

## Male Infertility

Male infertility is a common cause of a couple's failure to conceive. Nearly half of all couples attending an IVF clinic will be doing so for male factor infertility. The average sperm count has dropped nearly 50% in the last 70 years probably due to exposure to environmental pollutants. And the percentage of normal morphology sperm being reported in andrology labs has likewise dropped significantly.

Male infertility that is related to a failure of testicular function, ie something is not working in the sperm making machinery, is (by definition) due to Kidney deficiency in some shape or form. According to TCM theory the regulation of reproduction and sexuality is a function of the Kidney which is often described as the storehouse of the jing or essence and opens into the lower orifices including the spermatic duct and the other parts of testicles. Hence formulas to treat male infertility focus on Kidney jing, yin and yang function. [Jade Treasure Cool](#) and [Jade Treasure Support](#) are designed to be taken for a long time (several months) hence they include a large number of herbs in order to cover all the necessary aspects of Kidney function that need attention.

In addition to promoting the activity of the sperm making Sertoli cells and improving the integrity of the sperm they make, we also must keep in mind the seminal fluid which carries the sperm. Sperm constitutes only about 1% of the semen volume. The dynamic and fast moving sperm represent the yang within the moistening and nourishing yin of the seminal fluid. When doctors of chinese medicine are treating a sperm disorder they consider it important that both the yin and the yang aspects are considered, ie both the sperm and the fluid containing them. Seminal fluid, which nourishes developing sperm, must not only have adequate nutrients but must also have high levels of antioxidants to protect the sperm from reactive oxidative species which can damage the DNA of developing germ cells during their 90 day process of development. Reactive oxidative species (and scavengers of these) are found in higher concentrations in semen of infertile men. In cases where seminal fluid volume is reduced we look to the Kidney yin and blood and ensure that heat is not causing damage.

Thus [Jade Treasure Cool](#) and [Jade Treasure Support](#) include herbs which strongly reinforce Kidney yin and blood to provide nourishment via the seminal fluid, herbs which boost Kidney yang and support the manufacture of sperm and also herbs which have good proven antioxidant activity.

Boosting Kidney function alone is often not enough however – we may need to address branch or biao conditions too. For example when Kidney yang is deficient then blood circulation easily becomes sluggish leading to blood stasis. This can have consequences for erectile function.

Other less commonly seen (but not rare) forms of male infertility are caused by physical factors like a varicocele or from trauma - and a different approach is taken with these patients (see [Jade Treasure Clear](#)). Immune factors in the shape of antisperm antibodies are another cause of low fertility in some men. In Chinese medicine terms this often relates to blood stasis or to damp heat.

Our series of formulas for male factor infertility includes two formulas which address functional testicular disorders which lead to low sperm count, poor motility, high percentage of abnormal forms and high levels of DNA fragmentation. [Jade Treasure Cool](#) and [Jade Treasure Support](#) are essentially identical with one important distinction. Where there is heat it must be cleared, or the Kidney yin will be damaged and will not function to nourish the sperm by means of the seminal fluid or to support Kidney yang. Hence in [Jade Treasure Cool](#), 3 herbs which clear heat replace 3 herbs which support the yang in [Jade Treasure Support](#).

The third formula in the series [Jade Treasure Clear](#) addresses varicoceles and immune factors which might be affecting sperm production or performance.

## Jade Treasure Cool

male factor infertility with heat

When treating male infertility we are often relying on the semen analysis to tell us something is wrong with sperm manufacture rather than symptoms. It is not common for men with infertility to complain of sexual dysfunction or symptoms in the testicles themselves. However male infertility may coexist with some symptoms such as a high libido with premature ejaculation which can indicate heat. More often the only heat signs are a red tongue and rapid or tight pulse, with thirst and a ruddy complexion. This is often accompanied with a fast paced lifestyle and stressful work, excess coffee and alcohol consumption, smoking and insufficient sleep. In any case any signs of heat indicate that **Jade Treasure Cool** is the appropriate formula to use for a patient diagnosed with male infertility (or sub fertility). It addresses both shi and xu type heat.

### The formula

*Tu si zi* (Semen Cuscatae)  
*Fu pen zi* (Fructus Rubi Chingii)  
*Nu zhen zi* (ligustri lucidi fructus)  
*Gou qi zi* (Fructus Lycii Chinensis)  
*Wu wei zi* (Schizandra Chinensis)  
*He shou wu* (Radix Polygoni Multiflori)  
*Sheng di* (Radix Rehmanniae Glutinosae)  
*Shan zhu yu* (Fructus Corni Officinalis)  
*Dang shen* (Radix Codonopsis Pilulosae)  
*Dan shen* (Radix Salviae Miltiorrhizae)  
*Hong hua* (Carthami flos )  
*Huang bai* (Phellodendri cortex)  
*Zhi mu* (Anemarrhenae rhizoma)  
*Mu dan pi* (Cortex Moutan Radicis)

### Focus of treatment

- Reinforce Kidney yin, yang and jing
- Nourish and invigorate blood
- Clear heat

## Formula construction and therapeutic strategy

**Jade Treasure Cool** is a modification of Bu Shen Yi Jing fang (Supplement the Kidneys Benefit the Jing Formula), a modern research formula used in Guangdong teaching hospital. It incorporates ideas from classic formulas including the well known Wu Zi Yan Zong wan (5 Seed Progeny pill), and You Gui and Zuo Gui wan (Restore the right/left Kidney pill) and Qi Bao Mei Ran Dan (7 Treasure Special Pill for Beautiful Whiskers).

The seeds Fu Pen zi, Nu Zhen zi, Gou Qi zi, Tu Si zi, Wu Wei zi address Kidney yin and yang both. Shan you rou is added to conserve and protect Kidney and Liver yin. This herb has been seen to increase sperm motility in a dose dependant way in vitro. Wu Wei zi supports the conservation of the essence and is particularly high in antioxidants. Thus it helps to improve DNA integrity and reduce fragmentation.

Fu Pen zi also secures and builds Kidney essence and is useful where there is erectile difficulty.

Sheng di ensures that there is enough moisture to nourish the semen as does the blood tonic He Shou wu. He Shou Wu has the added attribute of building the jing or essence. Nu Zhen zi and Gou Qi zi are strong yin tonics, and will support the nourishing and moistening aspect of the seminal fluid, and provide a base for development of Kidney yang.

Zhi Mu and Huang Bai clear heat to ensure that yin will not be damaged and fluids dried out. The Kidney yang tonics Fu Pen zi and Tu Si zi, support the yang without being too heating. Dan shen and Hong hua promote circulation of blood in the testes, with Mu Dan pi supporting this action and cooling any heat in the blood.

Dang shen supports post natal qi and nourishment of developing sperm.

## Herbs; Flavour, nature and site of action

### Herbs to supplement Kidney Yang

*Tu si zi* (Cuscutae Semen)

Acrid and sweet, neutral. Liver and Kidney channels.

*Fu pen zi* (Fructus Rubi Chingii) (from astringing category)

Sweet and sour. Slightly warm. Liver and Kidney channels.

### Herbs used to supplement the Kidney Yin

*Nu zhen zi* (ligustri lucidi fructus)

Sweet and bitter, cool. Liver and Kidney channels.

*Gou qi zi* (Fructus Lycii Chinensis)

Sweet, neutral. Kidney and Lung channels.

*Shan Zhu Yu* (Corni Fructus) (from the Astringing category)

Sour and astringent, slightly warm. Liver and Kidney channels.

### Herbs used to secure essence and supplement Kidney

*Wu wei zi* (Schizandra Chinensis)

Sour, warm. Lung, Kidney and Heart channels.

### Herbs used to supplement the Blood

*He shou wu* (Radix Polygoni Multiflori)

Bitter, sweet and astringent. Slightly warm.

### Herbs used to invigorate the Blood

*Dan shen* (Salviae miltiorrhizae Radix)

Bitter, slightly cold. Heart, Pericardium and Liver.

*Hong hua* (Carthami Flos)

Acrid, warm. Heart and Liver channels.

### Herbs used to clear heat from the Blood

*Sheng di* (Rehmanniae Radix)

Sweet and bitter, cold. Heart, Liver and Kidney channels.

### Herbs to cool and invigorate the Blood

*Dan pi* (Moutan Cortex)

Bitter and acrid, cool. Heart, Liver and Kidney channels.

### Herbs used to clear Heat and protect Yin

*Zhi mu* (anemarrhenae rhizoma)

Bitter and sweet, cold. Lung, Stomach and Kidney channels.

Herbs used to clear Damp and Heat

*Huang bai* (Phellodendri cortex)

Bitter, cold. Kidney, Bladder and Large intestine channels.

Herbs used to supplement the Qi

*Dang shen* (Radix Codonopsis Pilulosae)

Sweet, neutral. Spleen and Lung channels.

## Prescribing **Jade Treasure Cool**

You can prescribe this to any patient diagnosed with a low sperm count, low numbers of normal shape sperm, poor motility or high DNA fragmentation if there are signs of heat. Because the formula is well balanced with herbs which address both the yin and the yang and the movement of blood it can be used long term without modification. Your patient should take this formula for a minimum of 4 months, preferably 6 – 12 months.

Building Kidney resources and clearing heat may require some lifestyle changes.

Specifically a reduction in alcohol and coffee and no smoking should be recommended, alongside recommendations for a diet of fresh foods and a balanced lifestyle that reduces long work hours and stress. Swimming is an ideal sport both for fitness and relaxation and for cooling the testicles.

Defer use of this formula during the acute phase of an infection or attack by an external pathogen.

If there is pronounced Spleen weakness (loose stools) you may need to add formulas which help the digestion of the oily seeds and the cooling moist Sheng di. [Digest Aid](#) and [Prosperous Farmer](#) are both good possibilities.

Where damp heat is particularly prominent (your patient has prostatitis or fungal skin

infection in the groin, herpes or other sexually transmitted disease) use a formula based on Long Dan xie gan wan (Gentiana Draining the Liver Decoction) such as [Quell Fire](#) or Bei Xie Fen Qing Yin (Dioscorea Separating the Clear Decoction) such as [Clear The Lower Palace](#) before taking [Jade Treasure Cool](#) or [Support](#).

If your patient has signs and symptoms of damp heat also consider [Jade Treasure Clear](#) particularly if there is a diagnosis of immune factor infertility or varicocele.

## Jade Treasure Support

male factor infertility with no heat

**Jade Treasure Support** is our male infertility formula of choice for all aspects of male factor infertility where there are no signs of heat.

As with our previous formula there may be no obvious disease of the sexual organs which accompany the abnormalities described on the semen analysis. However if there is marked yang deficiency the libido will be low and there may be erectile dysfunction. Along with this expect other yang deficient signs like lack of motivation, lethargy or sensitivity to cold, a pale tongue and possibly fluid retention. Blood tests may reveal low testosterone levels.

However in many cases this formula may be used to address poor sperm motility or morphology or low sperm numbers without seeing a specific symptom picture.

### The formula

*Tu si zi* (Semen Cuscatae)  
*Fu pen zi* (Fructus Rubi Chingii)  
*Nu zhen zi* (ligustri lucidi fructus)  
*Gou qi zi* (Fructus Lycii Chinensis)  
*He shou wu* (Radix Polygoni Multiflori)  
*Sheng di* (Radix Rehmanniae Glutinosae)  
*Shan zhu yu* (Fructus Corni Officinalis)  
*Dang shen* (Radix Codonopsis Pilulosae)  
*Dan shen* (Radix Salviae Miltiorrhizae)  
*Hong hua* (carthami flos)  
*Huang qi* (Radix Astragali)  
*Yin yang huo* (Herba Epimedii)  
*Ba ji tian* (morindae officinalis radix)

### Focus of treatment



- Reinforce Kidney yin, yang and jing
- Nourish and invigorate blood and qi

### Formula construction and therapeutic strategy

The strategy and the functions of the herbs are as described for **Jade Treasure Cool**, but we have removed the heat clearing herbs and added Ba Ji Tian, Yin Yang huo and Huang qi.

Yin yang huo boosts Kidney yang and the fire at the gate of vitality, promoting sperm manufacture and motility. Ba Ji tian warms the Kidney yang also but more gently. Sheng di is included to counter over heating if this formula is taken long term.

Huang qi is a qi tonic which warms Kidney yang and has been shown to promote sperm activity in vitro.

### Herbs, Flavour, nature and site of action

#### Herbs used to supplement Kidney Yang

*Tu si zi* (Cuscutae Semen)

Acrid and sweet, neutral. Liver and Kidney channels.

*Fu pen zi* (Fructus Rubi Chingii) (from Astringing category)

Sweet and sour. Slightly warm. Liver and Kidney channels.

*Yin yang huo* (Herba Epimedii)

Acrid and sweet, warm. Liver and Kidney channels.

*Ba ji tian* (Morindae officinalis radix)

Acrid and sweet, slightly warm. Liver and Kidney channels.

#### Herbs used to supplement Kidney Yin

*Nu zhen zi* (ligustri lucidi fructus)

Sweet and bitter, cool. Liver and Kidney channels.

*Gou qi zi* (Fructus Lycii Chinensis)

Sweet, neutral. Kidney and Lung channels.

*Shan zhu yu* (Corni Fructus) (from the Astringing category)

Sour and astringent, slightly warm. Liver and Kidney channels.

#### Herbs used to supplement the Blood and Jing.

*He shou wu* (Radix Polygoni Multiflori)

Bitter, sweet and astringent. Slightly warm.

#### Herbs used to invigorate the Blood

*Dan shen* (Salviae miltiorrhizae Radix)

Bitter, slightly cold. Heart, Pericardium and Liver.

*Hong hua* (Carthami Flos)

Acrid, warm. Heart and Liver channels.

Herbs used to clear Heat from the Blood

*Sheng di* (Rehmanniae Radix)

Sweet and bitter, cold. Heart, Liver and Kidney channels.

Herbs used to supplement the Qi

*Dang shen* (Radix Codonopsis Pilulosae)

Sweet, neutral. Spleen and Lung channels.

*Huang qi* (Radix Astragali)

Sweet, slightly warm. Spleen and Lung channels.

## Prescribing Jade Treasure Support

Prescribe [Jade Treasure Support](#) for all types of male factor infertility especially where there are symptoms of Kidney yang deficiency (although this is not an absolute requirement).

As with [Jade Treasure Cool](#) this formula can be used long term.

Defer use of this formula during the acute phase of an infection or attack by an external pathogen.

## Jade Treasure Clear

male factor infertility with immune factors and/or varicocele

A varicocele is an abnormality in a vein within the spermatic cord and while this doesn't affect sperm production in all men in which they occur, varicoceles are discovered twice as commonly in infertile men as in fertile men. They can be removed surgically though this doesn't always improve sperm production. In TCM terms any abnormality of blood flow is deemed to be a manifestation of "blood stagnation" and it is perhaps the underlying pathology that needs to be addressed before varicocele surgery can be really effective in improving sperm counts.

Anti sperm antibodies often occur in men who have varicoceles and also are common in men who have had vasectomies reversed (or other testicular surgery or trauma) or in cases of infection or inflammation such as prostatitis. The antibodies to sperm form when the barrier between the sperm and the blood stream has been breached. Immune cells in the blood are suddenly exposed to sperm cells, which they do not recognize and may tag them as foreign. These immune cells start making antibodies which attach to the sperm inhibiting function and causing them to clump together. Their motility is compromised as is their capacity to fertilise the egg. If there are significant numbers of antibodies fertility can be dramatically reduced.

Damp heat can be a contributing factor in some cases of immune infertility. This was more commonly the case when sexually transmitted diseases were not controlled as well as they are today with antibiotics. However this diagnosis will still be relevant these days in men who suffer from chronic prostatitis or skin infections particularly around the groin.

## The formula

*Gui zhi* (Cinnamomi Ramulus)  
*Tao ren* ( persica semen)  
*Dan pi* (moutan cortex)  
*Chi shao* (paeoniae radix rubra)  
*Dan shen* ( salviae miltiorrhizae)  
*Wang bu liu xing* (vaccariae semen)  
*Che qian zi* (plantaginis semen)  
*Fu ling* (poria)  
*Xiao hui xiang* (fructus foeniculi vulgaris)  
*Wu yao* (linderae radix)  
*Ju he* (citri reticulatae semen )  
*Chuan lian zi* (toosendan fructus)  
*Xu duan* (dipsaci radix)  
*Huang qi* (Radix Astragali)

## Focus of treatment

- Resolve blood stasis and remove obstruction.
- Warm and circulate qi around the testicles.
- Clear damp heat
- Support Kidney yang to preserve fertility

## Formula construction and therapeutic strategy

Gui Zhi Fu Ling wan (Cinnamon Twig and Poria Pill), a commonly used formula for addressing blood stagnation, has been shown in clinical trials to improve sperm counts in men with varicoceles and it is a logical base from which to build our treatment.

**Jade Treasure Clear** is composed of a balanced mix of cooling and warming herbs which clear obstructions of qi, blood, damp and heat and cold. When treating male infertility we must take care not to cool the Kidneys too much since Kidney yang function is vital for making healthy sperm. However if there is blood stasis or damp heat in the testes, sperm manufacture will be compromised and we must take steps to dispel these.

Gui Zhi Fu Ling wan, which is commonly used to treat abdominal masses in women, is a formula which invigorates the blood and gradually disperses stagnant blood at the same time as dispersing damp. Hence its application in reducing testicular masses, stasis in

testicular circulation or inflammation in the genital tract.

To the base formula we add herbs to target testicles, moving the qi and removing blockages, then more herbs to support the Kidneys.

One of the chief herbs, Gui zhi, is warm and unblocks the blood vessels and promotes circulation. The use of Chi shao and Dan pi augment blood circulation and balance the heating action of Gui Zhi. With Dan shen, Tao ren and Wang Bu Liu Xing they regulate the blood and transform stasis. Wang Bu Liu Xing has a particularly strong downward dredging action which we harness here to disperse clumping in the testicles. Wang Bu Liu Xing also acts like an envoy to direct the formulas actions to the testicles (similarly the qi regulating herbs described below).

Dan pi has been shown to inhibit the permeability of capillary vessels, so as to diminish inflammation and remove swelling.

Because the formula may be taken for several months, stronger blood moving herbs than these are not appropriate.

Fu ling, another chief herb of the base formula, has a role here in clearing any damp in the seminal fluid. Che qian zi supports this function by specifically clearing damp heat (via the urine) from the lower jiao. The reason we are concerned with clearing damp is that antisperm antibodies are more prevalent in an environment that contains cell debris or white blood cells (which you will sometimes see reported on semen analyses) or infection. Any inflammation like prostatitis will create an environment of damp heat. The use of Fu ling and Che qian zi help to clear or inhibit this and thus protect the Kidney yang and its vital function in sperm manufacture.

As with the treatment of female immune infertility we employ Dan Shen and Huang qi in quite large doses to counteract auto immune responses.

The base formula is further modified with herbs which circulate qi in the Liver channel and increase circulation of qi and blood in the testes.

Xiao hui xiang, Wu yao, Ju he and Chuan lian zi are all used to promote movement of qi in the testicles thus ensuring there will be no hindrance to the blood circulation.

Finally we safeguard the Kidney yang by adding Xu Duan. Huang qi also supports Kidney yang function.

## Herbs; Flavour, nature and site of action

### Herbs used to invigorate the Blood

*Tao Ren* (Persicae semen)

Bitter, neutral. Heart, Liver, Lung and Large Intestines channels.

*Dan shen* (Salviae miltiorrhizae Radix)

Bitter, slightly cold. Heart, Pericardium and Liver channels.

*Wang bu liu xing* (vaccariae semen)

Bitter, neutral. Liver and Stomach channels.

### Herbs used to cool and invigorate the Blood

*Dan pi* (moutan cortex)

Acrid, bitter, slightly cold. Heart, Liver and Kidney channels.

*Chi shao* (Paeoniae Radix rubra)

Bitter and sour, slightly cold. Liver and Spleen channels.

### Herbs used to warm interior cold

*Xiao hui xiang* (fructus foeniculi vulgaris)

Acrid, warm. Liver, Kidney, Spleen and Stomach channels.

### Herbs used to warm the channels and invigorate the Blood.

*Gui zhi* (Cinnamomi Ramulus) (from the Exterior releasing category).

Acrid and sweet, warm. Heart, Lung and Bladder.

### Herbs used to supplement the Qi

*Huang qi* (Radix Astragali)

Sweet and slightly warm. Spleen and Lung channels.

### Herbs used to supplement the Kidney yang

*Xu duan* (dipsaci radix)

Bitter, sweet and acrid, slightly warm. Liver and Kidney channels.

### Herbs used to regulate the Qi

*Wu yao* (linderae radix)

Acrid, warm. Spleen, Lung, Kidney and Bladder channels.

*Ju he* (citri reticulatae semen )

Bitter, neutral. Liver channel.

*Chuan lian zi* (toosendan fructus)

Bitter, cold. Liver, Stomach, Small intestine and Bladder channels.

### Herbs to clear Damp

*Che qian zi* (plantaginis semen)

Sweet, slightly cold. Kidneys, Liver, Lungs, Bladder, and Small Intestine channels.

*Fu ling* (poria)

Sweet and bland, neutral. Lung, Spleen, Heart and Bladder channels.

## **Prescribing Jade Treasure Clear**

For sub fertile men diagnosed with anti-sperm antibodies or a varicocele or who have a history of testicular trauma (include surgery and biopsies) prescribe [Jade Treasure Clear](#) to be taken for 4 months. After this time they could change to a more general male infertility formula. However if there are signs of blood stagnation (or the semen analysis is not showing adequate improvement 6 months after starting herbal therapy, then [Jade Treasure Clear](#) could be continued or combined with [Jade Treasure Support](#) or [Jade Treasure Cool](#).

Defer use of this formula during the acute phase of an infection or attack by an external pathogen.

