. The very best of these Ports, however, may not peak until 2040 or 2050, a time unlikely to find me at my peak. Still, I am keen to taste the Port even if I may need some help to open the bottle.

In the meantime I shall remain in a permanent state of high optimism, emanating love in all directions, and maintaining my tastebuds in working order.

HOTSPUR

JOE/JME prize

The JOE/JME prize recognises an outstanding young researcher who has made a significant contribution to research in basic endocrinology. The prize is awarded on alternate years by *Journal of Endocrinology* and *Journal of Molecular Endocrinology*.

The 2012 prize is to be awarded by *Journal of Endocrinology*.

The prize consists of a certificate and €2000. The winner's name and details will be published in the Society's newsletter and on the website.

In recognition of the fact that both *Journal of Endocrinology* and *Journal of Molecular Endocrinology* are official journals of the European Society of Endocrinology, the award will be presented during the annual European Congress of Endocrinology. The recipient of the prize will be expected to give a short presentation on their research at the time of the award and submit a review article to the journal awarding the prize.

The deadline for nominations is 31 December 2011

Further details can be found at www.endocrinology.org/grants/prize_joejmeprize.html

Hot Topics

Journal of Endocrinology

L-arginine protects β-cells from cytokines

L-arginine levels are decreased in type 2 diabetics, coinciding with pancreatic β-cell dysfunction. Krause and colleagues manipulated the concentration of L-arginine and cytokines, and looked at the effect on β-cell insulin secretion, metabolism, redox status and integrity. They found that L-arginine is able to stimulate β-cell insulin secretion, and enhance antioxidant and protective responses, thus protecting the functional integrity of β-cells in the presence of cytokines

Read the full article in *Journal of Endocrinology* **211** 87–97

GPR55 in metabolism

The endocannabinoid system is thought to modulate several metabolic processes. GPR55 is a putative cannabinoid receptor with an unknown role. Romero-Zerbo and colleagues found high GPR55 mRNA and protein levels in rat pancreatic islets and insulin-secreting β-cells. The GPR55 agonist O-1602 increased intracellular calcium handling and increased glucose-stimulated insulin secretion. GPR55 thus plays a role in glucose homeostasis.

Read the full article in *Journal of Endocrinology* **211** 177–185

Ovarian steroid secretion

Cortisol levels rise sharply in the hour following awakening. An altered cortisol awakening response (CAR) is associated with various health issues, including depression. Ahn and colleagues found that both oestradiol-17β and progesterone in saliva also peak in the hour after waking, in women with regular menstrual cycles. Ovarian steroid concentrations could therefore be used as an index for ovarian function.

Read the full article in *Journal of Endocrinology* **211** 287–297

Journal of Molecular Endocrinology

Hepatic sex differences in ZDF rats

Protection from the metabolic syndrome in premenopausal females suggests a protective effect from hormones such as oestrogen. Male ZDF rats develop type 2 diabetes spontaneously; females only do so if fed a high-fat diet. Gustavsson and colleagues investigated this sex-dependent difference, finding 94 differentially expressed hepatic transcripts. Females fed a high-fat diet had increased levels of fatty acid oxidation genes and reduced levels of de novo lipid synthesis.

Read the full article in *Journal of Molecular Endocrinology* **47** 129–143

SLC30A8 and type 2 diabetes

SLC30A8 encodes zinc transporter-8; rs13266634 is the only known variant causing increased type 2 diabetes susceptibility. Pound and colleagues demonstrate SLC30A8 expression in human pancreatic β- and α-cells, describing conserved regions in the gene promoter and intron 2. They also identified variant rs62510556, which modulates enhancer activity, but has no type 2 diabetes link. This study provides a framework for future SLC30A8 studies.

Read the full article in *Journal of Molecular Endocrinology* **47** 251–259

Endocrine-Related Cancer

Rare germline *RET* mutations

RET mutations are associated with medullary thyroid carcinoma. Cosci and colleagues analysed the transforming activity of 6 rare *RET* mutations. S904F and M848T displayed high transforming ability with low aggressiveness, whilst T338I, V648I, M918V and A883T displayed low or no transforming ability. This is the first paper to directly and favourably compare *in silico* assays (a less expensive and time-consuming method) with *in vitro* assays.

Read the full article in *Endocrine-Related Cancer* **18** 603–612

$BRAF^{V600E}$ in thyroid cancer

The $BRAF^{V600E}$ mutation is involved in papillary thyroid cancer (PTC), the most common endocrine malignancy. To search for epigenetic mechanisms in $BRAF^{V600E}$ PTC tumorigenesis, Hou and colleagues performed a genome-wide DNA methylation analysis on thyroid cancer cells. They found that $BRAF^{V600E}$ has numerous targets, including genes with metabolic and cellular functions. A shRNA knockdown on 6 genes demonstrated that two, *HMGB2* and *FGD1*, are directly oncogenic.

Read the full article in *Endocrine-Related Cancer* **18** 687–697

Clinical Endocrinology

Aortic root ectasia in acromegaly

Growth hormone (GH) excess results in cardiac complications, reducing life expectancy in acromegaly. However, the specific vascular consequences of excess GH are unknown. In their commentary, Colao and Grasso discuss the emerging problem of increased aortic root diameter in acromegalic patients. They focus on research by Casini and colleagues demonstrating that the prevalence of aortic ectasia was higher in acromegalic patients compared with controls.

Read the full article in *Clinical Endocrinology* **75** 495–500
Commentary *Clinical Endocrinology* **75** 420–421

Vaspin in obesity and atherosclerosis

Obesity is a major health concern. Vaspin, an insulin-sensitizing adipokine, has been shown to improve glucose tolerance and insulin sensitivity in obese mice. Choi and colleagues investigated plasma vaspin concentrations in humans. Plasma vaspin concentrations were significantly higher in metabolic syndrome males, compared to control. In women, vaspin concentrations were associated with coronary atherosclerosis. Further studies are needed to investigate these sex differences.

Read the full article in *Clinical Endocrinology* **75** 628–635

$BRAF^{V600E}$ in thyroid nodule sonography

Ultrasonography (US) can assist in distinguishing between malignant and benign thyroid nodules. $BRAF^{V600E}$ is a useful papillary thyroid carcinoma diagnostic marker. Lee and colleagues combined $BRAF^{V600E}$ status with US techniques, finding that the $BRAF^{V600E}$ mutation is significantly associated with malignant features found via US. The application of $BRAF^{V600E}$ mutation analysis can improve the diagnostic accuracy of thyroid nodules.

Read the full article in *Clinical Endocrinology* [in press]

HT HOT TOPICS

Society members get free access to the current content of Journal of Endocrinology, Journal of Molecular Endocrinology *and* Endocrine-Related Cancer *via www.biosciallliance.org*

Coming soon: free access to Clinical Endocrinology

Growth hormone therapy has proven benefits in adults with GHD [1–9]

Patients with GHD treated with GH therapy enjoy improved quality of life and healthcare utilisation is reduced [8,9]

Whatever their concerns, make sure they're not about growth hormone therapy

Genotropin®
somatropin (rbe)

To find out more please call 0800 521249

Genotropin® (somatropin, rbe). Abbreviated Prescribing Information Genotropin 5.3 mg Pre-filled pen (GoQuick). Genotropin 12 mg Pre-filled pen (GoQuick). Genotropin 5.3 mg Two-chamber cartridge. Genotropin 12 mg Two-chamber cartridge. Genotropin MiniQuick 0.2 mg. Genotropin MiniQuick 0.4 mg. Genotropin MiniQuick 0.6 mg. Genotropin MiniQuick 0.8 mg. Genotropin MiniQuick 1.0 mg. Genotropin MiniQuick 1.2 mg. Genotropin MiniQuick 1.4 mg. Genotropin MiniQuick 1.6 mg. Genotropin MiniQuick 1.8 mg. Genotropin MiniQuick 2.0 mg. Please refer to the SmPC before prescribing Genotropin. **Presentation: Genotropin Pre-filled Pen (GoQuick):** Two-chamber cartridge sealed in a disposable multidose pre-filled pen GoQuick. The cartridges contain either 5.3 mg or 12 mg somatropin (rbe). Each cartridge also contains 0.3% metacresol as preservative. The 5.3 mg pre-filled pen GoQuick is colour coded blue. The 12 mg pre-filled pen GoQuick is colour coded purple. **Genotropin Cartridge:** Two-chamber cartridge for use in a re-useable injection device, Genotropin pen, or in a reconstitution device. The cartridges contain either 5.3 mg or 12 mg somatropin (rbe). Each cartridge also contains 0.3% metacresol as preservative. The Genotropin Pens are colour coded, and must be used with the matching colour coded Genotropin two-chamber cartridge to give the correct dose. The Genotropin Pen 5.3 (blue) must be used with Genotropin 5.3 mg cartridge (blue). The Genotropin Pen 12 (purple) must be used with Genotropin 12 mg cartridge (purple). Instruction on reconstitution plus use of devices is supplied separately as are the Pen and Genotropin Mixer devices and any necessary consumables. **Genotropin MiniQuick:** Two compartment cartridge in single dose syringe containing powder and solvent for injection together with an injection needle. Each device contains either 0.2 mg, 0.4 mg, 0.6 mg, 0.8 mg, 1 mg, 1.2 mg, 1.4 mg, 1.6 mg, 1.8 mg or 2 mg somatropin (rbe). **Indications: Children:** Treatment of growth disturbance due to insufficient secretion of growth hormone (growth hormone deficiency, GHD) or associated with gonadal dysgenesis (Turner Syndrome) or chronic renal insufficiency (CRI) or in short children born Small for Gestational Age (SGA) with a birth weight and/or length below –2SD, who failed to show catch-up growth by 4 years of age or later. Prader-Willi syndrome (PWS), for improvement of growth and body composition. The diagnosis of PWS should be confirmed by appropriate genetic testing. **Adults:** Replacement therapy in adults with pronounced GH deficiency. Adult onset: Patients who have severe growth hormone deficiency associated with multiple hormone deficiencies as a result of known hypothalamic or pituitary pathology and who have at least one known deficiency of pituitary hormone not being prolactin. Childhood Onset: Patients who were growth hormone deficient during childhood as a result of congenital, genetic, acquired, or idiopathic causes. **Dosage and Administration:** Dose should be personalised for each individual. The subcutaneous injection site should be varied to prevent lipoatrophy. **Insufficient Secretion of GH in Children:** 0.025–0.035 mg/kg body weight per day. Higher doses have been used. Where childhood onset GHD persists into adolescence, treatment should be continued to achieve full somatic development (e.g. body composition, bone mass). For monitoring, the attainment of a normal peak bone mass defined as a T score > –1 (i.e. standardised to average adult peak bone mass measured by dual energy X-ray absorptiometry taking into account sex and ethnicity) is one of the therapeutic objectives during the transition period. **Prader-Willi Syndrome:** 0.035 mg/kg body weight per day. Daily doses of 2.7 mg should not be exceeded. **Gonadal Dysgenesis (Turner Syndrome):** 0.045–0.050 mg/kg body weight per day. **CRI:** A dose of 0.045–0.050 mg/kg body weight per day. Higher doses can be needed if growth velocity is too low. Dose correction can be needed after 6 months treatment. **Short children born SGA:** 0.035 mg/kg body weight per day until final height is reached. **GH Deficient Adults:** In patients who continue growth hormone therapy after childhood GHD, the recommended dose to restart is 0.2–0.5 mg per day. The dose should be gradually increased or decreased according to individual patient requirements as determined by the IGF-I concentration. In patients with adult-onset GHD, start with low dose, 0.15–0.3 mg/day. The dose should be gradually increased as determined by the IGF-1 concentration. Clinical response and side effects may guide dose titration. It is recognised that there are patients with GHD who do not normalise IGF-I levels despite a good clinical response, and thus do not require dose escalation. The maintenance dose seldom exceeds 1.0 mg per day. Women (especially those on oral oestrogen) may require higher doses than men. As normal physiological growth hormone production decreases with age, dose requirements are reduced. In patients above 60 years, therapy should start with a dose of 0.1–0.2 mg per day and should be slowly increased according to individual patient requirements. The minimum effective dose should be used. The maintenance dose in these patients seldom exceeds 0.5 mg per day. **Contra-indications, Warnings etc:** Hypersensitivity to the active substance or to any of the excipients. Any evidence of tumour activity exists. Anti-tumour treatment must be complete. Genotropin should not be used for growth promotion in children with closed epiphyses. Patients with acute critical illness suffering complications following open heart surgery, abdominal surgery, multiple accidental trauma, acute respiratory failure or similar conditions should not be treated with Genotropin. Hypersensitivity to the active substance or to any of the excipients. **Precautions:** Diagnosis and therapy should be initiated and monitored by suitably qualified and experienced doctors. Somatropin may induce insulin sensitivity and in some patients diabetes mellitus. Patients with diabetes, glucose intolerance, or additional risk factors for diabetes should be monitored closely during somatropin therapy. As thyroid function may be affected, monitoring of thyroid function should be conducted in all patients. In patients with hypopituitarism on standard replacement therapy, the potential effect of growth hormone treatment on thyroid function must be closely monitored. Signs of any relapse of malignant disease should be monitored. In patients with endocrine disorders, slipped epiphyses of the hip may occur. In case of severe or recurrent headache, visual problems, nausea and/or vomiting, a funduscopy for papilloedema is recommended as some rare cases of benign intracranial hypertension have been reported and if appropriate treatment should be discontinued. Leukaemia has been reported in a small number of growth hormone deficiency patients, some of whom have been treated with somatropin. However, there is no evidence that leukaemia incidence is increased in growth hormone recipients without predisposition factors. As with all somatropin containing products, a small percentage of patients may develop antibodies to Genotropin. The binding capacity of these antibodies is low and there is no effect on growth rate. Testing for antibodies to somatropin should be carried out in any patient with otherwise unexplained lack of response. Experience in patients above 80 years is limited. Elderly patients may be more sensitive to the action of Genotropin, and therefore may be more prone to develop adverse reactions. In acute, critically ill adult patients, GH may increase mortality. In CRI, renal function should be below 50% of normal before institution of therapy and growth should be followed for a year preceding institution of therapy. Conservative treatment for renal insufficiency should have been established and be maintained during therapy. Discontinue GH after renal transplantation. There have been reports of fatalities associated with the use of growth hormone in paediatric patients with Prader-Willi syndrome who had one or more of the following risk factors: severe obesity (those patients exceeding a weight/height of 200%), history of respiratory impairment or sleep apnoea, or unidentified respiratory infection. Patients with one or more of these factors may be at increased risk. Before initiation of treatment with somatropin in patients with Prader-Willi syndrome, signs for upper airway obstruction, sleep apnoea, or respiratory infections should be assessed. Patients should be monitored for signs of respiratory infections, which should be diagnosed as early as possible and treated aggressively. All patients with Prader-Willi syndrome should also have effective weight control before and during growth hormone treatment. Scoliosis is common in PWS and signs for scoliosis should be monitored. Experience of prolonged therapy in adults and patients with PWS is limited. In short children born SGA other medical reasons or treatments that could explain growth disturbance should be ruled out before starting treatment. Not recommended to initiate treatment in SGA patients near onset of puberty. **Interactions:** Concomitant treatment with glucocorticoids may inhibit the growth-promoting effects of somatropin containing products. Therefore, patients treated with glucocorticoids should have their growth monitored carefully to assess the potential impact of glucocorticoid treatment on growth. The clearance of compounds metabolised by cytochrome P450 3A4 (e.g. sex steroids, corticosteroids, anticonvulsants and ciclosporin) may be increased resulting in lower plasma levels of these compounds. The clinical significance of this is unknown. In diabetes mellitus, insulin dosage may need adjustment. Somatropin has been reported to reduce serum cortisol levels, possibly by affecting carrier proteins or by increased hepatic clearance. The clinical relevance of these findings may be limited. Corticosteroid replacement therapy should be optimised before initiation of Genotropin therapy. **Pregnancy and Lactation:** Animal studies are insufficient with regard to effects on pregnancy, embryofoetal development, parturition or postnatal development. There are no clinical studies available on exposed pregnancies. Therefore, somatropin containing products are not recommended during pregnancy and in women of childbearing potential not using contraception. There have been no clinical studies conducted with somatropin containing products in breast-feeding women. It is not known whether somatropin is excreted in human milk, but absorption of intact protein from the infant GI tract is unlikely. Therefore caution should be exercised when somatropin containing products are administered to breastfeeding women. **Overdosage:** Acute overdosage could lead initially to hypoglycaemia and subsequently to hyperglycaemia and Long-term overdosage could result in signs and symptoms consistent with the known effects of human growth hormone excess. **Side Effects:** In adult patients, common adverse effects related to fluid retention; such as peripheral oedema, stiffness in the extremities, paraesthesia, arthralgia and myalgia. These effects are mild to moderate, arise within the first months of treatment and subside spontaneously or with dose reduction. Formation of antibodies of low binding capacity in approximately 1% of patients; *in vitro* chromosome aberrations of unknown clinical significance. Very rare cases (< 1/10,000) of leukaemia have been reported in GH deficient children treated with somatropin, but the incidence appears to be similar to that in children without GH deficiency. In Prader-Willi syndrome patients treated with somatropin rare cases of sudden death have been reported, although no causal link has been established. **Pharmaceutical Precautions:** Keep Genotropin in the outer carton to protect from light. **Before Reconstitution:** Store in the refrigerator (2–8°C). *Genotropin Miniquick:* Solely for ambulatory use, only, the product may be stored at or below 25°C by the end user for a single period of not more than 6 months. During and/or at the end of this 6 months period, the product should not be put back in the refrigerator. *Genotropin Cartridge:* Storage up to 1 month at or below 25°C allowed. **After Reconstitution:** *Genotropin Miniquick:* Use immediately or within 24 hours. *Genotropin Cartridge:* Store in a refrigerator (2°C–8°C), do not freeze. Keep the container in the outer carton in order to protect from light. Use within 4 weeks. **Legal Category:** CD (Sch 4, Part I), POM. **Pack/Basic NHS Price/PL No:** Genotropin 5.3 mg Pre-filled pen (GoQuick) x 1 £122.87 00022/0085. Genotropin 12 mg Pre-filled pen (GoQuick) x 1 £278.20 00022/0098. Genotropin 5.3 mg Two-chamber cartridge x 1 £122.87 00022/0085. Genotropin 12 mg Two-chamber cartridge x 1 £278.20 00022/0098. Genotropin MiniQuick 0.2 mg x 7 £32.46 00022/0186. Genotropin MiniQuick 0.4 mg x 7 £64.91 00022/0187. Genotropin MiniQuick 0.6 mg x 7 £97.37 00022/0188. Genotropin MiniQuick 0.8 mg x 7 £129.82 00022/0189. Genotropin MiniQuick 1.0 mg x 7 £162.28 00022/0190. Genotropin MiniQuick 1.2 mg x 7 £194.74 00022/0191. Genotropin MiniQuick 1.4 mg x 7 £227.19 00022/0192. Genotropin MiniQuick 1.6 mg x 7 £259.65 00022/0193. Genotropin MiniQuick 1.8 mg x 7 £292.11 00022/0194. Genotropin MiniQuick 2.0 mg x 7 £324.56 00022/0195. **PL Holder:** Pfizer Limited, Ramsgate Road, Sandwich, Kent, CT13 9NJ, UK. Further information is available on request from Medical Information Department at Pfizer Limited, Walton Oaks, Dorking Road, Tadworth, Surrey, KT20 7NS, UK. **Date of Preparation:** March 2011. **Company Reference:** GN21_0

References: 1. Molitch ME, et al. *J Clin Endocrinol Metab* 2006; 91(5): 1621–1634. **2.** Maison P, et al. *J Clin Endocrinol Metab* 2004; 89(5): 2192–2199. **3.** McCallum R, et al. *Clinical Endocrinology* 2005; 62(4): 473–479. **4.** Widdowson M et al. *J Clin Endocrinol Metab* 2008 93: 4413–4417. **5.** Gotherstrom G et al. *J Clin Endocrinol Metab* 2009 94: 809–816. **6.** Genotropin SmPC 2011. **7.** Bravenboer N, et al. *J Bone Miner Res* 2005; 20(10): 1778–1784. **8.** Trainer P and Koltowska–Haagstrom M. KIMS Pfizer International Metabolic Database. Overview 2008 Number 11. **9.** Saller B, et al. *Eur J Endocrinol* 2006; 154: 843–850.

Adverse events should be reported. Reporting forms and information can be found at www.yellowcard.gov.uk. Adverse events should also be reported to Pfizer Medical Information on 01304 616161.

Date of preparation: September 2011

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