What is autonomic neuropathy?
Autonomic neuropathy is the term used to describe damage to the autonomic nervous system, which controls internal processes like:
- Blood pressure
- Heart rate
- Digestion
- Bladder function
- Sexual function

What is the autonomic nervous system?
The autonomic nervous system automatically (autonomously) regulates body processes without conscious effort.
The autonomic nervous system has two divisions:

Sympathetic
Prepares the body for emergency or stressful situations such as fight or flight.
Parasympathetic
Controls the body processes during rest or normal activity and helps the body recover after fight or flight.

The two divisions work synergistically (together) to react to and recover from changes in the body caused by an external factor.

What causes autonomic neuropathy in AL amyloidosis?
The abnormal amyloid protein that accumulates in AL amyloidosis can deposit in various tissues and organs including the autonomic nervous system. The amyloid can deposit in nerve endings causing damage which can interfere with the information and messages sent between the brain and the organs of the autonomic nervous system, such as the heart, blood vessels, the intestine and the sweat glands.

What are the symptoms of autonomic neuropathy?
The symptoms of autonomic neuropathy vary between patients depending on the nerves affected. Early symptoms can include: dizziness when standing and nausea and/or vomiting when eating. Further nerve damage can affect the function of particular organs and systems of the body.

Digestive symptoms
When the nerves of the gut and intestines are damaged by amyloid build up, they can cause symptoms of:
- Constipation
- Diarrhoea
- Feeling full after a few bites of food
- Nausea (particularly after eating)
- Vomiting

Bladder symptoms
Symptoms of nerve damage to the bladder can include:
- Frequent urinary tract infections
- Incontinence
- Urinary retention (inability to empty the bladder)

Heart rhythm and blood pressure symptoms
Nerve damage in the heart and/or lungs can cause symptoms of:
- Low blood pressure
- Dizziness
- Fainting
- Exercise intolerance
- Heart attacks
Sexual difficulties
The symptoms affecting the reproductive organs can include:
■ Erectile dysfunction
■ Vaginal dryness

What are the treatments for autonomic neuropathy?
Nerve damage is irreversible, but the symptoms associated with autonomic neuropathy can be managed to improve quality of life. Autonomic neuropathy is managed by treating the underlying AL amyloidosis while controlling the symptoms. In this case an individual approach is necessary to deal with the symptoms.

Digestive symptoms
If the amyloid deposits cause problems with digestion it may be advised to make small dietary changes, to help prevent constipation or diarrhoea. Treatment can also be prescribed if symptoms persist.

Heart rhythm and blood pressure symptoms
Symptoms related to heart rhythm and blood pressure can usually be controlled with treatment prescribed by a doctor.

Sexual dysfunction symptoms
Sexual dysfunction can be a difficult and embarrassing topic to discuss but it is important to discuss it with a doctor or nurse. They can also provide options to alleviate symptoms. Doctors can provide treatment for men who are having trouble maintaining an erection and for women experiencing problems with vaginal dryness, vaginal lubricant and be prescribed.

Other treatments
Complementary therapies, such as, acupuncture and transcutaneous electrical nerve stimulation (TENS) may help to relieve some symptoms.

Some tips for self-management
There are some lifestyle adjustments that can make living with autonomic neuropathy easier, these include:
■ Drinking lots of fluids - patients with diarrhoea should drink lots of fluids to replace those lost
■ Posture changes - taking time when standing up, such as standing in stages, can decrease dizziness. Tensing muscles regularly when sitting or lying down can help to increase blood flow
**Elevating your bed** – elevating the head of the bed can help with low blood pressure.

**In summary**

Autonomic neuropathy is a group of symptoms that can, if left untreated, worsen and affect quality of life. It is important to be vigilant for symptoms of autonomic neuropathy in AL amyloidosis and report them immediately to the doctor or nurse as soon as possible.

**About this Infosheet**

The information in this Infosheet is not meant to replace the advice of your medical team. They are the people to ask if you have questions about your individual situation. All Myeloma UK publications are extensively reviewed by patients and healthcare professionals prior to publication.

**Other information available from Myeloma UK**

Myeloma UK provides a wide range of information covering all aspects of the treatment and management of AL amyloidosis.

For a full publication list visit [www.myeloma.org.uk/publications](http://www.myeloma.org.uk/publications)

To order your free copies contact Myeloma UK. Our information is also available to download at [www.myeloma.org.uk](http://www.myeloma.org.uk)

To talk to one of our Myeloma Information Specialists about any aspect of AL amyloidosis, call the Myeloma Infoline on **0800 980 3332** or **1800 937 773** from Ireland.

Information and support about AL amyloidosis is also available around the clock at [www.myeloma.org.uk/amyloidosis](http://www.myeloma.org.uk/amyloidosis)
Notes