



# Maternal Health Resources



Combined Universities Centre for Rural Health



# Diabetes in Pregnancy



# Preparing for a healthy baby

- When preparing for a healthy baby it is important to review your diabetes and general health.
- You can seek advice from a diabetes and pregnancy team or a doctor experienced in caring for pregnant women with diabetes before trying to have a baby.

## Your Diabetes and Pregnancy Team:

- Diabetes specialist (Endocrinologist)
- Specialist obstetrician
- Midwife
- Diabetes educator
- Dietitian



# How to prepare for a healthy baby

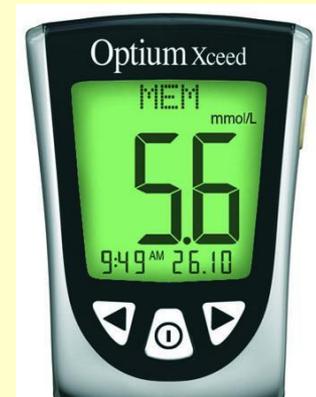
## Blood Sugar Level Control

To prevent miscarriage and birth defects in your baby it is important to have good control of your blood sugar levels at the time of conception and throughout pregnancy.



## Blood sugar levels during pregnancy

Test Times	Blood Sugar Level
Before Breakfast	4 - 5.0 mmol/L
2 hours after each meal	4 - 6.7 mmol/L



# How to prepare for a healthy baby

## Medications

### Insulin

If you are taking insulin your insulin requirements may change during pregnancy so it is important to speak with your doctor.

### Diabetes tablets (Type 2 Diabetes)

If you are taking tablets for your diabetes before pregnancy you should speak with your doctor .

### Other medications

Every medication you are taking must be reviewed before pregnancy or as soon as you find out you are pregnant.



# How to prepare for a healthy baby

## Contraception

Contraception is important as it allows you to plan your pregnancy for when you have good control of your blood sugar levels.

Before you stop using contraception it is important to have good control of your blood sugar levels. Poor control in the first 2 months of pregnancy can lead to miscarriage or birth defects.

See your health worker before you stop using contraception or as soon as you fall pregnant.



**If you have good blood sugar control during your pregnancy you can deliver your baby close to home.**



# Nutrition during pregnancy

What you eat = what baby eats

The dietitian at your clinic can talk to you about what to eat during your pregnancy.

To keep you healthy and help your baby grow, it is important that you eat foods that are high in:

**protein**  
**iron**  
**calcium**  
**folate**  
**iodine**



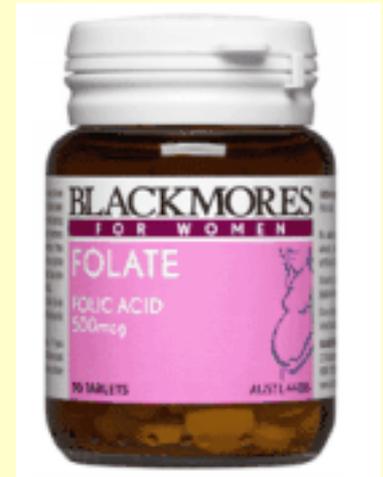
# Nutrition during pregnancy

## Folate in pregnancy

Folate is an important vitamin in pregnancy as it can help to prevent birth defects of the brain and spine.

Most women can meet their daily requirement from eating a wide variety of leafy green vegetables, fruit, breads, cereals and beans.

However women with diabetes are at greater risk and should take a **5 mg** folate supplement **before** pregnancy and throughout the **first 3 months**.



# Nutrition during pregnancy

## Iron in Pregnancy

Iron is needed to produce red blood cells which carry oxygen around the body. During pregnancy more iron is needed because the mother's volume of blood is larger and the baby's blood is developing.

Some women may find it hard to meet their requirements from diet alone.

If necessary an iron supplement may be recommended

### Best sources:

- Meat,
- Chicken and
- Fish.



### Good Sources:

- Legumes/beans
- Nuts and seeds,
- Green leafy vegetables,
- Iron fortified breakfast cereals
- Whole-grain breads



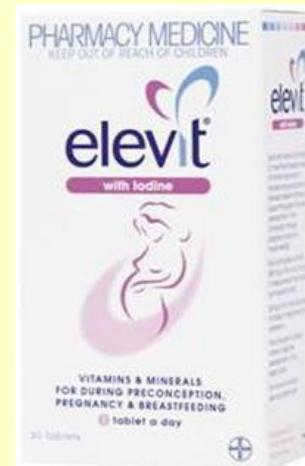
# Nutrition during pregnancy

## Iodine in pregnancy

Iodine is important in pregnancy as it can help to prevent birth defects of the brain that may cause mental developmental problems.

Most women can meet their daily requirement from eating fish (tin salmon) and shell fish (oysters), bread, dairy foods (cheese, ice cream, milk and yoghurt) and eggs.

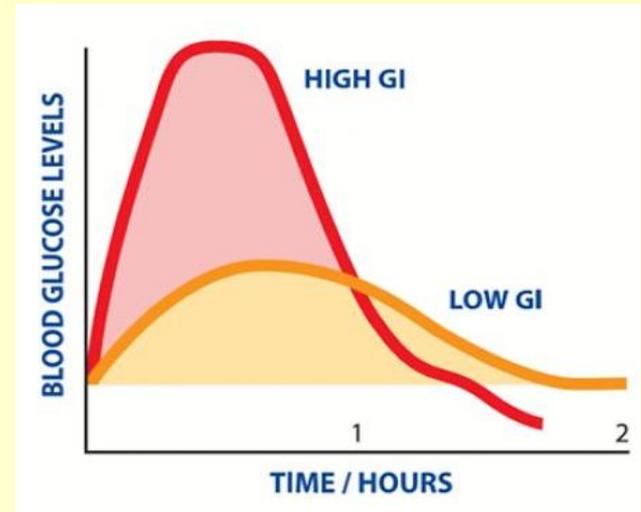
However women with diabetes are at greater risk and should take a **150 µg** iodine supplement **before** pregnancy and throughout the **first 3 months**.



# Nutrition during pregnancy

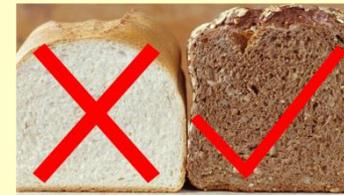
## Choose low GI foods

Low GI carbohydrates are slowly absorbed by the body and only cause a small increase in your blood sugar levels.



## Low GI carbohydrates include:

- Whole grain breads and cereals
- Fruits and vegetables
- Basmati or Doongara rice
- Pasta and noodle
- Legumes (beans and lentils)



# Weight management during pregnancy

## Good Weight Management

It is important to manage your weight gain during pregnancy to help you have good control over your blood sugar levels. Managing your weight will also benefit the baby.



How much weight you should gain depends on your Body Mass Index (BMI) before pregnancy.

## Expected weight gain during pregnancy

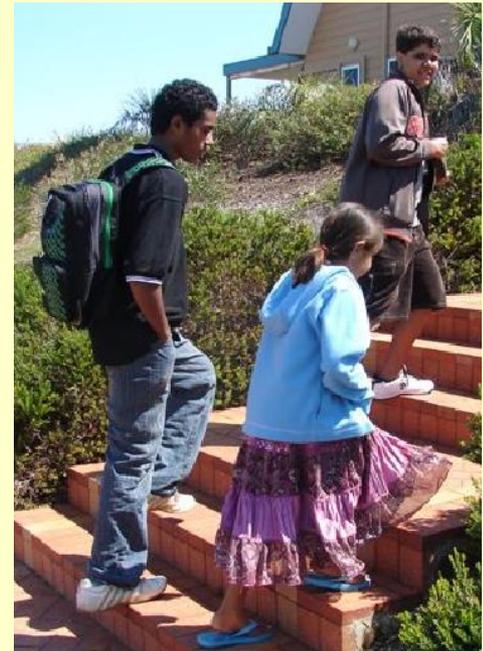
Pre-pregnancy BMI	BMI Range	Weight Gain Range (kg)
Underweight	<18.5	12-18
Normal	18.5—25	11.5-16
Overweight	25-30	6-11
Obese	>30	5-9

# Physical Activity During Pregnancy

## Exercise

Being physically active will help control your blood sugar levels. During pregnancy, it is best to do light physical activities such as:

- Walking (briskly if possible)
  - aim for 15-30 minutes
- Swimming
- Pregnancy hydrotherapy
- Low impact exercise tailored to pregnancy
- Pregnancy pilates or yoga



Alcohol  
and  
Pregnancy



Alcohol + Mother = "GROG BABY"

Choosing to drink when you are pregnant will harm you and your baby.

Whatever you drink,  
Your baby drinks too.

Alcohol and Pregnancy

Don't Mix

### What is a Grog Baby?

Grog babies are babies affected by alcohol. They are born with:

Long term brain damage  
e.g.

- Unable to concentrate and manage life
- Abnormal face features
- Growth problems

This is called ...

Fetal Alcohol Syndrome.

It is caused by drinking alcohol during pregnancy.

# Harm to Mother

## **Drinking harms You too.**

Your health is important. Heavy drinking can harm you whether you are pregnant or not.

Alcohol increases your risk of:

1. Doing dangerous things you may regret e.g.
  - Having sex without protection
  - Driving drunk and crashing
  - Becoming very violent and hurting others
2. Having thin bones that break easily
3. Breast Cancer
4. Reproductive problems
5. Heart disease and Stroke



# SAY NO FOR NINE!



Baby needs you to take care of yourself.

Say **NO** to alcohol while you are pregnant.

Say **NO** to alcohol when feeding baby.

It is best for You.  
It is best for baby.



**You can stop the cycle of harm!**



# We can Help

You don't have to fight the grog  
by yourself

We can help you win the fight  
To lose the booze.

Gain Health. Gain Baby. Gain Life.

**Talk to your Health Worker,  
Midwife, Diabetes Educator or  
Dietitian**

# How to have a Healthy Baby



# Underweight Baby

< 2500g

*Why is this bad? Underweight babies have greater risk of:*

- Developing diseases
- Dying
- Growth problems
- Developmental problems as children

*You are at risk of having an underweight baby if you:*

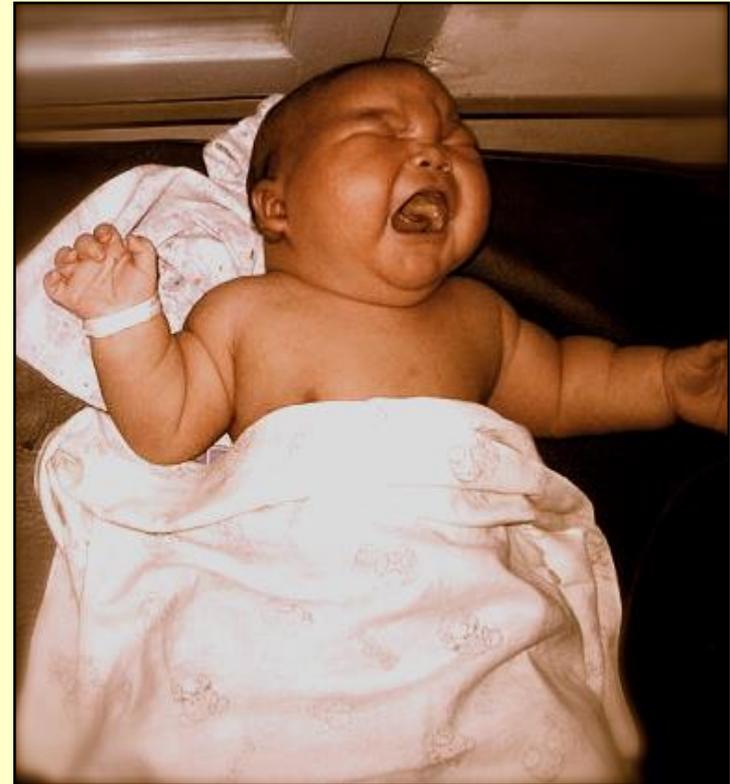
- Smoke
- Use drugs and/or alcohol
- Are a Mother aged <20 or >35 yrs
- Have inadequate nutrition
- Stress, abuse, fatigue, infections



# Overweight Baby > 4500 g

## Risk Factors for having an overweight baby:

- Gestational diabetes  
(diabetes during pregnancy)
- Excessive weight gain in  
pregnancy or Obesity

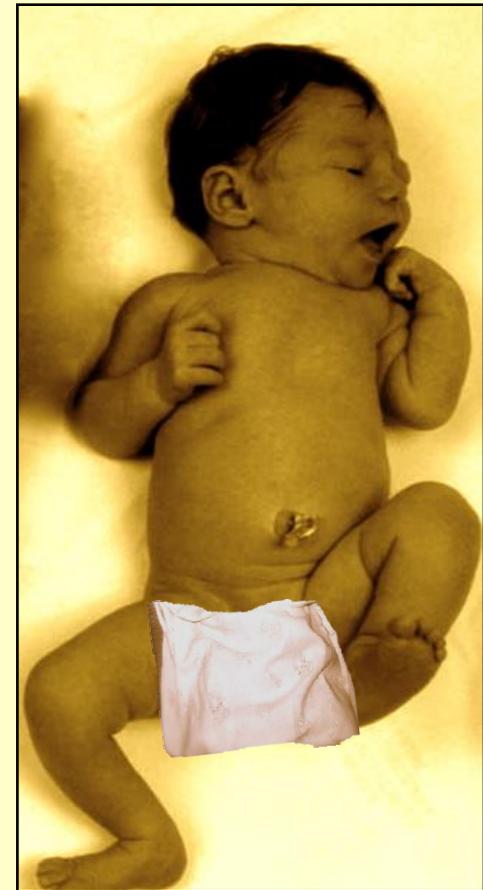


# Healthy Weight Baby

2500 - 4200 g

*How do I have a healthy weight baby?*

- Eat a healthy balanced diet eg. More fruit & veg; less high-fat, less high-sugar and less salty foods like pizza, cakes, fries.
- Avoid drugs, alcohol & cigarettes while you are pregnant
- Stay active during pregnancy with easy, light exercise e.g. Walking.
- Keep a healthy weight before & during pregnancy





## Why is weight important?

A baby's weight when they are born is one of the best ways to know how healthy they are overall.

How much your baby weighs at birth is also related to a baby's expected length of life and risk of getting long-term health problems e.g. Obesity, diabetes.

## Does fat baby = healthy baby?

No, this is a myth. If babies are born too big or with too much fat, this is unhealthy. It is best for your baby to be born weighing between 2500 - 4500 grams.

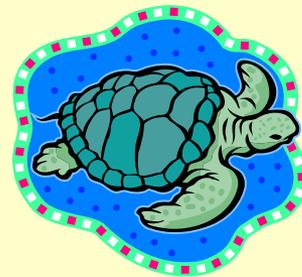
Large babies can cause problems in pregnancy and during the birth of baby. This can cause harm to both the mother and the baby.

Large babies are also at higher risk of getting Obesity and Type 2 Diabetes later on in life.

Do you have Diabetes?

Are you pregnant or  
planning for a baby?

Talk with your Midwife,  
Diabetes Educator or  
Dietitian today.





Polycystic  
Ovary  
Syndrome  
(PCOS)



## What is PCOS?

Polycystic ovary syndrome is a hormonal disorder.

It is a disorder in which the ovaries contain many cysts, causing changes in hormone levels.



## Causes

The exact cause of PCOS is unknown, but for most women PCOS occurs when they are overweight. If you are overweight you may have higher levels of insulin in your blood. This is the main hormone change in most women with PCOS.

High levels of insulin cause fat storage and further weight gain. It can also make your ovaries produce more male hormones, leading to fertility and pregnancy problems.

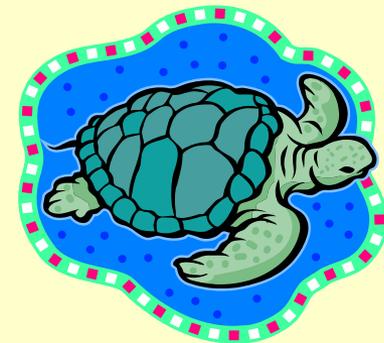
## Symptoms

Symptoms of PCOS vary between women. You may have a few or all of the following problems:

- Irregular periods
- Fertility problems e.g. Infertility, increased risk of miscarriages
- Unwanted or excessive growth of hair on body, chest or face
- Oiliness of skin and acne
- Weight problems, including difficulty losing weight

PCOS also increases your risk of getting:

- Diabetes
- High cholesterol and heart diseases
- Cancer of the uterus



## How do I know if I have PCOS?

Diagnosis of PCOS is based on your medical history and an ultrasound of the ovaries. Blood tests may also be done to confirm if you have PCOS.

PCOS can affect women between late teenage years and menopause. The age at which you are diagnosed depends on the severity and number of symptoms you experience.

It is important to talk with your doctor if you have any health concerns.

Awareness of PCOS  
is important to  
control symptoms  
and to prevent future  
health problems.





## Treatment of PCOS

If you have PCOS, see your doctor regularly for blood fats and sugar levels check-ups.

Weight loss is the best way to improve how your hormones work.

### Why?

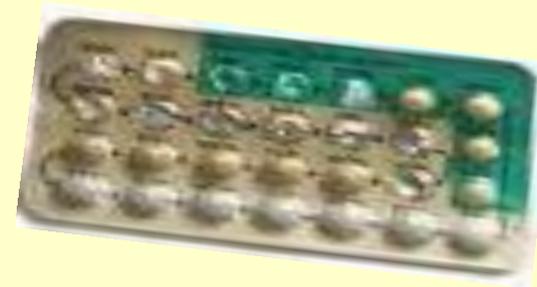
Losing 5-10% of your current weight can improve fertility. It will improve your blood glucose, insulin and fat levels. It can reduce your risk of diabetes and heart disease.

## Set a weight loss goal that you can achieve.

Talk to your dietitian about a long term eating plan to help you gradually lose weight.

If you have diabetes or high insulin levels, medication like Metformin may also be used to treat PCOS.

Talk with your doctor about this



# Contraception

Get the quick facts



# Male Condoms

## What is it?

The male condom is the only male contraceptive device.

## How does it work?

This is a form of barrier method..

## Pro's

- ◆ Reduces risk of getting or passing on STIs
- ◆ Widely available from pharmacies, vending machines and supermarkets
- ◆ Cheap

## Con's

- ◆ Must be put on before genital contact
- ◆ Can reduce sensitivity for some people

**99 % effective if used correctly**



# Female Condoms

## What is it?

The female condom fits inside the female vagina to prevent semen from entering.

## How does it work?

This is a form of barrier method

**95 % effective if used correctly**

## Pro's

- ◆ Reduces risk of getting or passing on STIs
- ◆ Can be brought without prescription
- ◆ Better than male condoms for sensation
- ◆ Can be inserted before sex

## Con's

- ◆ Needs practice to insert
- ◆ Penis might slip outside condom
- ◆ More expensive and less available than male condoms



# Diaphragm

## What is it?

Dome of rubber placed over cervix to prevent sperm from entering the uterus.

## How does it work?

This is a form of barrier method

**92-96% effective**

## Pro's

- ◆ Only use during sexual activity.
- ◆ Can be inserted 2 hours before sex
- ◆ Does not interfere with periods
- ◆ Easy to carry around

## Con's

- ◆ No protection from STIs
- ◆ Some women may find it difficult to insert
- ◆ Spermicides required
- ◆ Requires a fitting in a clinic
- ◆ May increase the risk of urinary tract infections
- ◆ Can be messy



# Oral Contraceptive pill ("The Pill")

## What is it?

"The pill" contains the hormones oestrogen and progesterone. There are many types available and they vary in the dose of hormones.

## How does it work?

This is a form of hormonal method

**99.5 % effective if  
taken correctly**

## Pro's

- ◆ Very effective form of contraception
- ◆ Many types so most women can find one to suit them
- ◆ Can make periods lighter and less painful
- ◆ Can choose when you have your period
- ◆ May relieve premenstrual syndrome

## Con's

- ◆ No protection from STIs
- ◆ Have to remember to take it
- ◆ May get bleeding between periods
- ◆ May experience nausea & sore breasts
- ◆ Might have mood changes



# Progesterone Only Pill ("The mini pill")

## What is it?

This pill only contains progesterone hormone for those who can not tolerate oestrogen.

## How does it work?

This is a form of hormonal method

**98% effective if taken correctly**

## Pro's

- ◆ Effective form of contraception
- ◆ Safe to use while breast feeding
- ◆ Better choice for women over 40 year
- ◆ Can have a baby sooner after stopping
- ◆ No serious side effects

## Con's

- ◆ No protection from STIs
- ◆ Need to be taken at the same time daily
- ◆ May change menstrual pattern
- ◆ May increase chance of developing ovarian cysts if there is past history



# Injectable Hormone Contraception ("Depo")

## What is it?

Depo is a progesterone only contraception injection given into the muscle (arm) every 12 weeks by doctor or nurse.

## How does it work?

This is a form of hormonal method.

**99% effective**

## Pro's

- ◆ Very effective contraception
- ◆ Can make periods light and less painful
- ◆ Some women don't get periods after 2 injections
- ◆ May relieve premenstrual syndrome
- ◆ Suitable for breastfeeding

## Con's

- ◆ No protection against STIs
- ◆ Once injection is given it cannot be removed - it has to wear off
- ◆ Regular visits to the doctor - costly
- ◆ May have small weight gain or mood changes



# Contraceptive Implant

## What is it?

The contraceptive rod is a small plastic rod with a progesterone hormone that is inserted under the skin inside the upper arm.

## How does it work?

This is a form of hormonal method

**99% effective**

## Pro's

- ◆ Can be removed at any time
- ◆ Lasts for 3 years
- ◆ Can make periods light
- ◆ Cheap
- ◆ don't have to remember to take daily contraception
- ◆ Not affected by vomiting and diarrhoea

## Con's

- ◆ No protection against STIs
- ◆ May experience irregular bleeding
- ◆ May experience weight gain or acne, mood swings, stomach pain and painful periods



# Vaginal Contraceptive Ring

## What is it?

Vaginal contraceptive ring is a soft plastic ring containing oestrogen and progesterone hormones. It is inserted for 3 weeks and removed for 1 week.

## How does it work?

This is a form of hormonal method.

**99% effective is used correctly**

## Pro's

- ◆ Less likely to experience nausea, sore breasts and in-between bleeding
- ◆ Don't have to remember to take a contraceptive pill everyday
- ◆ No risk of pill failure associated with diarrhoea and vomiting

## Con's

- ◆ No protection from STIs
- ◆ Possible slight weight gain and acne
- ◆ Increased risk of developing a blood clot in the vein



# Emergency Contraception ("Morning after pill")

## What is it?

It is a progesterone type hormone to prevent pregnancy after intercourse has occurred.

## How does it work?

This is a form of **emergency** method.

**95% effective if taken up to 24 hrs after sex**

## Pro's

It is effective in **emergencies** when sexual intercourse occurs:

- ◆ Without contraception
- ◆ If a condom breaks
- ◆ When sexual intercourse is forced or sexual assault has occurred

## Con's

◆ No protection from STIs

Possible side effects:

- ◆ Breast tenderness and mild headaches (should go in 48 hours)
- ◆ Nausea
- ◆ Tiredness (Some might get 'Flu-like' feelings)



# IUD (Multiload)

## What is it?

Copper device fitted in uterus. Prevents egg and sperm meeting.

## How does it work?

It is a form of intrauterine method.

**98-99% effective**

## Pro's

- ◆ Stays in place for up to 5 years
- ◆ May make periods lighter
- ◆ Don't have to remember to take contraceptive pill daily
- ◆ No risk of pill failure associated with diarrhoea and vomiting.

## Con's

- ◆ No protection from STIs
- ◆ May experience spotting between periods in the first months after insertion.



# IUD (Mirena)

## What is it?

Small plastic device with progesterone that is fitted into the uterus. Prevents the egg and sperm meeting.

## How does it work?

It is a form of intrauterine method.

**99% effective**

## Pro's

- ◆ Stays in place for us to 5 years
- ◆ May make periods lighter
- ◆ Don't have to remember to take contraceptive pill daily
- ◆ No risk of pill failure associated with diarrhoea and vomiting.

## Con's

- ◆ No protection from STIs
- ◆ May experience spotting between periods in the first months after insertion.



# Female sterilization

## What is it?

Female sterilization involves a procedure to block the fallopian tubes.

## How does it work?

This is a form of permanent method.

**Over 99% effective**

## Pro's

- ◆ Effective permanent contraception
- ◆ doesn't interfere with a your periods
- ◆ Effective immediately after the operation
- ◆ doesn't interfere with sexual drive

## Con's

- ◆ No protection from STIs
- ◆ Involves going to hospital and anesthetic
- ◆ Permanent—need to think it through
- ◆ May cause discomfort, bruising or infection
- ◆ You need a referral to outpatient hospital or gynecologist.



# Male Sterilization

## What is it?

It is usually done by a vasectomy, which is an operation that cuts the tube that carries the sperm from testes to the penis.

## How does it work?

This is a form of permanent method.



## Pro's

- ◆ More effective than female sterilization
- ◆ Can be done out of hospital
- ◆ You may only need 1-3 days off work
- ◆ Doesn't interfere with sexual drive or performance

**Over 99%  
effective**

## Con's

- ◆ No protection from STIs
- ◆ May cause bruising, discomfort or infection around site of operation
- ◆ Is usually not reversible
- ◆ Can sometimes cause a lump where the tube was cut (this is rare).

For more  
information :

See a health worker or  
visit the website  
[www.fpwa.org.au](http://www.fpwa.org.au)



Contact: Dr Cynthia Porter, AdvAPD, CDE  
ADIPS Council Member