

Autonomic Nervous System Blocks or Injections

- Stellate Ganglion Blocks
- Lumbar Sympathetic Ganglion Blocks
- Splanchnic Nerve Blocks
- Coeliac Plexus Blocks
- Hypogastric Plexus Blocks

Information for patients, relatives and carers

① For more information, please contact:

The Pain Management Clinic
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Caring with pride

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What are Autonomic Nervous System Injections?

The Autonomic Nervous System carries information to and from the organs and blood vessels in your body. It also lies alongside the nerves that carry pain signals from your internal organs to your spinal cord.

Stellate Ganglion injections are used to attempt to treat certain types of head and neck pain; arm pain or some chest pains.

Splanchnic Nerve Blocks and Coeliac Plexus Blocks are used for certain types of abdominal pain.

Lumbar Sympathetic Blocks are used for some types of leg pain and some pains associated with poor circulation in the legs.

Hypogastric Plexus Blocks are used for some types of pelvic pain.

Diagnostic Autonomic Blocks

These injections are usually done with local anaesthetic to see if injecting these nerves makes a significant difference to your pain. The effect is usually short-lived. If the injections make a significant difference to your pain a longer lasting “Therapeutic Injection” or procedure may be performed at another time.

Therapeutic Autonomic Blocks

A successful Diagnostic Block may indicate that a “Therapeutic Block” could be performed using phenol or alcohol. Alternatively, a Radiofrequency procedure may be indicated.

- 50% patients who respond to a Diagnostic Block should be helped by a Therapeutic Block.
- 5% chance of the pain being worse after the procedure.
- Pain may be more severe for up to three months after the procedure and then improve.
- Pain may not improve even if the initial Diagnostic Block relieved your symptoms.

What does the procedure involve?

Injections are done under imaging control to enable the doctor to see the area where the nerves lie. This may be ultrasound or x-ray imaging. The procedures can take up to 30 minutes. You may be in the Day Unit for two to four hours.

You will be asked to change into a theatre gown and lie on an x-ray table to have your injections. The skin will be cleaned with an antiseptic solution and injected with local anaesthetic before the procedure is done. The procedure can still be painful as the needles are placed into a sensitive area around the spine.

What happens afterwards?

The site of the injection will be sore afterwards. You can take your usual painkillers for this.

The effect of the injections varies from person to person. Some patients feel no benefit from the injections. Others find that their pain settles down and that they are able to manage normally. There is a range of responses along this scale.

If the injections are going to be effective, they may take a few days to work. You should continue with your usual activities. If you feel some benefit, you can gradually increase your level of activity. If you feel no benefit, continue with your pain killers.

You will be reviewed in the out patients clinic to assess their effectiveness. An appointment will be sent to you and further management will be discussed with you when you are seen in the clinic.

Anticoagulant Medication

You should tell us if you are taking any blood thinning medication such as Warfarin, Clopidogrel and other anticoagulant medications. These may need to be stopped before the procedure.

What are the risks from the injections?

General Risks from any injection technique:

No procedure is free of risk.

Short term side effects include: Pain at the site of injection; bruising, bleeding, infection, injury to other body structures near to the site of injection.

Long term side effects and complications are uncommon but the possibility cannot be excluded.

Serious complications such as long term significant nerve damage, paralysis or possible fatality are very very rare with a probable risk of one to two in 100,000 or less.

Specific Risks associated with the procedures:

Stellate Ganglion Blocks can be associated with temporary facial flushing, visual disturbance, altered voice and difficulty swallowing. There is a 1% to 3% chance of getting a pneumothorax which may require treatment with a chest drain in a few cases.

Lumbar Sympathectomy can be associated with a drop in blood pressure, temporary severe thigh pain that may last up to three months, impotence (3% with bilateral blocks) and temporary disturbance in bowel or bladder function. Legs may feel hot and can swell up.

Splanchnic Nerve Block and Coeliac Plexus Block can be associated with pneumothorax (3%), bleeding from the main vessels in the abdomen, disturbed bowel function with diarrhoea, low blood pressure.

X-ray guidance

If your procedure is guided by x-rays, there is a very small risk from the x-rays used to guide the procedure. We are all constantly exposed to small amounts of radiation in our daily lives due to natural background radiation in our environment. Rocks, building materials, food and drink, and cosmic radiation from space, all provide a radiation dose that we can't avoid. The effective dose from this procedure is approximately 0.5 mSv, which is about the same dose as you would receive from natural background radiation living in the UK for three months.

This radiation dose gives a risk of fatal cancer of one in 40,000. This is the same as the average risk of death by an accident at work and would formally be described as a "minor" risk. There is no risk from radiation if your procedure is guided by ultrasound.

You should not have x-rays if you are pregnant or at risk of being pregnant

Your questions

Please ask the nurse or doctor if you have any questions when you come to the Day Unit for your injection.

If you have concerns after your injection which are not answered by this leaflet, please contact your GP for urgent serious problems.

A message can be left for your consultant at the hospital.

Please use the space below to note any questions you have to ask at your follow up appointment.

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact:

Dr P Toomey, Consultant Anaesthetist,
The York Hospital, Wigginton Road, York, YO31 8HE or
telephone 01904 725505.

Teaching, training and research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email pals@york.nhs.uk.

An answer phone is available out of hours.

Please telephone or email if you
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Owner	Dr P Toomey, Consultant Anaesthetist
Date first issued	October 2015
Review Date	March 2021
Version	1 (reissued April 2019)
Approved by	Pain Team
Document Reference	PIL 936 v1.3

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