CONDITION

Multiple symmetric lipomatosis

Multiple symmetric lipomatosis causes painless, matching deposits of fatty tissue, usually around the neck, shoulders, and upper body.

WHAT IT IS
Symmetrical overgrowth of fatty tissue around the upper body

BODY SYSTEM
Skin, soft tissues, breathing, and nervous system

MAIN SYMPTOMS
Neck swelling, shoulder masses, limited movement, swallowing problems

WHAT CAUSES IT
Unknown; alcohol and mitochondrial changes may contribute

HOW IT IS DIAGNOSED
Examination plus CT or MRI imaging

MAIN TREATMENT
Surgical removal or liposuction; monitoring when mild

CAN IT BE CURED?
Sometimes - removal helps, but regrowth can occur

IS IT AN EMERGENCY?
Sometimes - when breathing or swallowing becomes difficult

LONG-TERM OUTLOOK
Usually chronic; regrowth after treatment is common

Overview

Multiple symmetric lipomatosis, or MSL, is a rare condition in which fatty tissue grows in matching areas on both sides of the body. The growths are usually painless and are not cancer.

Unlike an ordinary lipoma, which is a single fatty lump inside a thin capsule, MSL often causes broad areas of fatty tissue without a clear border. These deposits most often form around the neck, shoulders, upper arms, upper back, chest, or abdomen. They can create a thick collar around the neck or make the shoulders and upper body look unusually broad.

MSL is also called Madelung disease or Launois-Bensaude syndrome. Despite the older name "Madelung disease," it is described here as a condition.

Small deposits may mainly affect appearance. Larger deposits can limit neck or arm

movement, press on the throat or airway, and make clothing difficult to fit. Some people also have nerve symptoms or health problems related to alcohol use, the liver, blood pressure, blood fats, or blood sugar.

MSL is different from general weight gain. Losing weight may reduce ordinary body fat, but it usually does not remove the abnormal deposits.

Symptoms

The deposits often grow slowly over several years. They are usually soft, painless, and similar on both sides of the body. Their exact pattern differs from person to person.

Common features include:

Pressure from deeper deposits can cause other symptoms. These may include trouble swallowing, shortness of breath, noisy breathing, snoring, sleep apnoea, or a change in the voice. Sleep apnoea means breathing repeatedly stops or becomes shallow during sleep.

Some people develop numbness, tingling, burning pain, weakness, or poor balance. These symptoms may come from peripheral neuropathy, which is damage to nerves outside the brain and spinal cord. Neuropathy can have several causes, including long-term heavy alcohol use, diabetes, vitamin deficiencies, and possibly the underlying processes involved in MSL.

A new lump that is painful, firm, one-sided, or growing quickly is not typical of MSL and needs medical assessment.

- Thickening around the front, sides, or back of the neck
- Rounded masses over the shoulders, upper arms, chest, or upper back
- A larger neck size or a collar-like appearance
- Reduced movement of the neck, shoulders, or arms
- Difficulty finding clothes that fit comfortably

Causes and risk factors

The exact cause of MSL is not known. Research suggests that the fatty tissue may have problems controlling how fat is stored and broken down.

Changes in mitochondria may play a part. Mitochondria are structures inside cells that help produce energy. Mitochondrial DNA changes have been found in some people and families with MSL, but not everyone with the condition has an identifiable genetic change.

Long-term heavy alcohol use has a strong association with MSL. Alcohol may affect fat metabolism and mitochondrial function. However, alcohol is not the only cause. People who drink little or no alcohol can develop MSL, and having the condition is not evidence that someone misuses alcohol.

MSL has historically been reported most often in adult men, especially those with Mediterranean ancestry. It can occur in people of any sex or background.

Conditions reported alongside MSL include liver problems, high blood pressure, abnormal cholesterol or triglyceride levels, diabetes, gout, low thyroid function, and peripheral neuropathy. These associations do not mean that everyone with MSL will develop them.

Rare family clusters suggest that inherited factors can matter in some cases. Most people do not have a clear family history.

Diagnosis

Diagnosis starts with a medical history and physical examination. The symmetrical pattern and typical location of the fatty deposits may strongly suggest MSL.

Computed tomography, or CT, uses X-rays to make detailed images. Magnetic resonance imaging, or MRI, uses magnets and radio waves. Either test can show how far the fatty tissue extends and whether it surrounds the airway, blood vessels, nerves, or muscles. Imaging also helps with planning surgery.

An ultrasound may help assess a superficial lump, but CT or MRI usually gives a clearer picture of deep or widespread deposits.

A biopsy is not always needed. During a biopsy, a small tissue sample is removed and examined under a microscope. It may be recommended if a mass is unusually firm, painful, rapidly growing, or not symmetrical. This helps distinguish MSL from an ordinary lipoma, liposarcoma, or another condition. Liposarcoma is a rare cancer of fatty tissue.

Blood tests do not confirm MSL. They may be used to check liver function, blood sugar, cholesterol, thyroid function, blood cells, or vitamin levels. Nerve testing may be considered when there is numbness, weakness, or poor balance.

Treatment and management

Treatment is based on the size and location of the deposits, their effect on daily life, and whether they are pressing on important structures. Small, stable deposits that are not causing

problems may be monitored.

Surgery is the main treatment for troublesome MSL. Open surgery, called lipectomy, removes fatty tissue through an incision. It may be preferred for large or deep deposits, especially around the airway, major blood vessels, or nerves.

Liposuction removes fat through a narrow tube. It may be useful for softer, more accessible deposits or for improving body contour. Because MSL tissue does not always have a clear capsule, complete removal can be difficult with either method. Some people need more than one procedure.

Possible surgical problems include bleeding, fluid collection, infection, scarring, uneven contours, and injury to nearby nerves or other structures. The neck contains major blood vessels and airway structures, so careful surgical planning is important.

The fatty tissue can grow back after surgery or liposuction. Recurrence does not mean that the original procedure was performed incorrectly. The underlying tendency to form abnormal deposits remains.

There is no established medicine that reliably removes MSL deposits. Weight loss can improve general health and reduce ordinary fat, but it does not usually eliminate the abnormal tissue.

Reducing or stopping alcohol is often advised, particularly when drinking is heavy. This can protect the liver, nerves, heart, and other organs. It may help slow further growth in some people, but it does not reliably shrink existing deposits.

Other care may include treatment for sleep apnoea, diabetes, liver problems, abnormal blood fats, or neuropathy. Physiotherapy may help maintain movement when neck or shoulder masses cause stiffness.

Complications

Most MSL deposits remain benign, meaning non-cancerous. Their location and size are usually more important than the tissue itself.

Potential complications include:

Large deposits may make anaesthesia or placing a breathing tube more difficult. If you are planning any operation, tell the anaesthesia team about MSL and any history of breathing or swallowing problems.

Cancer developing within an area of MSL appears to be very uncommon. Even so, a new one-sided, hard, painful, or rapidly enlarging mass should be checked rather than assumed to be part of MSL.

- Narrowing of the airway, causing breathlessness or noisy breathing
- Pressure on the throat or oesophagus, causing swallowing difficulty
- Sleep apnoea from tissue around the upper airway
- Limited neck, shoulder, or arm movement
- Nerve compression, numbness, weakness, or balance problems
- Emotional distress related to appearance or unwanted attention
- Regrowth after surgery or liposuction

Prevention

There is no proven way to prevent MSL because its underlying cause is not fully understood. Some cases may involve inherited or mitochondrial changes that cannot be prevented.

Avoiding heavy alcohol use may reduce one important risk factor and can protect against liver and nerve damage. It is not a guarantee that MSL will not develop or progress.

If MSL runs in your family, genetic counselling may help explain what is known about inheritance. Genetic testing does not identify a cause in every family and may not change treatment.

After treatment, follow-up cannot guarantee that deposits will not return. It can help detect regrowth and monitor areas close to the airway or other important structures.

Living with it and what to expect

MSL usually has a long-term course. Deposits may enlarge gradually, remain stable for a time, and then grow again. It is not possible to predict the pace for one person from another person's experience.

The condition does not usually spread through the body like cancer. However, fatty tissue can become extensive within the areas it affects. Symptoms may change as deposits increase in size or begin pressing on nearby structures.

Some people need only periodic appointments and imaging when there is a clinical reason. Others have one or more operations because of swallowing, breathing, movement, or appearance concerns. Regrowth can happen months or years after treatment.

Daily life may be affected by restricted movement, difficulty sleeping, clothing fit, or reactions from other people. Physiotherapy, treatment for sleep apnoea, practical clothing changes, and

emotional support can help with these specific problems.

Routine follow-up may include checking the size of deposits, neck movement, breathing, swallowing, nerve symptoms, alcohol use, and related health conditions. Seek an earlier review if established symptoms change rather than waiting for the next planned appointment.

When to get medical help

Arrange a routine medical appointment if you notice matching fatty swellings around your neck, shoulders, arms, or upper body. A planned review is also appropriate if known deposits are gradually enlarging, limiting movement, affecting sleep, or causing distress.

Request prompt medical assessment if you develop:

Call emergency services if breathing becomes severely difficult, you are choking, you cannot swallow saliva, or your lips or skin become blue or grey. These signs can indicate serious airway obstruction and should not wait for a routine appointment.

- New difficulty swallowing or repeated coughing during meals
- A persistent voice change
- Increasing shortness of breath or noisy breathing
- New numbness, weakness, falls, or problems with balance
- A lump that becomes hard, painful, one-sided, or rapidly larger

Common questions

Is multiple symmetric lipomatosis cancer?

No. The fatty deposits are benign. MSL does not normally behave like cancer or spread to distant organs. An unusual hard, painful, one-sided, or fast-growing lump may need imaging or a biopsy to rule out another cause.

Will losing weight make the lumps go away?

Usually not. Weight loss may reduce ordinary body fat and improve general health, but MSL deposits often remain. Their cells do not respond to weight loss in the same way as typical fat.

Is MSL caused by drinking alcohol?

Alcohol is strongly associated with the condition, but it is not the only factor. Some people with MSL do not drink heavily. Genetics, mitochondrial function, and changes in fat metabolism may also contribute.

Do the fatty deposits grow back after surgery?

They can. Surgery and liposuction remove existing tissue but do not remove the underlying tendency to form it. Regrowth may occur in the treated area or nearby, sometimes years later.

Can MSL affect my breathing?

Yes, if deposits grow around the throat, upper airway, or deeper parts of the chest. This is not the case for everyone. Noisy breathing, worsening breathlessness, choking, or difficulty swallowing needs prompt assessment.

Can my children inherit MSL?

Most cases do not follow a clear inheritance pattern. Rare family clusters and mitochondrial DNA changes have been reported. Genetic counselling may be useful when several relatives have similar fatty deposits or related neurological symptoms.

Sources

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