MEDICINE INFORMATION

Dose-adjusted EPOCH and DA-R-EPOCH

A guide to the EPOCH medicines, continuous infusion, blood tests and when dose adjustment may be part of the plan.

At a glance

Treatment	Etoposide + Prednisolone + Vincristine + Cyclophosphamide + Doxorubicin
When it may be used	EPOCH-based plans may be used for selected aggressive lymphomas.
How it is given	Etoposide, vincristine and doxorubicin run through a vein using a pump. Cyclophosphamide goes through a vein separately. You take the steroid by mouth. In R-EPOCH, rituximab is also given by drip.
Before you start	Tell the team about heart problems, previous doxorubicin, constipation or numbness.

What this treatment is and how it works

EPOCH combines etoposide, a steroid, vincristine, cyclophosphamide and doxorubicin. This guide covers the version using prednisolone. Some EPOCH protocols use prednisone. Dose-adjusted EPOCH is often shortened to DA-EPOCH. DA-R-EPOCH includes rituximab.

When it may be used

The type of lymphoma helps determine whether rituximab or a different plan is needed.

Before treatment

Ask if the treatment is inpatient or if you will use a pump at home.

How treatment is given

Some EPOCH medicines run through a vein over several days. The steroid is taken by mouth and cyclophosphamide is given as part of the cycle. Ask which tests, medicines and white-cell support visits come after the infusion.

Tests and monitoring during treatment

Blood counts between cycles help the team decide the next dose in dose-adjusted EPOCH. They may also check heart, kidney and liver function and look for early changes in blood salts as lymphoma cells break down.

Side effects

Common or more frequent side effects

- **Changes in blood counts.** Treatment can lower the white cells that fight infection, the red cells that carry oxygen and the platelets that stop bleeding. You may feel tired or get breathless sooner than usual. Let the unit know about nosebleeds, new bruises or small red or purple spots. Fever or shaking chills needs a call to the urgent number even if your next blood test is already booked.
- **Sore mouth and changes in eating.** Your mouth may feel tender or dry, and some foods may sting. A soft toothbrush and the mouth care your unit recommends can help. Tell the team about ulcers, a white coating, or trouble swallowing so it can assess for mouth infection and help with pain. If you cannot drink enough, contact the unit promptly.
- **Constipation and nerve symptoms.** Some drugs in this regimen can slow your bowel and affect nerves. Write down how often you pass stools, and tell the team about tingling, weakness or a change in your balance. Ask about a bowel plan if you already take medicines that contribute to constipation. With severe belly pain, vomiting or a swollen abdomen, call urgently.
- **Effects of steroid medicines.** A steroid may make it harder to sleep or cause changes in appetite, mood or blood sugar. Tell the unit if thirst or urination increases, especially if you have diabetes. Do not change the dose or timing on your own. Ask before treatment which symptoms should prompt a blood sugar check.

Other reported side effects

Tell the team about a sore line, new swelling or a change in bowel habit. Tell the nurse immediately if the pump or line leaks or comes apart.

Serious effects to recognise

- **Central line problems.** Call about new pain, redness, leaking fluid or swelling near the line. Fever or sudden illness can be a sign of infection. Ask what to do if the pump alarms or the line is pulled. Use your unit’s emergency plan for the line and infusion.

Rapid breakdown of lymphoma cells can affect the kidneys and the salts in your blood, particularly early in treatment. Your team may arrange extra blood tests and preventive medicine.

When to seek urgent help

Call your hospital’s 24-hour cancer care number straight away for fever, chills, a painful or leaking line, severe constipation with vomiting, reduced urine or new breathlessness. Follow your hospital’s written temperature instructions. If you have no written threshold, call at 37.5°C (99.5°F) or above, or below 36°C (96.8°F). Call if you feel very unwell even when your temperature is normal.

Seek emergency care for severe breathing difficulty, swelling of the face or throat, chest pain, collapse or bleeding that will not stop.

Practical advice for this treatment

Learn what to check if you have a pump

Etoposide, vincristine and doxorubicin may be given as a continuous infusion through a central line. If your hospital uses an outpatient pump, have the nurse show you how to carry it and check that it is working. Know who to call if tubing leaks, the pump alarms or the dressing loosens. Follow the nurse's instructions and avoid adjusting the settings.

Allow time for between-cycle blood tests

With dose-adjusted EPOCH, results between cycles inform the next dose. Ask where to have blood tests and who will review them. Sometimes a white-cell growth factor is prescribed after treatment. Check the timing of this injection with your unit.

Ask about hepatitis B testing if rituximab is included

R-EPOCH includes rituximab. This medicine can reactivate previous hepatitis B infection, so the team checks for it before treatment and may recommend monitoring or prevention medicine. Bring results of any past hepatitis tests if you have them.

Medicines, interactions and vaccinations

Check with the pharmacist before antifungals, supplements or other new medicines. Ask before vaccinations. Follow the written directions for the steroid.

Everyday life

Ask how to look after the line or pump, if used, and get the unit's instructions in writing. Keep a bowel and symptom record if needed.

Pregnancy, fertility and breastfeeding

Discuss fertility preservation, contraception and breastfeeding before starting.

After treatment

Ask when scans or other checks will assess response. Report ongoing tingling, weakness or breathing problems and keep the follow-up plan.

Frequently asked questions

What does dose-adjusted mean?

The team may change doses in later cycles based on blood counts and other safety findings.

Does EPOCH always include rituximab?

Rituximab is only given if prescribed. It adds the R in R-EPOCH.

Why are blood tests needed between cycles?

They help the team see how low counts went and how they recover.

Can I go home with the infusion?

Some centres use pumps at home. Ask how your unit gives EPOCH and who to call if there is a problem.

What if the pump alarms?

Use the pump team's 24-hour number and tell them what the pump shows. Also call if the tubing leaks, disconnects or the site hurts or swells. Follow instructions from the team before touching the pump or line.

Why ask about previous doxorubicin?

Total exposure helps the team assess heart risk.

What should I report about my bowel movements?

Tell the team promptly about increasing constipation, especially with vincristine and while on stronger pain medicines. Severe belly pain, vomiting or trouble passing wind and stools requires urgent assessment.

Individual medicine guides

- Etoposide
- Prednisolone
- Vincristine
- Cyclophosphamide
- Doxorubicin

Sources and further reading

Read this guide alongside your hospital's plan. Ask your pharmacist to confirm the exact product dispensed in India and follow the instructions for that product.

Summary of Product Characteristics (SmPC) and prescribing information

- Etoposide infusion - Irish HPRA SmPC
- Prednisolone tablets - UK SmPC
- Prednisone tablets (Cortancyl) - French product page with SmPC
- Vincristine injection - UK SmPC
- Cyclophosphamide injection - UK SmPC
- Conventional doxorubicin injection - UK SmPC
- Rituximab (MabThera) - EU SmPC
- US prescribing information for doxorubicin
- Intravenous etoposide - US prescribing information

Clinical protocols and other references

- eviQ dose-adjusted R-EPOCH protocol

Additional sources

- Original dose-adjusted EPOCH study

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