[Template:Infobox medical condition](/wiki/Template:Infobox_medical_condition" \o "Template:Infobox medical condition)

A **lipoma** is a [benign tumor](/wiki/Benign_tumor) composed of [adipose tissue](/wiki/Adipose_tissue) (body fat). It is the most common benign form of [soft tissue](/wiki/Soft_tissue) tumor.[[1]](#cite_note-1) Lipomas are soft to the touch, usually movable, and are generally painless. Many lipomas are small (under one centimeter diameter) but can enlarge to sizes greater than six centimeters. Lipomas are commonly found in adults from 40 to 60 years of age, but can also be found in younger adults and children. Some sources claim that malignant transformation can occur,<ref name=Schepens>['Obesity Gene' Causes Cancer of Fat Tissue, Schepens Scientists Find](http://www.hms.harvard.edu/news/pressreleases/Schepens/0400ObesityGene.html) Schepens Eye Research Institute (Harvard Medical School affiliate). April 26, 2000</ref> while others say this has yet to be convincingly documented.[[2]](#cite_note-2)

## Contents

* 1 Types[[edit](/index.php?title=(none)&action=edit&section=1)]
* 2 Causes[[edit](/index.php?title=(none)&action=edit&section=2)]
  + 2.1 Other conditions[[edit](/index.php?title=(none)&action=edit&section=3)]
* 3 Prognosis[[edit](/index.php?title=(none)&action=edit&section=5)]
* 4 Epidemiology[[edit](/index.php?title=(none)&action=edit&section=6)]
* 5 Other animals[[edit](/index.php?title=(none)&action=edit&section=7)]
* 6 References[[edit](/index.php?title=(none)&action=edit&section=8)]
* 7 External links[[edit](/index.php?title=(none)&action=edit&section=9)]

## Types[[edit](/index.php?title=(none)&action=edit&section=1)]

There are many subtypes of lipomas:[[3]](#cite_note-3)[Template:Rp](/wiki/Template:Rp)

* [Adenolipomas](/wiki/Adenolipoma) are lipomas associated with [eccrine sweat glands](/wiki/Eccrine_sweat_glands).[[4]](#cite_note-4)[Template:Rp](/wiki/Template:Rp)
* [Angiolipoleiomyomas](/wiki/Angiolipoleiomyoma) are acquired, solitary, asymptomatic acral nodules, characterized histologically by well-circumscribed subcutaneous tumors composed of smooth muscle cells, blood vessels, connective tissue, and fat.[[3]](#cite_note-3)[Template:Rp](/wiki/Template:Rp)
* [Angiolipomas](/wiki/Angiolipoma) are painful subcutaneous nodules having all other features of a typical lipoma.[[3]](#cite_note-3)[Template:Rp](/wiki/Template:Rp)[[5]](#cite_note-5)\* [Cerebellar pontine angle](/wiki/Cerebellar_pontine_angle) and [internal auditory canal](/wiki/Internal_auditory_canal) lipomas[[6]](#cite_note-6)\* [Chondroid lipomas](/wiki/Chondroid_lipomas) are deep-seated, firm, yellow tumors that characteristically occur on the legs of women.[[3]](#cite_note-3)[Template:Rp](/wiki/Template:Rp)
* [Corpus callosum](/wiki/Corpus_callosum) lipoma is a rare congenital brain condition that may or may not present with symptoms.[[7]](#cite_note-7) This occurs in the corpus callosum, also known as the [colossal commissure](/wiki/Colossal_commissure), which is a wide, flat bundle of neural fibers beneath the cortex in the human brain.
* [Hibernomas](/wiki/Hibernoma) are lipomas of [brown fat](/wiki/Brown_fat).
* Intradermal spindle cell lipomas are distinct in that they most commonly affect women and have a wide distribution, occurring with relatively equal frequency on the head and neck, trunk, and upper and lower extremities.[[3]](#cite_note-3)[Template:Rp](/wiki/Template:Rp)[[5]](#cite_note-5)\* [Neural fibrolipomas](/wiki/Neural_fibrolipoma) are overgrowths of fibro-fatty tissue along a nerve trunk, which often leads to nerve compression.[[3]](#cite_note-3)[Template:Rp](/wiki/Template:Rp)
* [Pleomorphic lipomas](/wiki/Pleomorphic_lipoma), like spindle-cell lipomas, occur for the most part on the backs and necks of elderly men and are characterized by floret giant cells with overlapping nuclei.[[3]](#cite_note-3)[Template:Rp](/wiki/Template:Rp)
* [Spindle-cell lipomas](/wiki/Spindle-cell_lipoma) are asymptomatic, slow-growing subcutaneous tumors that have a predilection for the posterior back, neck, and shoulders of older men.[[3]](#cite_note-3)[Template:Rp](/wiki/Template:Rp)
* Superficial subcutaneous lipomas, the most common type of lipoma, lie just below the surface of the skin.[[2]](#cite_note-2) Most occur on the [trunk](/wiki/Torso), [thigh](/wiki/Thigh), and [forearm](/wiki/Forearm), although they may be found anywhere in the body where fat is located.

## Causes[[edit](/index.php?title=(none)&action=edit&section=2)]

The tendency to develop a lipoma is not necessarily hereditary although hereditary conditions, such as [familial multiple lipomatosis](/wiki/Lipomatosis), may include lipoma development.[[8]](#cite_note-8)[[9]](#cite_note-9) Genetic studies in mice have shown a correlation between the *HMG I-C* gene (previously identified as a gene related to obesity) and lipoma development. These studies support prior epidemiologic data in humans showing a correlation between *HMG I-C* and [mesenchymal tumors](/wiki/Mesenchymal_tumour).[[10]](#cite_note-10) Cases have been reported where minor injuries are alleged to have triggered the growth of a lipoma, called "post-traumatic lipomas."[[11]](#cite_note-11) However, the link between trauma and the development of lipomas is controversial.[[12]](#cite_note-12)

### Other conditions[[edit](/index.php?title=(none)&action=edit&section=3)]

[Lipomatosis](/wiki/Lipomatosis) is believed to be a hereditary condition in which multiple lipomas are present on the body.

[Adiposis dolorosa](/wiki/Adiposis_dolorosa) (Dercum disease) is a rare condition involving multiple painful lipomas, swelling, and fatigue. Early studies mentioned prevalence in obese postmenopausal women. However, current literature demonstrates that Dercum disease is present in more women than men of all body types; the average age for diagnosis is 35 years.[[13]](#cite_note-13) [Liposuction](/wiki/Liposuction) is another option if the lipoma is soft and has a small [connective tissue](/wiki/Connective_tissue) component. Liposuction typically results in less [scarring](/wiki/Scar); however, with large lipomas it may fail to remove the entire tumor, which can lead to regrowth.[[14]](#cite_note-14) New methods under development are supposed to remove the lipomas without scarring. One is removal by injecting compounds that trigger [lipolysis](/wiki/Lipolysis), such as [steroids](/wiki/Steroid) or [phosphatidylcholine](/wiki/Phosphatidylcholine).<ref name=Salam/>[[15]](#cite_note-15) <gallery caption="Resection of an intermuscular lipoma in the elbow region"> Image:Lipoma 05.jpg|X-ray of the lipoma. Image:Lipoma 03.jpg|Intraoperative photo. Image:Lipoma 04.jpg|Operating field after removal of the lipoma. Arrow marks the [median nerve](/wiki/Median_nerve) that was compressed by the lipoma. Image:Lipoma 06.jpg|The resected lipoma  
(8 cm × 6 cm × 3 cm)

</gallery>

<gallery> File:Breast Lipoma 102050296.jpg|Ultrasound image of breast lipoma File:Arm mri.jpg|MRI showing lipoma of the arm File:Medical X-Ray imaging TPH07 nevit.jpg|X-ray showing lipoma File:Lipoma from thigh.jpg|This lipoma was removed from the thigh of a 39-year-old male patient. It measured approximately 10 cm in diameter at the time of removal. File:Fibrolipoma.JPG|Fibro lipoma upper back just below the shoulder, just like a Medium-sized Raisin </gallery>

## Prognosis[[edit](/index.php?title=(none)&action=edit&section=5)]

Lipomas are rarely life-threatening and the common subcutaneous lipomas are not a serious condition. Lipomas growing in internal organs can be more dangerous, for example lipomas in the gastrointestinal tract can cause bleeding, [ulceration](/wiki/Peptic_ulcer) and painful obstructions (so-called "malignant by location", despite being a benign growth histologically).[[16]](#cite_note-16)[[17]](#cite_note-17) Malignant transformation of lipomas into [liposarcomas](/wiki/Liposarcoma) is very rare and most liposarcomas are not produced from pre-existing benign lesions.<ref name=Dalal/> A few cases of malignant transformation have been described for bone and kidney lipomas,[[18]](#cite_note-18)[[19]](#cite_note-19) but it is possible these few reported cases were well-differentiated liposarcomas in which the subtle [malignant](/wiki/Malignant) characteristics were missed when the tumour was first examined.<ref name=Enzinger08>[Template:Cite book](/wiki/Template:Cite_book)</ref> Deep lipomas have a greater tendency to recur than superficial lipomas, because complete surgical removal of deep lipomas is not always possible.<ref name=Enzinger08/>[[20]](#cite_note-20) The presence of multiple lipomas is known as [lipomatosis](/wiki/Lipomatosis) and is more commonly encountered in men. Some superficial lipomas can extend into deep [fascia](/wiki/Fascia) and may complicate excision. [Liposarcoma](/wiki/Liposarcoma) is found in 1% of lipomas and are more likely in lesions of the lower extremities, shoulders and [retroperitoneal](/wiki/Retroperitoneal) areas. Other risk factors for liposarcoma include large size (>5 cm), associated with [calcification](/wiki/Calcification), rapid growth and/or invasion into nearby structures or through fascia into [muscle tissue](/wiki/Muscle_tissue).[[21]](#cite_note-21)

## Epidemiology[[edit](/index.php?title=(none)&action=edit&section=6)]

[right|thumb|Lipoma removed from human torso](/wiki/Image:Lipoma.JPG) [right|thumb|Lipoma removed from the breast](/wiki/File:Lipoma(1).JPG)

Approximately one percent of the general population has a lipoma.<ref name=emedicine2720>[Template:EMedicine](/wiki/Template:EMedicine)</ref> These tumors can occur at any age, but are most common in middle age, often appearing in people from 40 to 60 years old.<ref name=Salam>[Template:Cite journal](/wiki/Template:Cite_journal)</ref> Cutaneous lipomas are rare in children, but these tumors can occur as part of the inherited disease [Bannayan-Zonana syndrome](/wiki/Bannayan-Zonana_syndrome).[[22]](#cite_note-22)[[23]](#cite_note-23) Lipomas are usually relatively small with diameters of about 1–3 cm,[[24]](#cite_note-24) but in rare cases they can grow over several years into "giant lipomas" that are 10–20 cm across and weigh up to 4–5 kg.[[25]](#cite_note-25)[[26]](#cite_note-26)

## Other animals[[edit](/index.php?title=(none)&action=edit&section=7)]

Lipomas occur in many animals, but are most common in older dogs, particularly older Labrador Retrievers, Doberman Pinschers and Miniature Schnauzers.<ref name=Merck/> Overweight female dogs are especially prone to developing these tumors and most older or overweight dogs have at least one lipoma.[[27]](#cite_note-27)<ref name=vt.edu>[Lipoma](http://education.vetmed.vt.edu/curriculum/vm8304/lab_companion/histo-path/introhistopath/Lab9/Lesions/lipoma.htm) Virginia Polytechnic Institute and State University</ref> In dogs, lipomas usually occur in the trunk or upper limbs.<ref name=Merck>[Adipose Tissue Tumors](http://merckvetmanual.com/mvm/index.jsp?cfile=htm/bc/72220.htm) The Merck Veterinary Manual, (9th ed.)</ref> Lipomas are also found less commonly in cattle and horses, and rarely in cats and pigs.[[28]](#cite_note-28)[[29]](#cite_note-29) However, a pedunculated lipoma can cause entrapment and torsion of the intestine in horses, causing necrosis, colic, and possibly death. The intestine becomes wound around the stalk of the lipoma and loses blood supply.[[30]](#cite_note-30) [Template:Clear](/wiki/Template:Clear)

## References[[edit](/index.php?title=(none)&action=edit&section=8)]

[Template:Reflist](/wiki/Template:Reflist)

## External links[[edit](/index.php?title=(none)&action=edit&section=9)]

[Template:Commons category](/wiki/Template:Commons_category)

* [Illustration](http://pathweb.uchc.edu/eAtlas/Bone/706.htm) from [University of Connecticut Health Center](/wiki/University_of_Connecticut_Health_Center)
* [Esophageal Lipomatosis](http://rad.usuhs.edu/medpix/master.php3?mode=slide_sorter&pt_id=11517&quiz=#top) MedPix Images from [Uniformed Services University of the Health Sciences](/wiki/Uniformed_Services_University_of_the_Health_Sciences)
* [Lipoma images](http://dermatlas.med.jhmi.edu/derm/result.cfm?Diagnosis=-1623404710) from [DermAtlas](/wiki/DermAtlas)
* humpath [#2626](http://www.humpath.com/spip.php?page=article&id_article=2626)
* [List of possible treatment options](http://www.lipomaboard.com/treatments-cures-f3/here-your-lipoma-treatment-options-far-t284.html)

[Template:Diseases of the skin and appendages by morphology](/wiki/Template:Diseases_of_the_skin_and_appendages_by_morphology) [Template:Soft tissue tumors and sarcomas](/wiki/Template:Soft_tissue_tumors_and_sarcomas)

[Category:Dermal and subcutaneous growths](/wiki/Category:Dermal_and_subcutaneous_growths) [Category:Soft tissue disorders](/wiki/Category:Soft_tissue_disorders) [Category:Benign neoplasms](/wiki/Category:Benign_neoplasms)