



Your Monthly Update

Dear Colleague

Welcome to the February 2008 newsletter from Pure Bio Ltd.

Did you know. . .?

Pure Bio is now stocking Adenosylcobalamin (vitamin B12). Vitamin B-12 is important for the normal functioning of the brain and nervous system and for the formation of blood. It is normally involved in the metabolism of every cell of the body, especially affecting the DNA synthesis and regulation but also fatty acid synthesis and energy production.

Whilst methylcobalamin – already available from Pure Bio – is more essential in maintaining healthy homocysteine levels, **Adenosylcobalamin** is more essential for optimising cellular energy through the Citric Acid Cycle. Deficiency of Adenosylcobalamin may result in abnormal fatty acid synthesis, with the abnormal fat subsequently being incorporated into myelin. This can lead to the myelin becoming fragile, or even to a state of demyelination.

Following a specific request, our topic for this month is:

Loss of Libido

Ranking	Nutritional Supplements	Botanical Medicine
Primary	DHEA	
Secondary	L-Arginine EFAs	Ginkgo Yohimbe Damiana Catuaba Muirapuama
Other	Zinc	Horny goat weed Maca Ginseng St John's Wort (if associated to depression) Tribulus terrestris
Primary – Reliable and relatively consistent scientific data showing a substantial health benefit.		

Secondary – Contradictory, insufficient, or preliminary studies suggesting a health benefit or minimal health benefit.

Other – An herb is primarily supported by traditional use, or the herb or supplement has little scientific support and/or minimal health benefit.

Decreased libido

Although impotence affects an estimated one in ten adult males, a low sex drive is by far the greater problem and is now the biggest single reason for consulting a sex therapist. Loss of interest in sex affects at least 20% of the adult population at any one time, including 30% of middle-aged women, 45% of men with prostate symptoms, 60% of stressed executives, 72% of postmenopausal women and 80% of new mothers and breast-feeding women.

Viagra actually has little, if any, effect on desire for sex. It works by selectively inhibiting the action of an enzyme (Type 5 phosphodiesterase) in the penis. As a result, smooth muscle fibres in the arteries and spongy tissues of the penis relax so that more blood can flow into the penis and pool inside. This results in a firmer erection once sexual stimulation starts – but for stimulation to begin, the sex drive must already be intact.

The sex drive is said to be the second strongest urge in humans, after sleep. Sigmund Freud took great interest in this phenomenon, and coined the term libido to signify the instinctive psychosexual energy he believed was present in everyone from birth. The term libido is now used more generally however, to describe the basic desire for sex.

Factors affecting libido

The human sex drive is controlled through complex interactions between:

- sex hormones (such as dehydroepiandrosterone (DHEA), testosterone and oestrogen),
- certain metabolic hormones (e.g. prolactin, growth hormone), neurotransmitters (e.g. dopamine) and
- pheromones – volatile, odourless chemicals secreted in human sweat that have subtle effects on the sexuality of others.
- Psychological stimuli (sight, imagination), physical factors (taste, smell, touch) and cultural customs or inhibitions also play a role.

A number of external factors such as levels of stress, exercise, drug and alcohol intake, smoking habits, general health, fatigue, diet and even the degree of exposure to sunlight, all contribute to a person's libido.

Men generally reach their peak physical sex drive in their teens, while their psychological sex drive peaks after the age of 50 as testosterone levels fall. Women, on the other hand, reach their physical sexual peak in their 30s or 40s while their psychological sex drive reaches its maximum in their 50s - at the same time as that of males.

Causes of decreased libido

Loss of sex drive can occur for a number of reasons:

- hormone imbalances
- stress
- side effects of drugs
- pregnancy
- breast-feeding

- depression
- Physical conditions such as prostate enlargement in older males, and pain or long-term illness
- emotional problems including low self-esteem and relationship difficulties

Stress is one of the most widespread causes of loss of libido, along with overwork, tiredness and lack of sleep. Excess stress is associated with a reduction in sex hormone levels, and an increase in secretion of prolactin. Prolactin has a powerful negative effect on libido, and literally switches off the sex drive as well as reducing fertility. Prolactin is released in high quantities at the end of pregnancy and during the first three months of breast-feeding and is the primary cause of decreased sex drive at this time.

It is also estimated that between 3% and 8% of men with low sex drive and impotence have a raised prolactin level. This may be caused by a benign tumour of the pituitary gland - a prolactinoma. Beer and stress also increase levels of prolactin.

Depression is estimated to affect 5% of the population at any one time. Loss of sex drive is one of the first symptoms to occur in depressive illness, and one of the last to recover with antidepressant therapy. The most well known antidepressant, Prozac (fluoxetine) and the traditional tricyclic antidepressants (e.g. amitriptyline) significantly reduce sex drive, cause erectile dysfunction in at least 40% of males and make orgasm difficult to achieve (and of reduced intensity) in 30% of those taking them. Antidepressants that have a neutral effect on sex drive - and may even stimulate it - are therefore preferable (trazodone, viloxazine, fluvoxamine, mirtazapine and nefazodone).

Prescription Drugs - Over 150 commonly prescribed drugs have a negative effect on sex drive. The most common culprits are diuretics, treatments for high blood pressure, angina and heart failure, tranquilizers, the anti-ulcer drug cimetidine, some antihistamines and finasteride - a drug widely used to treat an enlarged prostate gland in older males.

Even hormonal methods of contraception frequently reduce interest in sex. The progestogen-only contraceptives (e.g. mini-Pill, implants, depo injections) are especially harmful and may reduce vaginal secretions – making sex uncomfortable – as well as lowering natural testosterone levels.

Hysterectomy - It is estimated that one in five women will have had a total hysterectomy by the age of 55. A study in Japan found that 27% of women who had had a hysterectomy noticed the loss of uterine sensations while having sex, and that 70% had difficulty in reaching orgasm as a result. A similar survey in Finland compared women who had both uterus and cervix removed (total abdominal hysterectomy) with those who had just the uterus removed, but had the cervix left in place (sub-total hysterectomy). One year later, although researchers found no difference in sexual desire between the two groups, women who had undergone the sub-total operation experienced significantly more orgasms than women undergoing a total hysterectomy.

If loss of libido occurs after hysterectomy, it may be related to an early menopause, which often occurs within two years of hysterectomy even if the ovaries are left in place. Many women find that sex feels different after the menopause. As oestrogen levels fall, one in five experience a profound loss of interest in sex. Oestrogen replacement therapy will usually revive a lost libido.

Male menopause - The male sex drive is frequently affected by hormone changes occurring in later life. Testosterone levels reach their peak in the late 20s to early 30s and then slowly fall by less than 1% a year from around the age of 40. Some men develop symptoms of tiredness, irritability, a lowering of libido and a decrease in sexual performance plus excessive sweating, hot flushes and mood swings. Many men experience these symptoms despite normal testosterone levels. While this is a controversial area, some physicians believe this is due to a reduced interaction

between circulating testosterone and its receptors (testosterone resistance), or to more testosterone becoming bound to protein (and therefore less active) in the circulation. Testosterone replacement therapy does seem to help, although it is only usually prescribed by specialist andrologists because of a theoretical increased risk of prostate cancer as a result of treatment.

Lifestyle modification

Eliminating wheat, beer, milk, cheese, and alcohol can help a flagging libido, especially for men.

A deficiency in zinc, which is common in both sexes, can also adversely affect sexual appetite.

Long hours in front of a computer or the television could alter sex drive due to the pulsed electromagnetic radiations (PEMR) that have now been linked with reduced fertility and libido and increased tiredness. In one study, for example, human testicle cells exposed to radiation from a computer screen for 24 hours had a 300% increase in mortality, compared with unexposed cells. An EMF-Bioshield device fitted to the computer can significantly reduce exposure to these radiations.

Nutritional Supplement options

In theory, a prosexual supplement could work in a variety of ways, by:

- improving general physical, mental and sexual energy levels, and counteracting stress, fatigue or exhaustion
- having a direct action on neurotransmitters
- having a hormone-like action in the body, or by stimulating natural hormone secretion
- raising low mood to overcome the loss of sex drive linked with depression
- increasing blood flow to the genitals and producing sensations of tingling, throbbing or engorgement
- increasing production of reproductive fluids, especially semen volume, which acts as a sexual trigger in the male
- stimulating erotic dreams or thoughts
- reducing sexual inhibitions
- through a classic placebo effect.

DHEA (dehydroepiandrosterone) - Levels of DHEA decline naturally with age and also with adrenal insufficiency. Both have been associated with low libido. DHEA should only be taken under the supervision of a qualified healthcare practitioner. People taking DHEA supplements should have blood hormone levels monitored regularly.

L-arginine is needed by the body to make nitric oxide, a compound that helps to relax blood vessels and allow blood to flow through arteries.

Essential fatty acids are crucial to sexual health as they are the precursors to the prostaglandins pathways.

Oats - Most people are aware of the traditional saying about sexuality and sowing one's wild oats, although few are also aware that this familiar, nutritious porridge cereal may actually boost libido. A study involving 40 adults found that oats (**Avena sativa**) significantly increased sexual desire and performance when given in combination with extracts of stinging nettle (*Urtica dioica*).

Botanical Treatment options

Catuaba, is derived from the bark of the Amazonian Tree of Love (*Erythroxylon catuaba*). Preliminary studies suggest that Catuaba promotes erotic dreams in both men and women, followed by increased sexual desire within 5 – 21 days of regular treatment. It also seems to improve peripheral blood flow and to strengthen penile rigidity.

Damiana has a long tradition of use as an aphrodisiac that can be traced back to the Ancient Mayans of Central America. The remedy is derived from the aromatic leaves of a small shrub, *Turnera diffusa aphrodisiaca*. The therapeutic effect is partly derived from volatile oils that gently irritate the sexual organs to produce localized tingling and throbbing sensations, increased blood flow and increased sensitivity of nerve endings in the clitoris and penis. Some herbalists have suggested that alkaloids in Damiana could have a testosterone effect but there is little research to support this.

Muira Puama (*Ptychopetalum olacoides*) - Over 50% of males taking it claimed a “dynamic” effect on libido and erectile dysfunction. It is thought to stimulate desire through a direct action on neurotransmitters, by stimulating nerve endings in the genitals and by promoting the effects of testosterone. Clinical studies have shown that Muira Puama is more effective than Yohimbine, a pharmaceutical extract from the bark of a West African tree, *Pausinystalia yohimbe*, which has FDA approval as a treatment for impotence.

Yohimbe itself has been used for centuries by the Bantu to increase libido, enhance sexual pleasure and prevent or treat impotence. Thanks to its yohimbine content, 80% of men taking it claim a good to excellent response. Yohimbine selectively blocks the release of vasoconstrictive chemicals in the peripheral arteries so that they dilate, increasing blood flow to the penis. This results in a powerful and long-lasting erection which can produce priapism - a surgical emergency in which erection is so prolonged that blood trapped in the penis will clot and prevent future erections if not urgently evacuated. For this reason, unsupervised treatment with Yohimbe bark is not recommended. Contrary to popular belief, Yohimbine has no effect on testosterone levels, but does increase sex drive in both men and women through a poorly understood action on neurotransmitters that induces erotic dreams.

Ginkgo biloba, or Maidenhair tree, contains ginkgolides and bilobalides that can relax blood vessels in the body, boosting circulation to the brain, hands, feet and genitals. Trials confirm that males with erectile dysfunction show a good response to Ginkgo, with half of previously impotent men regaining full potency within six months. After nine months, all those who previously had to rely on drugs injected into the penis to achieve an erection regained full erectile function. Even more significant, out of 30 impotent men who had not achieved erection with orthodox medical treatment, 19 regained full potency after taking Ginkgo.

Ginseng (*Panax ginseng* and *P. quinquefolium*) has been shown in numerous clinical trials to help the body adapt to physical and emotional stress. Ginseng contains a variety of so-called ginsenosides that stimulate secretion of adrenal hormones, including small quantities of oestrogen and testosterone. Ginseng has been associated with sexual function for centuries and veterinary studies have found it can boost sexual activity and sperm production in rabbits, bulls and rats, stimulate ovulation in hens and prepare female rats for mating.

Ginseng is widely reputed to have an aphrodisiac effect in humans, which preliminary studies suggest is due to the enzyme panquilon. It was recently suggested that ginseng increases levels of nitric oxide (NO) in the spongy tissue of the penis and clitoris. NO is a nerve chemical essential for increasing blood flow to the penis during sexual arousal and this action is in fact, similar to that of Viagra. Impotent men who took Korean ginseng for two months achieved a three times greater frequency of sexual intercourse and morning erections, and significantly firmer tumescence than those receiving placebo.

Siberian ginseng (*Eleutherococcus senticosus*) has similar actions and is also noted for its aphrodisiac properties. It contains oestrogen-like plant hormones that have been shown to relieve hot flushes, vaginal dryness and night sweats in menopausal

women. Veterinary research shows that Siberian ginseng increases milk secretion in cows, honey production by bees, and increases semen production in bulls by 28 percent. It is still being researched as a prosexual supplement in humans, but seems to improve fertility and sex drive by enhancing overall vitality and by normalizing levels of sex hormones.

St John's Wort (*Hypericum perforatum*) can significantly boost sex drive in those who are also depressed. Research in Germany involving 111 post-menopausal women with low sex drive and physical exhaustion found that taking Hypericum for three months helped 60% achieve a significantly higher libido. Before the trial, 60% said they were too exhausted for sex. At the end of the trial, none of them felt that way. They also reported increased self-esteem, a marked increase in self-confidence and self-respect.

Tribulus terrestris is a plant widely used in Indian Ayurvedic medicine. Its fruit contains steroidal substances that have been shown to increase testosterone levels in otherwise healthy males by around 30% within 5 days, leading to a significant increase in low libido – especially that associated with lethargy and fatigue.

Homeopathy

Homeopathic hormones such as testosterone or DHEA are frequently used to normalise hormone imbalances associated with loss of libido, especially in those unable to take orthodox hormone replacement therapy. Complex remedies containing a number of homeopathic ingredients are also available over the counter, which may combine Ovarinum (ovarian extract) or Orchitinum (testicular extract) with other homeopathic remedies such as Lycopodium, Selenium, Agnus castus and Ambra grisea.

Most practitioners prefer to prescribe individual homeopathic remedies tailored to a person's constitutional type:

- Baryta carbonica, for example, is helpful for men with so little interest in sex that they fall asleep during intercourse, who lack confidence or are anxious about the size of their genitals.
- Phosphoricum acidum is an effective homeopathic remedy for those whose low sex drive is linked with lethargy, stress or feelings of guilt about sex.

Aromatherapy

Aromatic oils contain many active ingredients in a highly concentrated and potent form which, because they are volatile, readily evaporate to release their powerful scent.

The sense of smell is directly connected to one of the most ancient parts of the brain, the Limbic System, without first being filtered by higher centres. Smells therefore have a profound effect on behaviour as they can trigger primitive responses that have not been modified by intellectual input. The Limbic System is in turn directly linked to other nerve centres in the brain concerned with learning, memories, arousal, emotions and even hormone secretion. Smell can therefore evoke powerful responses such as hunger, nostalgia, fear and sexual desire. Some of these effects are triggered through the subconscious detection of production of pheromones – volatile odourless chemicals secreted in human sweat that have subtle effects on the sexual behaviour of others.

The sense of smell is more acute in women than men, and is strongest around the time of ovulation. Low sex drive responds well to treatment with aromatherapy. Several different therapeutic actions are thought to be involved, including the ability to:

- calm, relieve stress and induce relaxation
- stimulate secretion or mimic the effects of natural pheromones
- stimulate erotic centres in the brain where desire originates
- release inhibitions

- produce a direct physiological effect through the plant hormones present in the essential oils used.

The essential oils believed to increase sex drive through a pheromone-like action include [Angelica](#), [Ambrette](#), [Benzoin](#), [Clary-sage](#), [Cumin](#), [Mace](#), [Nutmeg](#), [Patchouli](#), [Pimento berry](#), [Sandalwood](#) and [Vetiver](#). Angelica also has oestrogenic properties and is useful for stimulating low sex drive in women with menopausal symptoms, or with heavy, painful or irregular periods or who are exhausted due to anaemia.

Not surprisingly, oils with a hot or warm, spicy aroma are popular sexual stimulants. These include [Black pepper](#), [Cardamom](#), [Cinnamon](#) and [Ginger](#).

The heavy, floral essential oils of [Geranium](#), [Rose](#), [Jasmine](#) and [Ylang-ylang](#) are among the most powerful aromatic aphrodisiacs:

Jasmine is thought to boost sex drive through a hormone action although some researchers believe it stimulates secretion of pheromones. Jasmine is especially useful for those whose loss of libido is linked with anxiety, restlessness, low mood and lack of confidence.

Rose oil is recommended for women who find it difficult to reach orgasm and whose low sex drive is linked with lack of self-confidence or with menstrual problems. It is also beneficial for men suffering from erectile dysfunction.

Ylang-ylang is both relaxing and uplifting and is helpful for impotence and total loss of sex drive in men or women, especially where this is linked with anxiety and stress.

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