

# Developing Treatments



## Treatments for men

For most of history, men have viewed themselves as normal. That is they have considered their anatomy, health and symptoms as the norm, with women and children as different. Most of the history of medicine is therefore the history of medicines for men.

As men's and women's bodies are different, some conditions are specific to men. However, men today also have higher death rates than women associated with many cancers, heart disease, diabetes, liver disease, suicide and deaths due to external causes such as accidents at work.

Today, men's average life expectancy at birth in the United Kingdom is nearly 77 years, while for women it is over 81 years. This is not necessarily all explained by biology. Men's attitudes towards their health also have a part to play.

## Treatments for men: baldness

Men are much more likely to suffer from hair loss than women. Men have been keen to find a treatment for hair loss since the Ancient Egyptian pharaohs. In addition to the substances on display, past remedies have included rubbing onion juice or eel fat onto the scalp, or even drinking bat's blood!

Today, 50% of men aged over 50 are balding. Most male baldness (androgenic alopecia) is an inherited condition caused by a substance called dihydrotestosterone (DHT). DHT seems to reduce blood flow to hair follicles, so the hairs eventually fall out.

**Photograph below shows:  
Sea horses, 1700s**

Robert James wrote about sea horses in *A New English Dispensatory* published in 1747:  
"The Ashes of the burnt Fish [sea horse], mixed with Tar or Fat...and the Part anointed, cures an Alopecia."

John Burges, an apothecary, collected these sea horses in the 1700s as specimens of medicinal ingredients.



### **Powdered bees, 1700s**

In 1747, Robert James in *A New Universal English Dispensatory* wrote about powdered bees:

“If this powder is mixed in Unguents [ointments], with which the Head is anointed, it is said to cure the Alopecia, and to contribute to the Growth of Hair upon bald Places.”

But by 1770, William Lewis wrote in *The New Dispensatory* :

“Bees, dried and pulverized, are said to cure the alopecia...but they have been for a long time strangers to the shops.”

John Burges, an apothecary, collected these bees a part of a larger group of specimens of medicinal ingredients in the 1700s.



### **J.J. Bell & Co.'s Unique Vegetable Extract, 1880-1920, F.Newbery & Sons**

Described on the box as “warranted to stop the hair from falling off, cleanse the head from scurf, and cause the hair to grow in bald places.” We do not know what the ingredients are.

### **Humagsolan Hair Food tablets, around 1925, Humagsolan Ltd.**

Humagsolan's label claims that the product 'promotes the growth and prevents the loss of hair'. Humagsolan contains predigested keratin in the form of easily assimilable cystin, the substance that the manufacturers claimed induces hair growth.

### **Kolene hair food, 1920-1950, Pannett and Neden**

The manufacturers stated that using Kolene meant that “starved roots and dried-up follicles take on new life and the hair regains the lustre and strength of youth.” We do not know what the ingredients are.

### **Tincture of jaborandi, 1940-1960, British Drug Houses**

Jaborandi is a South American tree. Manufacturers did not often use it in medicine, but they did add it to hair lotions, as it was supposed to stimulate hair growth.

### **Cantharidin vinegar, 1950-1965, British Drug Houses**

Cantharides beetles, renowned as an aphrodisiac, were also recommended in the 1700s to promote hair growth. Robert James wrote in *A New Universal English Dispensatory* in 1747:

“Galen informs us that Plaisters made of these Flies, may very properly be used for the Cure of Baldness.”

More recently, pharmacists have included vinegar of cantharidin in hair lotions.

### **Harlene Hair Tonic, 1964-1975, Edwards Harlene Ltd.**

The packaging instructed customers to apply the tonic to the roots of their hair and massage it into their scalp. We do not know what the ingredients are.

### **Regaine lotion, 2004, McNeil Healthcare Ltd.**

The active ingredient in Regaine is minoxidil which dilates arteries, increasing blood flow to the hair follicles. It can restore existing hair growth, but cannot reactivate dead follicles.

Scientists first developed minoxidil as a drug to reduce high blood pressure. However, when patients first used it in the 1980s, they started growing unwanted hair. Researchers at the pharmaceutical company Upjohn were successful in creating a product that could concentrate this hair growth on the scalp.

### **Wellman Tricologic tablets, 2007, Vitabiotics**

Tricologic was launched as a new product in 2007. Its packaging says it contains “vitamins, minerals and bio-active nutrients to nourish hair follicles and support healthy hair growth.” These ingredients include *Keratone*™ to nourish hair follicles, biotin for scalp oils, niacin (vitamin B3) for blood circulation, iron, and para-aminobenzoic acid to maintain hair colour.

## Bears' grease advertising model and ointment pot lids, 1800s

In 1653, Nicholas Culpeper wrote in *The Physicians Library* that "Bears Grease staies [stops] the falling off of the hair."



The fact that bears are very hairy seems to have led people to believe that a preparation made from bear's grease would help them to grow hair.

Manufacturers prepared bear's grease for sale from the fat of the brown bear mixed with beef marrow and a perfume to take away the disgusting smell. People believed that the best bear's grease came from Russia. By the early 20<sup>th</sup> century, makers started to substitute other fats. Imitation products labelled 'Bear's Grease' were made from veal suet, lard and beef marrow, perfumed with lavender, thyme, otto of roses or oil of bitter almonds. Sometimes manufacturers added green colouring to make it more attractive.

## Treatments for men: sexual performance

We can only presume that men have been concerned about their sexual performance since the beginning of time. Certainly substances that people have believed to be aphrodisiacs have existed for centuries.

Since the mid-1990s, scientists have developed medicines to treat erectile dysfunction. Medical professionals now treat impotence seriously as a medical condition. Patients' demand for treatments for erectile dysfunction is massive. In 2007, 9 Viagra tablets were sold around the world every second.

### Aphrodisiacs

#### Cantharides, 1800s

Dried and powdered cantharides beetles are a very powerful poison. Medics have used small doses to treat many diseases, but cantharides has also been renowned to increase sexual desire. In 1752, a Frenchman was prescribed 2 drachms of cantharides for a fever, and claimed that in the next two months he bedded his wife at least 87 times.

#### Rhinoceros horn, 1800s

Rhino horn has a long-standing reputation as an aphrodisiac. Is it just because of its phallic shape? It contains fairly large amounts of calcium and phosphorus. This could mean that taking doses of powdered horn could increase a patient's stamina levels.

### **Potensan tablets, 1950s, Medo Chemicals Ltd**

Potensan was first developed by scientists in the early 1950s. It contained the active ingredients yohimbine hydrochloride, strychnine hydrochloride and the controlled drugs amylobarbitone and dexamphetamine sulphide. These tablets were seen as a remedy for sexual dysfunction due to the alleged aphrodisiac qualities of yohimbine.

### **Restandol capsules, 2001, N.V.Organon**

Impotence, infertility and decreased sex drive can be caused by low levels of the male hormone, testosterone. These capsules contain testosterone undecanoate (undecylate) which converts into testosterone, the natural male hormone, in the body.

### **Treatments for erectile dysfunction**

Persistent erectile dysfunction is estimated to affect about 10% of men at any time. It can be caused by physical and psychological factors.

Erections are usually controlled by a balance of two chemicals – the first brings on an erection, the second takes it away. Recent drugs act to make sure that the two chemicals are not out of balance either by promoting the first chemical, or reducing the action of the second one.



Scientists originally developed alprostadil as a treatment for high blood pressure. It was licensed as a treatment for erectile dysfunction in 1994, and had to be injected into the penis or inserted into the urethra.

### **Muse urethral stick, around 2001, Abbott Laboratories Ltd**

The active ingredient is alprostadil, a prostaglandin – identical to a natural substance in the body – which increases the blood flow into the penis. To take the medicine, a patient had to insert this stick into their urethra.

### **Caverject powder for injection, around 2001, Pharmacia and Upjohn**

This kit contains a glass vial of 10 mcg of alprostadil powder, a syringe of bacteriostatic water for mixing into solution and injection, a 30 gauge 'microlance' needle, 2 antiseptic wipes and a 22 gauge hypodermic needle. This kit is used to treat erectile dysfunction by injecting the medication into the penis which promotes blood flow.

Pfizer launched the first oral treatment for erectile dysfunction in 1998 – sildenafil (Viagra). Since then manufacturers have launched other oral treatments.

### **Viagra tablets, 2005, Pfizer**

Scientists first developed Viagra as a treatment for angina, by increasing blood flow to the heart. They discovered through clinical trials that there were more receptor sites for the drug in the groin than the heart, and that it was therefore an effective treatment for erectile dysfunction. When Viagra was launched in the United States in 1998, it became the fastest-selling new medicine in history.

Doctors still sometimes prescribe sildenafil to patients with pulmonary arterial hypertension (high blood pressure in the vessels carrying blood from the heart to the lungs).

### **Levitra tablets, around 2000, Bayer**

Levitra's active ingredient vardenafil has actions similar to that of sildenafil (Viagra).

### **Uprima tablets, around 2001, Abbott Laboratories**

Uprima tablets, containing the active ingredient apomorphine, work in a different way to Viagra and Levitra. Apomorphine stimulates the region in the brain called the hypothalamus which helps to produce the natural signals which start the erection process in the penis.

## **Treatments for men: prostate disease**

The prostate gland is part of the male reproductive system. The gland encircles the urethra at the base of the bladder. It is usually about the size of a walnut. Prostate secretions are an important component of semen, protecting and nourishing sperm.

The three most common prostate conditions are:

- inflammation of the prostate gland (prostatitis)
- prostate enlargement (benign prostatic hyperplasia or BPH)
- prostate cancer.

Medical professionals first recognised these conditions and started to develop treatments for them in the last century.

### **Prostate inflammation and enlargement**

Prostatitis is the most common genitourinary disease in men aged 18 to 50 years. In addition to the pain, sufferers experience increased frequency of urination. The inflammation is often due to an infection.



Statisticians estimate that up to two million British men aged over 45 suffer from symptoms of benign prostatic hyperplasia. With age, the prostate gland gradually enlarges. Its position around the urethra means that it begins to interfere with the normal flow of urine.

If prostate inflammation is caused by an infection, a doctor will prescribe an antibacterial medicine to treat it.

### **Doxycycline capsules, 2001, Norton Healthcare Ltd**

Doxycycline is a “broad spectrum” antibacterial which is used to treat a wide range of infections, including inflammation of the prostate gland.

### **Benign prostatic hypertrophy (BPH)**

Doctors’ preferred treatment for an enlarged prostate are a group of drugs known as “Alpha-blockers.” They act by relaxing the muscle in the prostate so that urine can pass more freely.



### **Doralese tablets, 1994, Bencard**

### **Doxazosin tablets, around 2000 Arrow Generics**

### **Cardura tablets, 2000, Pfizer**

### **Baratol tablets, 2001 Monmouth Pharmaceuticals Ltd**

### **Solgar prostate support vegicaps, around 2000**

This is one of a range of herbal preparations that are advertised to treat prostate enlargement. Researchers have found limited evidence for clinical benefits of extract of saw palmetto which is one of the ingredients in this food supplement. It also contains nettle leaf extract, pygeum africanum bark extract, zinc, lycopene from tomato, and selenium.

## **Prostate cancer**

Prostate cancer is the most common cancer in men in the United Kingdom with over 30,000 men diagnosed with the disease each year. Prostate cancer was first treated in the 1950s using oestrogen, a female hormone.

In the 1950s, scientists discovered that the female hormone, oestrogen, was effective in treating prostate cancer. Although it did not cure the disease, it both reduced the cancer’s growth, making it possible to operate, and relieved the symptoms in inoperable cases.

The active ingredients in Pabestrol and Dienoestrol are artificial oestrogens. Both were used to relieve the symptoms of patients with prostate cancer in the 1950s.

**Pabestrol tablets, 1950s, Paines and Byrne Ltd**

**Dienoestrol tablets, 1950s, British Drug Houses**

**Zoladex, 1995, Zeneca Pharmaceuticals**

The active ingredient in this injection, goserelin acetate, belongs to a group of medicines called gonadorelin analogues. It reduces the production of testosterone in men and reduces the production of oestrogen in women. The injection is used as part of the treatment for prostate cancer in men, and breast cancer and endometriosis in women.

## Treatments for men: “Man ‘flu”

The concept of “man ‘flu” is widely known. Jokingly, men are accused (mainly by women) of exaggerating minor colds into something more serious. There may be some factual basis: recent surveys have shown that men are more likely than women to take time off work with a cold. Of course, not sharing your cold with colleagues could be regarded positively!

Although “man ‘flu” is a recent term, tonics for men to maintain their health are longstanding.



### **The Hypochondriac, 1819**

Is this evidence of “man ‘flu” in the 1800s? John Augustus Atkinson’s image was published on 1 March 1819. The man has taken a number of medicines, leaving their half empty bottles on the table, has a prescription for pills, and is keeping warm in front of a brazier.

**Nonn for Men tablets, 1928-1941,  
Nonn Ltd**

Nonn for Men tablets were promoted as being especially formulated for men. They are for the treatment of nervous states and nervous exhaustion including headaches, insomnia, depression and anxiety. The preparation is also promoted on the packaging as “Nature’s own nerve nourishment” with the claim that “Nonn is prepared from the identical nerve substances from which the brain extracts all its energy.”



Museum of the Royal Pharmaceutical Society, 2008  
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[www.rpsgb.org/museum](http://www.rpsgb.org/museum)

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### **Samona for Men tablets, 1942-1947, Samona Ltd.**

Samona for Men was advertised as “guaranteed to give an increased mental capacity, personal confidence and assurance, the power to think and act quickly with the ability to carry on under pressure. This means added success for business and professional men.”

The tablets contained strychnine, iodine, potassium iodide, and vitamins A, B1 and D.



### **Wellman tablets, 2008, Vitabiotics**

Wellman tablets are described as a “comprehensive formulation of over 28 essential bio-elements...specially developed to help maintain general health and vitality in men of all ages. Built for men who want to help achieve optimum sports potential, safeguard reproductive health, or help maintain health in an otherwise hectic and demanding lifestyle.”

## **Treatments for men: Men's health today**

Researchers have found that men are very reluctant to seek advice about their health. For example, research in 2004 showed that on average a man waits 14 weeks before reporting a symptom of testicular cancer to a doctor. If early symptoms for serious diseases are not picked up quickly, medical professionals may not have time to take effective action.



Recent campaigns have concentrated on persuading men to take more interest in their health. ‘Popping down their local’ pharmacy is an easy way for men to get professional health advice.

### **Haynes Manuals, 2002**

To appeal to the stereotypical man, the publishers of these healthcare books have developed them in the format of car manuals.

*- Man: 120,000 BC to present day, all models, shapes, sizes and colours. Haynes owners workshop manual; the practical step by step guide to men's health, Ian Banks, 2002*

### **‘Pop down your local’ leaflet, 2004**

The ‘Pop down your local’ campaign was first launched in April 2004.

## Treatments for men: long-term conditions

Men today are affected by a wide range of long-term conditions:

- 16% of men reported experiencing back pain over the last year.
- Over 1.5million men in the United Kingdom are estimated to have had either angina or a heart attack.
- About 30% of men have raised blood pressure.
- Over 4% of men have diagnosed diabetes, but an estimated additional 3% of men aged 35 and over have undiagnosed diabetes.

These three products are examples of the many treatments available for major long-term conditions: heart disease and high blood pressure, diabetes, and back pain.

### Heart disease/hypertension

#### **Diovan capsules, 2002, Novartis**

The active ingredient in Diovan, valsartan, is an angiotensin II receptor antagonist. This means that it blocks the effect of a chemical occurring in the body which tightens your blood vessels, making it harder for the blood to flow through them and causing blood pressure to increase. Valsartan causes the blood vessels to relax.

It is used in the management of high blood pressure and heart failure.

### Diabetes

#### **Humulin S, around 2002, Eli Lilly and Co Ltd**

Humulin is one example of a treatment for Type 1 or insulin dependent diabetes. It is a substitute for the patient's own insulin, as diabetics do not make enough insulin to control the level of glucose in their bodies. Humulin is a soluble insulin which the patient injects into themselves. Its effect lasts for up to 8 hours.

#### **Glucophage tablets, around 1994, Lipha Pharmaceuticals Ltd**

The active ingredient in Glucophage is metformin hydrochloride, which is used to treat Type 2 or non-insulin dependent diabetes.

### Back pain

#### **Ibugel, 1999, Dermal Laboratories**

Ibugel is a gel containing ibuprofen, a non-steroidal anti-inflammatory drug (NSAID). People use ibuprofen to manage mild to moderate pain and inflammation from a variety of sources. Ibuprofen gel, applied to the skin, is particularly targeted at relief of pain and inflammation associated with conditions such as backache.

