

Royal Brompton & Harefield NHS Foundation Trust

Cyclophosphamide monitoring

and dosage record for respiratory patients with interstitial lung disease



Contents

Your details	3
Important information	3
Contact details for the healthcare team looking after you	4
Cyclophosphamide	5
Intravenous cyclophosphamide	5
Oral cyclophosphamide	7
What else do I need to know about cyclophosphamide	
treatment?	10
Can I take other medicines with cyclophosphamide?	10
What do I do if I forget to take my medicine?	11
Things you must tell medical staff	11
Over-the-counter medicines	11
Monitoring results	12
What the terms mean	18

This leaflet gives you general information on cyclophosphamide monitoring. It does not replace the need for personal advice from a healthcare professional. Please ask us if you have any questions. This booklet holds information about your immunosuppression treatment. Please keep this booklet with you all the time and show it to any person treating you including your doctor, pharmacist and nurse.

Your details

Name: Address:

Date of birth:

Contact telephone number:

Important information

- This medicine has been prescribed for **you alone**. Do not give it to anyone else, even if their symptoms are the same as yours.
- Take this medication only as prescribed by your doctor. Do not change anything without checking with your doctor first.

Contact details for the healthcare team looking after you:

Indication for treatment:

Consultant name and contact no:

GP surgery address and telephone:

Community pharmacy address and telephone:

For further information on medicines, please contact the pharmacy medicines information patient helpline on 020 7351 8901, 10am-5pm, Monday to Friday.

For advice outside working hours, call the NHS 111 service free of charge from any phone by dialling 111 or phone Royal Brompton Hospital switchboard on 020 7352 8121 and ask for the operator. You can ask the operator to connect you to the on-call respiratory doctors.

Cyclophosphamide (sye-kloe-FOSS-fa-mide)

Cyclophosphamide is an immunosuppressant drug. Immunosuppressant drugs are used to suppress (dampen down) the body's immune system in conditions where the immune system is overactive and reacts against your own body.

This drug can be used:

- To prevent organ rejection in patients who have had an organ transplant.
- In lung disease to reduce inflammation that may be contributing to your symptoms. (If you take prednisolone, taking these treatments will usually mean that your dose of prednisolone can be reduced).
- In other conditions, such as rheumatoid arthritis.

Cyclophosphamide is given intravenously or orally.

Intravenous cyclophosphamide

Cyclophosphamide is given by intravenous infusion (into a vein) to treat severe inflammation in the lung that may not have responded to steroid treatment.

Your doctor will decide what dose you need. The dose will depend on your body weight and total body surface area and is usually given monthly for a period of six months.

Occasionally, cyclophosphamide infusion is given more frequently. If it is thought you would benefit from a more frequent dose, your consultant will discuss this with you.

Side effects

Allergic reaction – tell your doctor immediately if you experience allergic symptoms such as flushing, wheezing and swelling of the face, increased heart rate, decreased blood pressure and breathing difficulties. This is not the full list of possible side effects. Please refer to the patient information leaflet supplied with your medicine for a complete list.

- Nausea, vomiting, headache and fatigue – tell your doctor if any of these symptoms are severe or do not go away.
- Bladder irritation that may cause the appearance of blood in your urine – if this happens, tell your doctor or nurse immediately.
- Decreased production of blood cells.
- Kidney or liver problems resulting in reduced function.
- Hair loss or thinning is a rare side effect and hair will normally start to regrow after, and sometimes even during, treatment.
- Reduced sperm count usually returns to normal when treatment is stopped. Please discuss this with your doctor before starting the treatment as a referral to a fertility specialist may be required.
- Irregular menstrual periods

and loss of ovulation – may not return to normal even when treatment is stopped. Please discuss this with your doctor before starting the treatment as a referral to a fertility specialist may be required.

Patients receiving cyclophosphamide may be more likely to develop bladder cancer, leukaemia and other forms of cancer.

Blood tests

Your blood and urine will be checked each month prior to treatment with cyclophosphamide to check for any unwanted effects on your blood cell production, kidney and liver function.

Pregnancy and breastfeeding

- Make sure you are not pregnant before starting cyclophosphamide – cyclophosphamide can cause problems for your unborn baby
- Cyclophosphamide treatment will only be started following a negative pregnancy test
- Use adequate contraception before starting treatment, during treatment and for

three months after stopping treatment

- You must contact your doctor immediately if you become pregnant whilst on treatment
- You must not breastfeed while you are taking cyclophosphamide

Precautions

To avoid bladder irritation, it is important that you drink plenty of fluid while taking cyclophosphamide for the first few days following your infusion.

If you get a sore throat or any signs of an infection, you should tell your doctor as soon as possible.

Oral cyclophosphamide

A very small number of patients will be given cyclophosphamide tablets if they cannot have the infusion.

Your doctor will decide on what dose you need. Your dose will depend on your body weight. Oral cyclophosphamide is usually taken once a day and one hour before food or on an empty stomach.

If you take any other medicines including any overthe-counter medicines, please let your doctor know so that he or she can check if they are safe for you to take with cyclophosphamide.

You will start on a low dose of cyclophosphamide for one

month to check if you experience any side effects or problems from this treatment. Your dose will then gradually increase to the maximum dose prescribed by your doctor.

Cyclophosphamide does not work immediately and it may be six to 12 weeks before you notice any benefit.

Your recommended dose:

Test dose	mg	Start date:
Increased dose	mg	Start date:
Increased dose	mg	Start date:
Increased dose	mg	Start date:

Side effects

Tell your doctor immediately if you experience allergic symptoms such as flushing, wheezing and swelling of the face, increased heart rate, decreased blood pressure and breathing difficulties.

This is not the full list of possible side effects. Please refer to the patient information leaflet supplied with your medicine for a complete list.

Nausea, vomiting, headache,

sore mouth – tell your doctor if any of these symptoms are severe or do not go away.

- Bladder irritation that may cause the appearance of blood in your urine – if this happens, tell your doctor immediately.
- Decreased production of blood cells.
- Kidney or liver problems resulting in reduced function.
- Hair loss or thinning is a rare side effect and hair will normally start to regrow after, and sometimes even during, treatment.
- Reduced sperm count usually returns to normal when treatment is stopped.

Please discuss this with your doctor before starting the treatment as a referral to a fertility specialist may be required.

 Irregular menstrual periods and loss of ovulation – may not return to normal even when treatment is stopped. Please discuss this with your doctor before starting the treatment.

Patients receiving cyclophosphamide may be more likely to develop bladder cancer, leukaemia and other forms of cancer.

Blood tests

Your GP should arrange for you to have a blood test every week until your dose is stabilised, then every four weeks from there on to check for any unwanted effects on

> It is important that you do not take cyclophosphamide unless you are having regular blood tests.

your blood cell production, kidney and liver function.

Pregnancy and breastfeeding

- Cyclophosphamide can cause problems for your unborn baby
- Make sure you are not pregnant before starting treatment
- Treatment will only start after a negative pregnancy test
- Use adequate contraception before starting treatment, during treatment and for 3 months after stopping treatment
- You must contact your doctor immediately if you become pregnant while on treatment
- Do not breastfeed while you are taking cyclophosphamide as small amounts of the drug can pass into breast milk

Precautions

To avoid bladder irritation, it is important that you drink plenty of fluid while taking cyclophosphamide. If you get a sore throat or any signs of an infection, you should tell your doctor as soon as possible.

What else do I need to know about cyclophosphamide treatment?

Because the tablets and infusion work by suppressing (dampening down) the body's immune system, you may have a decreased ability to fight infection.

If you get any signs of infection (a sore throat, fever, etc.), experience jaundice (yellowing of the skin or whites of the eyes) or any unexplained bleeding or bruising you should tell your doctor as soon as possible.

If you have not had chickenpox but come into contact with someone who has chickenpox or shingles, or if you develop chickenpox or shingles, you should see your doctor immediately as you may need special treatment.

Can I take other medicines with cyclophosphamide?

Always ask your doctor or pharmacist about any other medicines before you start to take them. This includes overthe-counter medicines, herbal and alternative remedies. All of these can interact with cyclophosphamide and affect your treatment.

Keep a record of any symptoms and discuss them with your doctor. It is important for your doctor or pharmacist to know so they can help you. The symptoms you are trying to treat may be a sign of cyclophosphamide not working safely for you.

While you are taking cyclophosphamide – and for at least six months after you stop treatment – do not have any live vaccines, such as yellow fever, and discuss any other vaccinations with your doctor first. Immunosuppressants lower your body's resistance. This may cause you to get an infection from the vaccine and the response to the vaccine may be reduced. Pneumovax and yearly flu vaccines are safe and recommended.

What do I do if I forget to take my medicine?

If you forget to take your medicine, you can take it as soon as you remember but never take two doses at once. If you are unsure what to do, contact your doctor for advice.

Things you must tell medical staff

If you need emergency treatment, the medical staff helping you will need to know that you are on cyclophosphamide.

If you are pregnant, breastfeeding or allergic to any medicine, please inform your doctor before he or she prescribes any new medicines.

If you take more tablets than you have been told, you must contact your doctor immediately.

Over-the-counter medicines

The information in this record will help a pharmacist determine if over-the-counter medicines are suitable for you.

Date of blood test		
Dose		
Hb Male 13.4-16.6g/dL Female 11.5-15.1g/dL		
MCV 84-98fL		
WBC 5.1-11.4 10^9/L		
Platelets 147-397 10^9/L		
Neutrophills 2.0-7.5 10^9/L		
Lymphocytes 1.3-3.7 10^9/L		
ALT 0-40 IU/L		
Alk phos 38-126 U/L		
CRP 0-10 mg/L		
Urea 2.5-6.5 mmol/L		
Creatinine 60-120 umol/L		
Total Billirubin 3-24 umol/L		
Next test date		

Date of blood test		
Dose		
Hb Male 13.4-16.6g/dL Female 11.5-15.1g/dL		
MCV 84-98fL		
WBC 5.1-11.4 10^9/L		
Platelets 147-397 10^9/L		
Neutrophills 2.0-7.5 10^9/L		
Lymphocytes 1.3-3.7 10^9/L		
ALT 0-40 IU/L		
Alk phos 38-126 U/L		
CRP 0-10 mg/L		
Urea 2.5-6.5 mmol/L		
Creatinine 60-120 umol/L		
Total Billirubin 3-24 umol/L		
Next test date		

Date of blood test		
Dose		
Hb Male 13.4-16.6g/dL Female 11.5-15.1g/dL		
MCV 84-98fL		
WBC 5.1-11.4 10^9/L		
Platelets 147-397 10^9/L		
Neutrophills 2.0-7.5 10^9/L		
Lymphocytes 1.3-3.7 10^9/L		
ALT 0-40 IU/L		
Alk phos 38-126 U/L		
CRP 0-10 mg/L		
Urea 2.5-6.5 mmol/L		
Creatinine 60-120 umol/L		
Total Billirubin 3-24 umol/L		
Next test date		

Date of blood test		
Dose		
Hb Male 13.4-16.6g/dL Female 11.5-15.1g/dL		
MCV 84-98fL		
WBC 5.1-11.4 10^9/L		
Platelets 147-397 10^9/L		
Neutrophills 2.0-7.5 10^9/L		
Lymphocytes 1.3-3.7 10^9/L		
ALT 0-40 IU/L		
Alk phos 38-126 U/L		
CRP 0-10 mg/L		
Urea 2.5-6.5 mmol/L		
Creatinine 60-120 umol/L		
Total Billirubin 3-24 umol/L		
Next test date		

Date of blood test		
Dose		
Hb Male 13.4-16.6g/dL Female 11.5-15.1g/dL		
MCV 84-98fL		
WBC 5.1-11.4 10^9/L		
Platelets 147-397 10^9/L		
Neutrophills 2.0-7.5 10^9/L		
Lymphocytes 1.3-3.7 10^9/L		
ALT 0-40 IU/L		
Alk phos 38-126 U/L		
CRP 0-10 mg/L		
Urea 2.5-6.5 mmol/L		
Creatinine 60-120 umol/L		
Total Billirubin 3-24 umol/L		
Next test date		

Date of blood test		
Dose		
Hb Male 13.4-16.6g/dL Female 11.5-15.1g/dL		
MCV 84-98fL		
WBC 5.1-11.4 10^9/L		
Platelets 147-397 10^9/L		
Neutrophills 2.0-7.5 10^9/L		
Lymphocytes 1.3-3.7 10^9/L		
ALT 0-40 IU/L		
Alk phos 38-126 U/L		
CRP 0-10 mg/L		
Urea 2.5-6.5 mmol/L		
Creatinine 60-120 umol/L		
Total Billirubin 3-24 umol/L		
Next test date		

What the terms mean

Hb: The oxygen-carrying component of red blood cells.

MCV: The average volume of a red blood cell.

WBC: White blood cells.

Platelets: An irregular, disc-shaped element in the blood that helps in blood clotting.

Lymphocytes: A small white blood cell that plays a large role in defending the body against disease. They are responsible for immune responses.

Neutrophils: A type of white blood cell filled with enzymes used to kill and digest micro-organisms.

ALT: An enzyme normally present in the liver and heart cells that is released into the blood stream when the liver or heart is damaged. Abnormally high ALT levels may indicate that the liver is not functioning normally.

ALK phos: An enzyme made in the liver that is usually released into the blood during injury. Abnormally high levels may indicate some liver damage.

CRP: A component of blood that rises in response to inflammation in the body. This rate increases with more inflammation.

Urea and creatinine: Substances normally cleared from the blood by the kidneys. Increased blood levels of urea and creatinine indicate that the kidneys may not be functioning normally.

If you have concerns about any aspect of the service you have received in hospital and feel unable to talk to those people responsible for your care, call PALS on:

•	Royal Brompton Hospital	020 7349 7715

Harefield Hospital
01895 826 572

or email pals@rbht.nhs.uk. This is a confidential service.

Royal Brompton Hospital Sydney Street London SW3 6NP tel: 020 7352 8121 textphone: (18001) 020 7352 8121

Harefield Hospital Hill End Road Harefield Middlesex UB9 6JH tel: 01895 823 737 textphone: (18001) 01895 823 737

Website: www.rbht.nhs.uk

إذا كنت ترغب في الحصول على ترجمة فورية لمضمون هذه الوثيقة إلى اللغة العربية، يرجى منك الاتصال بأحد مستخدمينا بجناح المصلحة التي يتم فيها استشفائك. أحد موظفينا سيسعى لترتيب إجراءات الترجمة وإتمامها في الوقت المناسب لك.

Brosurteki bilginin Turkçe tercumesi için tedavi goruyor oldugunuz bolume bas vurunuz. Bolum personeli tercumenin gerçeklesmesini en kisa zamanda ayarlacaktir.

© Royal Brompton & Harefield NHS Foundation Trust

September 2014