

NEWSLETTER

Message from the President



The meeting in Barcelona was an outstanding success and I am grateful for all the hard work of the organising team. It was to be expected that the overall attendance would be lower but the enthusiasm of the delegates more than compensated for this.

A notable feature of the meeting was the symposia and round tables devoted to topics other than erectile dysfunction. It was therefore no surprise that at the Business Meeting there was a unanimous decision to change the name of the society to the European Society of Sexual and Impotence Research (ESSIR). There was also agreement that the Executive Committee should be broadened to reflect the geographical and speciality of the members of the society. The limitations of a hand vote were then demonstrated by the election of three urologists from Southern Europe from a field of seven excellent candidates. During the next year we will finalise the new draft bylaws in order that they may be circulated for further discussion before adoption at the Rome meeting.

During the next two years I hope that the basis of the society will be strengthened so that it will become a multidisciplinary society in Europe that is concerned with sexual function/dysfunction. This requires a wider membership base, an active Executive Committee and good relationships with other organisations that have overlapping interests. The office will remain in Madrid during this time.

At the meeting of the representatives of the European patient help organisations European Sexual Dysfunction Alliance (ESDA), I was pleased to learn that such organisations were now present in 7 countries and more countries hope to be active by the end of this year. Such organisations provide valuable help for sufferers and become a source of information for journalists.

It is planned that future Chairmen of ESDA will be a member of the ESSIR Executive Committee.

In March there was a two day meeting organised jointly by the British Society of Sexual and Impotence Research and the Impotence Association (patient help organisation). The first day was a scientific meeting attended by over 200 healthcare professionals from a wide background. Many of them stayed for the second day which was open to the public (that is lay members of the Impotence Association). Such was the success of the meeting that next year the British Association of Sexual and Relationship Therapists also wish to take part.

Any society is only as good as its members and the more you contribute to it the better. Please let us know of any ideas that you have for its improvement and particularly ideas for the meetings, newsletter or organisation. We hope to keep our running costs to a minimum and in this we are helped by generous contributions from the pharmaceutical industry.

John Pryor
President ESSIR



In this issue:

- Welcome message from the new president of the ESSIR, John Pryor.
- Female Sexual Dysfunction: Gorm Wagner introduces this new field and talks about the ESSIR's scientific session at the EAU in Brussels.
- Hartmut Porst's literature review in our "Don't miss..." section.
- Edoardo Pescatori's regular section of coming events.
- Practical guidelines for intracavernosal self-injection by Dimitrios Hatzichristou.
- Jeremy Heaton writes about the role of dopamine receptors in sexual function in our Basic Research Highlights.
- A historical perspective of the oldest remedy for impotence, aphrodisiacs, a contribution from Israel.
- We have added a cut out slip to the back page of the Newsletter to make it easy for our readers to keep us informed of changes in their address or to request new subscriptions for colleagues. We look forward to the postal avalanche!

VISIT OUR WEBSITE
www.essir.net

THE WINDS OF CHANGE

Gorm Wagner



WHO has realised it, the WPA has realised it and WAS too: Times have finally changed!

For those of you not familiar with initials WHO stands for the World Health Organisation, which in its own impotent economic situation is now open to re-enforcing and re-examining the concept of Sexual Health which it began in 1974 with a "technical

conference" and which led in 1975 to the WHO declaration:

"Sexual Health is the integration of the somatic, emotional, intellectual, and social aspects of sexual being, in ways that are positively enriching, and that enhance personality, communication and love".

The World Psychiatry Association (WPA) an umbrella organisation for about 150.000 psychiatrists has recently set up a group to organise educational programmes on sexual health among their members having realised the fact that ordinary psychiatrists in general do not feel confident about handling sexual issues with their patients.

The World Association of Sexology (WAS) is an organisation which brings together a wide range of the ill-defined professional term "sexologists" and therefore has a variety of educational, therapeutical and counselling members among the many organisations globally that attend their meetings to discuss highly diversified topics. This organisation has felt itself set aside until now, but due to the impulse of its current leaders wants to become a part of the new millennium's development of a multidisciplinary approach to sexual health.

And all this is due to a single pharmacological development success, marking a temporary endpoint to 25 years of dedicated intensive work by groups of basic and clinical researchers in male erectile dysfunction (impotence). The introduction of an effective oral compound which has helped a large number of couples regain quality of life in an area of their basic needs: satisfying physical intercourse.

This pharmacological breakthrough has brought

the uncertainty and trial-and-error approach down to earth and at the same time shifted the field of management of the largest group of male sexual disorders (erectile dysfunction) away from the sophisticated specialists' hands right into the consultation rooms of the primary care physicians.

The latter, both unprepared and already overburdened colleagues, suddenly find themselves having to deal with the sexual problems of their demanding patients. This represents a task for which they are not educationally prepared and for which their average 8.5 minutes per patient cannot cater. This is a new dilemma for the WMA (World Medical Association) to address.

WHO, WPA, WAS, and WMA now have to reef their sails in order to make their influence felt upon pre and post-graduate educational programmes and to live up to their own demands of professionalism in order to seize this new opportunity to help further the understanding and to implement a professional approach to human sexuality. To accomplish such goals the specialists, mainly urologists, will have to participate and share their expertise.

But - what next?

Well the obvious answer is FSD!

Female Sexual Dysfunction is a highly diverse and complex issue where somatic disciplines, and gynaecology have not yet become actively involved. And this is most likely the reason why the hitherto active researchers in erectile dysfunction are now moving their focus and efforts into this area, not least because of the belief that the only way forward is through better understanding of the female sexual response of the brain and the genital functions. This thinking is especially prominent in the US and Europe and is the reason why both the ISIR (International Society for Impotence Research) and the ESIR (European Society for Impotence Research) have recognised this development as an important way to advance basic and clinical research in FSD.

A recent initiative was a consensus conference in Boston to re-evaluate the definitions of FSD (J. Urol. March, 2000) and the conferences on FSD in Boston in 1998 and 1999. The WHO sponsored International Consultation on

LITERATURE REVIEW

Hartmut Porst

Erectile Dysfunction in Paris in 1999 incorporated FSD and so did the ESIR in their recent Barcelona Meeting in January 2000. Furthermore the ESIR has gone as far as to change its name to ESSIR (European Society for Sexual and Impotence Research) which gives the connotation that research in sexual function of both sexes are incorporated into their activities. This is also why the ESSIR has chosen to host a pre-congress session on FSD at the EAU in Brussels this year.

One may not agree that this is the "right" or "correct" or even "best" way to present and



discuss FSD, but the experience of 25 years of research in erectile dysfunction does indicate that the way towards fruitful development is to implement initiatives and research and to question "accepted" procedures and treatment modalities which have so far not moved the field of understanding or treating FSD ahead in the last quarter of a century.

Hence the ESSIR's decision to host this symposium at the EAU in Brussels as a way to open the eyes of European Urologists to the possibilities of research in this challenging new area.

Daniell,H.W., Dunn,S.R., Ferguson,D.W. et al: Progressive osteoporosis during androgen deprivation therapy for prostate cancer. J Urol 163, 181-186, 2000.

26 men undergoing surgical or chemical castration for prostate cancer have had a decrease of bone mineral density of 2,4 % and 7,6 %, respectively, during years 1 and 2 with continuing decrease of 1,4 % to 2,6 % per year 3 to 8 years after continuous androgen deprivation. The bone mineral density loss was greater in obese and younger (< 75 years) men without regular exercise. This paper underlines the negative impact of androgen deprivation on bone mineralization which may be also true for non-treated severely hypogonadal men due to other etiologies.

Adamkiewicz,A.,Zgliczynski,S.,Slowinska-Szrednicka,J. et al: The relationship between plasma androgens (dehydroepiandrosterone sulfate and testosterone) and coronary arteriosclerosis in men: the lower the androgens, the higher the coronary score of arteriosclerosis. The Aging Male 2, 22-32, 2000.

In 201 non-obese men (28-60 year (48,1 year) with coronary heart disease the plasma levels of dehydroepiandrosterone sulfate (DHEAS), testosterone, FSH, LH, Sex hormone binding globulin (SHBG) lipids and lipoproteins were determined and correlated with the progression of the disease ascertained by the score of coronary arterial narrowing on coronary angiograms. It turned out that a negative correlation was found between testosterone and DHEAS and the degree of arteriosclerosis. These findings may indicate a preventive role of both testosterone and DHEAS in terms of manifestation of severe and life threatening cardiovascular diseases as it was also presumed in other recent publications.

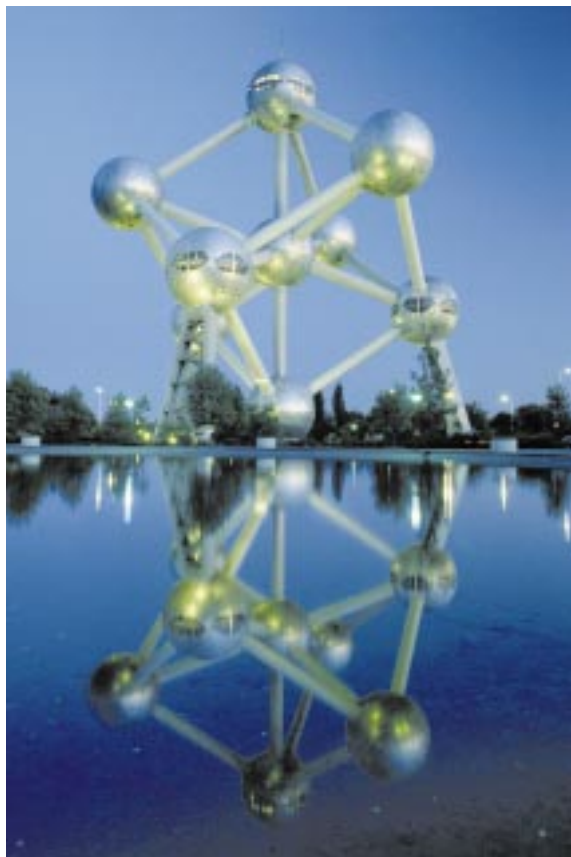
Arlt,W., Haas,J., Callies,F. et al: Biotransformation of oral dehydroepiandrosterone in elderly men. Significant increase in circulating estrogens. J Clin Endocrinol Metab 84, 2170-2176,1999.

A placebo-controlled study with 50 or 100 mg DHEA in 14 healthy male volunteers (mean age 58,1 + 5,1 year) with DHEAS plasma levels below 1,5 mg/ml (4,1 µmol/l) could provide evidence that under DHEA supplementation serum testosterone and DHT remained unchanged but 17-β-estradiol and estrone significantly increased in a dose dependent manner to concentrations still within the upper normal range for men. If the findings of these relatively small series could be confirmed in a larger trial the indeed cheap DHEA could also be an ideal drug for elevation of estrogen levels in the elderly men without the risk of feminizing effects inherent to conventional estradiol containing drugs.

Don't miss...



April 9-11, 2000 Cambridge, Massachusetts, **U.S.A.**
25th ANNUAL MEETING OF THE AMERICAN SOCIETY OF ANDROLOGY
Organizing Secretariat: ASA Executive Offices, 74
New Montgomery, Suite 230
San Francisco, CA 94105, USA
Tel: 415-764-4823 Fax: 415-764-4915
E-mail: 105037.1120@compuserve.com



April, 12-15, 2000 Brussels, Belgium
XVth CONGRESS OF THE EUROPEAN ASSOCIATION OF UROLOGY (EAU)
EAU Congress Office - EAU 2000: PO Box 30016,
6803 AA Arnhem, **The Netherlands**
Tel. +31 26 3890680
fax +31 26 3890686
Email p.debont@uroweb.nl
n.vandervoort@uroweb.nl
NOTE

Pre-congress meetings on Wednesday, April 12:
European Society for Male Genital Surgery (ESMGS)
European Society for Sexual and Impotence Research (ESSIR): "New perspectives on Female Sexual Dysfunction"

April 29 - May 4, 2000 - Atlanta, GA, **U.S.A.**
95th ANNUAL MEETING OF THE AMERICAN UROLOGICAL ASSOCIATION (AUA)

During May 1 and 2 there will be most of E.D. related presentations.

Registration/informations at:
Web: www.auanet.org
Email: convention@auanet.org
lindeman@auanet.org
Fax: (410) 7529612

During the Meeting: Sunday, April 30
2000 h.13.00-18.00

SOCIETY FOR THE STUDY OF IMPOTENCE MEETING

May, 24-26, 2000 London, **England**
3rd INTERNATIONAL SYMPOSIUM ON RECONSTRUCTIVE UROLOGY

On May 26th: Penile reconstruction.
Administrative Secretary: Ms. Jane Capon, Room G28, Institute of Urology & Nephrology
48 Riding House Street, London W1N 7PN, UK
Tel +44 (0)20 75049328 Fax +44 (0) 20 76377076
Email: j.capon@ucl.ac.uk

May 24-27, 2000 Chiba, **Japan**
3rd ASIAN AND OCEANIC CONGRESS OF ANDROLOGY

Scientific secretariat: Haruo Ito, M.D., Ph.D, Dept. of Urology, Chiba
Tel: 0081-43-2262134; Fax: 0081-43-2262136
E-Mail: itoh@med.m.chiba-u.ac.jp

November 5-9, 2000 New Delhi, **India**
25th SIU CONGRESS

Conference Secretariat: Events International Meeting Planners Inc.
759 Victoria Sq., Suite 300,
Montreal, Quebec, CANADA H2Y 2J7
Tel (514) 2860855
Fax (514) 2866066
E-mail: info@eventsintl.com

November 26-30 2000 Perth, **Australia**
9th WORLD MEETING ON IMPOTENCE RESEARCH, incorporating the 12th SYMPOSIUM ON CORPUS CAVERNOSUM REVASCULARIZATION

Conference Secretariat: Promaco Conventions Pty Ltd,
PO Box 890, Canning Bridge
WESTERN AUSTRALIA 6153
Email: promaco@promaco.com.au

September 30 - October 3, 2001 Rome, **Italy**
4th CONGRESS OF THE EUROPEAN SOCIETY FOR SEXUAL AND IMPOTENCE RESEARCH (ESSIR)

Organizing Secretariat: SC Studio Congressi,
Via Ferrara, 40 - 00191 Roma
tel: +39 06 3290250
fax +39 06 36306897
Email: sc.congressi@agora.stm.it
website: essir2001.it

PRACTICAL GUIDELINES FOR A SUCCESSFUL INTRACAVERNOSAL SELF-INJECTION PROGRAMME

Dimitrios Hatzichristou

Although nowadays, sildenafil is the first line treatment for erectile dysfunction, for the last 15 years, intracavernosal pharmacotherapy has been the cornerstone for the medical treatment of male erectile dysfunction, as most impotent patients may benefit from intracavernosal self-injection therapy. Since the number of patients seeking help for ED has increased considerably, many physicians with limited experience in the field have become involved in their treatment. There is increasing evidence that patients who fail with sildenafil citrate may respond to intracavernosal injection therapy and therefore physicians may offer this type of treatment as a second line therapy. The success of this form of treatment depends not only on the underlying pathophysiology, but also on an appropriate patient education. Unfortunately, clinicians usually prescribe drugs without the appropriate dose titration, patient education, counselling and regular follow-up. The following are some practical guidelines addressing these issues.

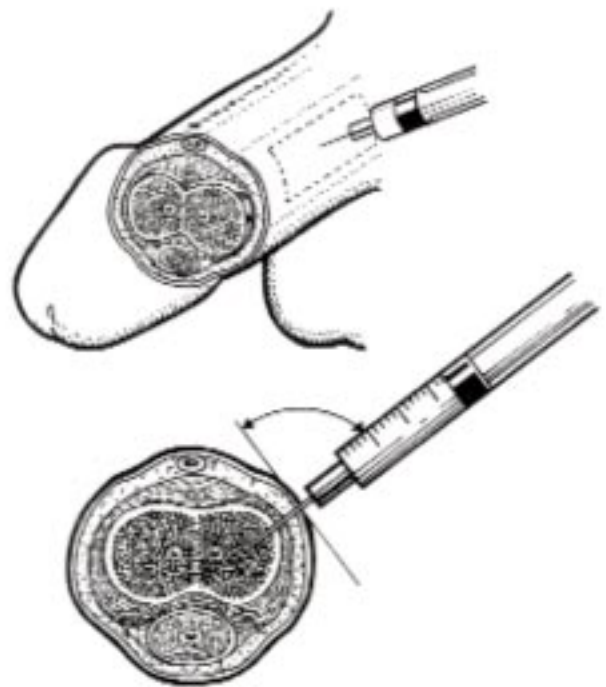
Candidates for intracavernosal self-injection programme should be educated on the anatomy of the penis and the appropriate site for injection. They should also be told that this form of therapy will not affect orgasm or ejaculation and is solely used for restoration of erectile capability. A detailed informed consent which states the known complications of this treatment and discusses the possibility of long term side effects should also be signed. Then all patients will follow a training programme. The training programme

The training programme consists of three phases: the dose determination phase, the self-injection phase and home use.

a) Dose determination phase

During the dose determination phase, the patient is simply instructed to observe the techniques involved in self-injection. A basic principle for safe intracavernosal pharmacotherapy is to use low drug doses in order to reduce the potential complications and to minimise the cost of therapy. Patients with neurogenic impotence should initially receive an extremely low dose, usually 5mcg alprostadil. If only tumescence or weak erection of short duration is achieved with the first dose, the second dose of vasoactive agents is increased to 10mcg alprostadil. In cases

where there continues to be inadequate erectile response, further testing with increasing doses of alprostadil (up to 40mcg) or a combination of vasoactive agents should be done. Doses of up to 1ml of tri-mix, which consists of papaverine, phentolamine and alprostadil, are relatively



safe and effective for the majority of patients. In cases where the erectile response to the initial injection is overly prolonged, the dose should be lowered. A discussion of the results of the injection with the patient, in terms of erection duration and quality is mandatory at the end of this phase.

b) Self-injection phase

The self-injection phase begins with instructions in sterile injection and techniques for the preparation of the solution if required (i.e. alprostadil powder). It is also important to instruct the patients on the specific site of the injection after intracavernosal injection, in order to reduce the potential local complication of hematomas. The patient should also be informed that erection starts within a few minutes and the therapeutic goal is to create a rigid enough erection for vaginal penetration that lasts up to 60 minutes. If the patient feels

PRACTICAL GUIDELINES FOR A SUCCESSFUL INTRACAVERNOSAL SELF-INJECTION PROGRAMME

comfortable with home use, then a prescription for 2-3 injections is given for initial home use. In cases where the use of drug combination is necessary, pre-filled syringes with the appropriate dose of the mixture should be supplied to the patient by the hospital pharmacy. In such cases, the use of a 27-30 gauge needle will minimise pain and trauma during injection.

c) Home use

The patient is asked to describe his experience in the initial home use of injections. Technical issues, the quality of the erection as well as patient and partner acceptance and satisfaction are also discussed. If this initial trial is satisfactory, medication is prescribed for a one month period. If the patient reports fear of needles or practical problems in solution preparation or administration, the use of an autoinjector may be helpful, although the new systems for alprostadil administration available in the market are extremely user friendly. Such devices may also offer major assistance to patients with poor manual dexterity, poor visual acuity, as well as obese patients. Alternatively such patients may have their drugs administered by their partners.

Patients are also told not to inject more than once per day. It should be pointed out that some medication vials should be kept in a refrigerator at home and syringes must be stored in a secure place. After this introductory period, regular follow-up visits should take place.

Follow-up visits

Physician follow-up should occur once per month for the first three months and then at regular intervals, usually once every three months. At the first follow-up visit, the results of the treatment should be discussed extensively not only with the patient but also with his partner. Dose adjustment is possible as after the first in-home self-injections. Typically the patient becomes familiar with the technique and his anxiety levels with this therapy and his ED are expected to diminish.

Follow-up visits may include physical examination of the penis. In cases of the appearance of fibrotic nodules, discontinuation of the treatment for a month period is recommended. A small group of patients may also need dose readjustment. In cases with

poor response even to the highest doses of drug solution, the use of a vacuum device may also be useful to enhance the final results of intracavernosal injection. For patients who use papaverine solution blood tests (including transaminases determination) every six months, in order to check liver function are recommended.

Psychological counselling and rehabilitation. Restoration of erectile function should not be the only treatment objective, as it is also essential to address personal and emotional factors in the sufferer and his partner, possible sexual dysfunction of the partner, all of which may be instrumental in causing or maintaining not only the negative feelings to sexual activity, but also the dysfunction per se. Therefore, sexual and psychological counselling are important during the initial evaluation, the training programme during the follow-up visits. This should help to minimise the drop-out rate considerably.

Management of priapism

The only dangerous complication of intracavernosal pharmacotherapy is priapism. This consists of an erection that persists for more than 4-6 hours, although there is no general agreement on the time limits at which treatment of prolonged erection is necessary, and irreversible histological changes in the erectile tissue have been identified only after 12 hours of priapism. An initial intracavernosal injection of 500 µg of phenylephrine may be successful in producing detumescence within the first few hours of priapism and may be repeated once or twice at 20 minute intervals. Blood aspiration from the corpora through a 23 gauge butterfly needle and irrigation of the corpora with 20-100 ml of an alpha - adrenergic agonist solution (1 mg phenylephrine in 1000 ml normal saline) has been an effective strategy even in cases of persistent, long lasting priapism. Shunting procedures may therefore be considered unnecessary except in cases of extremely prolonged priapistic state (more than 24 hours), as they are associated with post-priapism impotence.

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DOPAMINE RECEPTORS IN SEXUAL FUNCTION

Jeremy PW Heaton

The brain, the heavy-weight of sex organs, and the nervous system have the continuous responsibility of modulating the state of penile blood flow – and equivalently the flow in the clitoris and possibly the vagina. Uniquely among autonomic functions, the proper coordination of a sexual erectile response requires full participation of the brain. From the diverse inputs and processes that continually engage our biological CPU (Central Processing Unit) there has to be a means to achieve this selective function. The brain has two broad strategies for achieving selectivity: hierarchical, branching usually excitatory circuits; or diffuse and distributed neural interconnections that are mostly monoaminergic (norepinephrine, dopamine or serotonin).

The location and function of the receptors largely determines the specificity of the responses for the monoamines. Therefore there is need for many distinct receptors which make up subfamilies (and even more subtypes) of the monoamine receptors (i.e., norepinephrine - 4, dopamine - 5 and serotonin - 7)^{1,2}. There are in addition peptides, probably now numbering over 100, which are usually co-localized with a non-

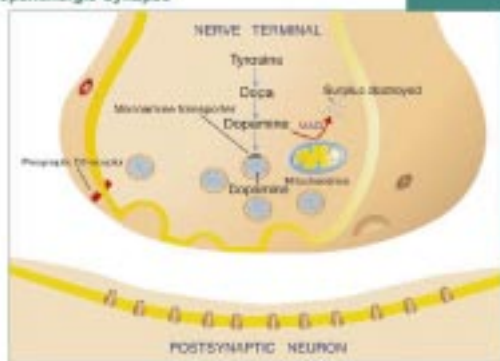
continuous revision as cloning, expression and identification of new variants become commonplace.

Dopamine receptors have been divided into D1 (D1 and D5) and D2 (D2, D3 and D4) subclasses, based on radioreceptor and cloning studies. They are typical G-protein coupled, 7 - transmembrane region receptors. Dopamine receptors (especially D2) may activate multiple pathways, although the same receptors are not always coupled in different cells so different receptor subtypes (isoforms) may act on the same pathway with different outcomes. The D2 receptor appears to be responsible for most of the behavioral effects of dopamine, while the physiological role of D1 is more vascular in nature. Postsynaptic D1 and D2 receptors are involved in stereotypical behavior, while selective D2 receptor activation may underlie dopamine agonist - induced hypomotility, stretching-yawning and penile erection⁴.

Apomorphine has dopamine receptor (D1/D2) agonist activity, with more potent D2-like effects due to key structural similarities to dopamine (and dissimilarities – the larger apomorphine 'key' will not fit all the keyholes that fit dopamine). Apomorphine has been extensively studied in animals, primarily rodents, and is a prototypical central initiator of erection. It has also been used extensively in human clinical trials so there is a particular opportunity to compare human and animal data and acquire a view of the central erectile pathways and their putative role in sexual response. The data indicate that human erectile response at least follows the model and dopaminergics, exemplified by apomorphine, have a unique therapeutic role in clinical erectile dysfunction. The paraventricular nucleus (PVN) of the hypothalamus is a significant site of action of apomorphine in its ability to cause erections. Lesioning this area prevents the apomorphine - induced erectogenic response⁵ and direct injection of apomorphine into the same area stimulates erections⁶. Apomorphine induces selective activation in the PVN at doses relevant to erectile response as verified by early active gene, and c-fos labeling techniques⁷. Injections into the medial preoptic area also elicit copulation erections and facilitate copulation^{8,9}. There is some evidence pointing to a potential role for D1 receptors in the medial preoptic area in the control of erection, as contrasted with D2 receptors in this area which appear to have a

Dopamine Receptor Family: Indications for Treatment

Dopaminergic Synapse



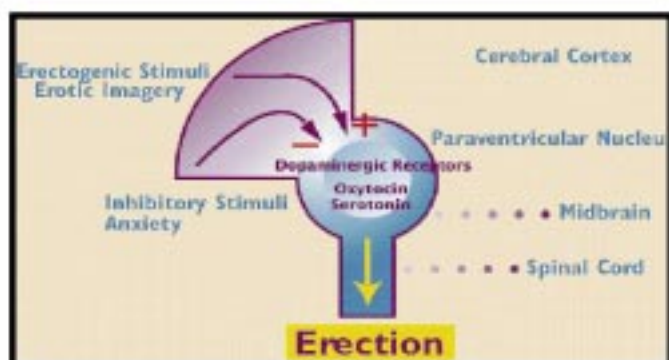
peptide neurotransmitter in the same neuron. In addition there is cholinergic neurotransmission and the actions of nitric oxide – which in the central nervous system including the spinal cord has a peculiar affinity for the erectile pathways³. Classifications of receptor sub-types associated with the major neurotransmitters are in

DOPAMINE RECEPTORS IN SEXUAL FUNCTION

more specific role in seminal emission¹⁰. In contrast, the injection of apomorphine into the hypothalamic ventromedial or dorsomedial nucleus, preoptic area, caudate nucleus, nucleus accumbens or substantia nigra has no direct effect on erections.

Dopamine-containing nerve endings impinge on oxytocinergic cell bodies in the PVN, which project in turn to extra-hypothalamic brain areas such as the hippocampus, the ventral medulla and the spinal cord. In the hypothalamus, the MPOA is rich in dopaminergic receptors and is an important integrating center for brain signalling leading to penile erection. The dopaminergic stimulation activates serotonergic neurons in the median raphe.

Neural Initiation



Source: Kirby, R., *Erectile Dysfunction* 2nd edition.

Raphe-hippocampal 5-HT neurons in turn activate downstream cholinergic mechanisms. Cholinergic transmission changes further influence the downstream spinal mechanisms that mediate coordination of erection¹¹.

Finally the erectile pathways, and their dopamine components, are particularly susceptible to the hormonal environment. Testosterone, and other sex steroid hormones, have complex roles in neural development, differentiation and on-going function¹². This elegant logic connecting sexual function – sex hormones – central sexual neurotransmitters (especially dopamine) is simple although the details are complex.

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APHRODISIACS: THE OLDEST PRESCRIPTION

*Ilan Gruenwald, MD
Yoram Vardi, MD*

Before you turn to the use of aphrodisiacs, consider the words of the Roman Seneca:

"I will show you a philtre without potions, without herbs, without any witch's incantation: if you wish to be loved, love".

Men and women have long dreamed about the possibility of enhancing their sexual desirability by fast, effective and simple artificial means. The history of aphrodisiacs began with that of mankind and there seems to be no limit to the credulity of man in his pursuit of aphrodisia. It is possible to compile a catalogue of over 500 substances which have, at some time, somewhere, been advocated for their supposed aphrodisiac properties. Every culture and society seems to have its own types of aphrodisiacs, some of which are specific to the plant or animal species that naturally exist in that particular geographic region. Much of our current knowledge about aphrodisiacs is rooted in erotic and unusual myths, poems, superstitions, legends and anecdotal evidence. Aphrodisiac plants can be found illustrated with a sensual array of art - from Egyptian hieroglyphics to medieval tapestries, whimsical Tibetan folk art and erotic Asian silk-screen paintings.

According to mythology, Aphrodite, goddess of love and sexuality, (picture 1) emerged from the seas bearing herbs that could cure impotence, enhance sexual pleasure, and provoke both love and fertility. It is therefore not surprising that many types of seafood have a reputation as aphrodisiacs.



Picture 1

Named after this Greek goddess, aphrodisiacs are defined in the Academic Press Dictionary of Science and Technology as a drug or agent that arouses or increases sexual response and sexual desire. But testaments to the use of aphrodisiacs go way back to before Aphrodite's birth.

Aphrodisiacs come in a surprising number of forms including animals, plants, food and drink, drugs, scents, devices and chemical substances. The following are a few of the most common aphrodisiacs by type:



Picture 2

Because Aphrodite was born from the sea, forms of sea-plants and sea life were thought to enhance sexual powers: oysters and clams are by far the most popular seafood to be thought of as aphrodisiacs. On some islands in the Caribbean, live shrimp are eaten during sex. In parts of Europe, caviar (picture 2) and sardines are a favourite ingredient of love potions.

Sex organs of animals fabled for their sexual activity, such as goats and rabbits, have achieved

their esteemed status as love aids in some cultures. During Roman times organotherapy was a popular way of trying to treat sexual problems. This therapy is based on the belief that the consumption of a healthy animal organ might cure illnesses in the corresponding human organ. Romans ate all kinds of animal genitalia, including penises, wombs and testes, from animals ranging from monkeys to deer. The use of deer genitals as an aphrodisiac dates back to the Greeks, Hippocrate recommends the penis, and also rhino horns. Even today rhinos are hunted down for this specific reason and they are an endangered species close to extinction. Preparations of deer penis were included in several pharmacopoeias as late as the 18th century in Sweden. Even today there is a market for animal genitalia. According to the March 1995 issue of *Animal People*, one Canadian company delivered 50,000 seal carcasses to China during 1994.

Foods causing physiological effects such as chillies, curries, and other spicy foods have been seen as aphrodisiacs because they produce signs that are similar to the physical reactions experienced during sex, increased heart rate, sweating etc.

Similarity to genital organs - Many ancient peoples believed that an object resembling genitalia may possess sexual powers. Ginseng, rhinoceros horn, asparagus, celery, onion, and oysters are classical examples. The word ginseng means "man root" and the plant's reputation as an aphrodisiac probably arises from its marked similarity to the human body. The first aphrodisiac mentioned in the Bible (Gen. 30:14-16) is the mandrake (picture 3) (*Mandragora officinarum*), and its use is attributed to its supposed power to induce fertility. This was again due to the shape of its root, which resembles the penis. However, research by A.Fleisher in 1994 suggests that it was not the appearance of its root, but rather the unique fragrance furnished by the fruits of mandrake that gave it its power. It seems that the Scripture connects the fragrance of mandrake with sexuality.



Picture 3

Scent, in particular human body odour is thought to be an aphrodisiac. The sense of smell, is closely intertwined with sexual proclivity in the animal kingdom, as most animal species use scent to determine the female's readiness for copulation. Scent is still important in human relationships. Unfortunately, due to social taboos and environmental interference, it is difficult for humans to allow their bodies to obtain a natural smell that is attractive to the opposite sex.

APHRODISIACS: THE OLDEST PRESCRIPTION

Pheromones are but one segment of aphrodisiac substances. These are naturally occurring chemicals that evoke a sexual response and there is considerable scientific evidence to substantiate their influence on sexual behaviour. Some other aromas are thought to have aphrodisiac effects; jasmine, sandalwood, cinnamon and frankincense, among them. Some African cultures believed that softly massaging ones' own urine into their lover enhanced sexual and spiritual love. Various devices have also been devoted to stimulating potency. As an example, in London, in the mid-eighteenth century, John Graham made a fortune charging people for the privilege of sleeping on his "celestial bed". The bed had curious coils attached to it, soft music was played, incense burned, and coloured lights bathed the sleeper.

Favourites

Of aphrodisiac substances, from the common apple to the Asian ylang-ylang tree, out of hundreds of various alleged medicines (snake blood, ox penises, monkey brains), insects (e.g. common cockroach), green oats (*Avena Sativa*), powdered nettle and sea buckhorn fruit,--mushrooms, Ginkgo biloba and the Spanish Fly are by far the favourite aphrodisiacs.

Ginkgo is most probably the oldest, and most prototypical, aphrodisiac in the world. Ginkgo biloba (picture 4) (*Ginkgoaceae*) resembles the persimmon in colour (pale orange), size and character. The nuts contain very small quantities of a group of remarkable chemicals called ginkgolides; higher concentrations are found in the leaves and in the wood. The ginkgolides are highly modified diterpenes which may play a role in sexual excitement. The plant's origin is in the Permian era, some 200-225 million years ago. The present form of the ginkgo leaf has been essentially unchanged since Jurassic times, about 100 million years ago. Thus, Ginkgo biloba is a fascinating living fossil; individual specimens can reach an age of over 500 years. In Chinese herbal medicine (a major source of information) ginkgo leaves have been used for more than 5,000 years against various ailments including impotence. Nowadays, the most common preparation is a standardised extract (containing 24 % flavoglycosides).

Spanish fly, or cantharides, is probably the most legendary aphrodisiac-and the most dangerous. Made from dried beetle remains, the reported sexual excitement from Spanish fly comes from the irritation to the urogenital tract. Unfortunately, aphrodisiac experimentation is not without danger, Spanish fly is a poison that burns the mouth and throat and can lead to genitourinary infections and scarring of the urethra. A case of fatal poisoning

due to voluntary ingestion of cantharides powder was reported by Poletini in 1992. Death from the *Amanita muscaria* mushroom was also reported.

There are also various kinds of popular aphrodisiac mushrooms (porcini, portobello) and each has its own history. Mushrooms have an unusually high content of glutamic acid which may be the main thrust of their aphrodisiac powers. Dried *Amanita muscaria* mushroom has been acclaimed as the most powerful of aphrodisiacs. A salad of mushrooms, radishes, garlic and *Vadalia* onions has been recommended to improve sexual enhancement.

Love has its problems

Doubts regarding the efficacy of aphrodisiacs were officially expressed by the U.S Food and Drug Administration (FDA) in 1989. The Agency then declared that there was no scientific proof that any over-the-counter (OTC) aphrodisiacs work to treat sexual dysfunction. Despite this, people continue the optimistic quest for drug-induced sexual success. There is urgent need for scientific research today to clarify all the misinformation surrounding this topic.

Despite the lack of scientific evidence of safety and effectiveness, the fraudulent OTC love potion industry thrives to this day. It is estimated that the aphrodisiac sellers, who do much of their business by mail-order, take in revenues in the hundreds of millions of dollars a year.

As a professional association we must fight against the unproven and potentially harmful products sold freely as potent aphrodisiacs. We must demand proper diagnosis and conventional proven effective treatment for the various sexual problems. We must not allow these companies to take advantage of an individual's despair for benefit of profit.

The science of love

Today, research on sex in many countries around the globe is still socially taboo. Regarding aphrodisiacs only few studies have been conducted on Ginseng, Green Oats (*Sativa*), *Mauri Puama*, and a few others that suggest some link between these substances and heightened sexual response in both males and females. However, there is still a lack of firm scientific evidence, desperately needed, for confirmation of these findings.

The non-scientific evidence and knowledge about aphrodisiacs has existed for thousands of years. As with much of our knowledge of ourselves, most likely, some of it is true and some of it is false, and we have little of idea of which is which. Unfortunately, throughout history science and sex have never mixed well. Perhaps these subjects will always remain separate, but today the gap is much narrower than ever before, promising a good chance of improving our knowledge in this field and improving human sex life.

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Contribution from a reader

Bill and Marla decided that the only way to pull off a Sunday afternoon quickie with their ten-year-old son in the apartment was to send him out on the balcony and order him to report on all the neighborhood activities.

The boy began his commentary as his parents put their plan into operation.

"There's a car being towed from the parking lot," he said. "An ambulance just drove by". A few moments passed. "Looks like the Andersons have company," he called out, "Matt's riding a new bike and the Coopers are having sex."

Mom and Dad shot up in bed. "How do you know that?" the startled father asked.

"Their kid is standing out on the balcony too," his son replied.



HUMOUR