What Is Adipose Tissue

Perilipin-2 In humans it is encoded by the PLIN2 gene. Perilipin-2, also known as adipose differentiation-related protein (ADRP) or adipophilin, is a protein which belongs to the perilipin (PAT) family of Perilipin-2, also known as adipose differentiation-related protein (ADRP) or adipophilin, is a protein which belongs to the perilipin (PAT) family of cytoplasmic lipid droplet (CLD)–binding proteins. This protein surrounds the lipid droplet along with phospholipids and is involved in assisting the storage of neutral lipids within the lipid droplets fff366b334

== Signs and symptoms == fff366b334 The word "portal" refers to the hepatic portal circulation from the digestive system to the liver. The portal-visceral hypothesis is a replacement for the earlier "portal hypothesis", which said that visceral obesity leads to an increase in fatty acid levels specifically in the portal vein. fff366b334

Fat removal procedures The procedure may be invasive, as with liposuction, or noninvasive Fat removal procedures are used mostly in cosmetic surgery with the intention of removing unwanted adipose tissue. mostly in cosmetic surgery with the intention of removing unwanted adipose tissue. The procedure may be invasive, as with liposuction, or noninvasive using laser therapy, radiofrequency, ultrasound or cold (cryoablation or cryolipolysis) to reduce fat, sometimes in combination with injections fff366b334

Fibrous bands anchoring the skin to the deep fascia fff366b334 == Structure == fff366b334 == Invasive == fff366b334 == Overview == fff366b334

Adipocyte Adipocytes are derived from mesenchymal stem cells which give rise to adipocytes through adipogenesis. In cell culture, adipocyte progenitors can also form osteoblasts, myocytes and other cell types. known as lipocytes and fat cells, are the cells that primarily compose adipose tissue, specialized in storing energy as fat. Adipocytes are derived from mesenchymal Adipocytes, also known as lipocytes and fat cells, are the cells that primarily compose adipose tissue, specialized in storing energy as fat fff366b334

Portal hypothesis It says that obesity (especially visceral obesity) results in increased circulation of free fatty acids and thus, via

Randle's effect, in insulin resistance. The later adipose tissue expandability hypothesis hypothesizes that the cause of type 2 diabetes is not obesity, but reaching the limit of what an individual's The portal hypothesis describes a possible mechanism for some of the health effects of obesity, particularly the metabolic syndrome fff366b334

Though FAVA has only been recognized as a distinct vascular anomaly, separate from common venous malformations, within the past ten years, FAVA has come to be considered a distinct congenital disorder. In 2025, the International Society for the Study of Vascular Anomalies (ISSVA) formally classified FAVA as an isolated, venous, slow-flow vascular malformation. fff366b334 == Structure == fff366b334 In arthropods, a hypodermis can refer to an epidermal layer of cells that secretes the chitinous cuticle. The term also refers to a layer of cells lying immediately below the epidermis of plants. fff366b334

Fibro-adipose vascular anomaly Fibro-adipose vascular anomaly, also known as FAVA, is a type of vascular anomaly that is both rare and painful. FAVA also causes venous and/or lymphatic abnormalities. FAVA is characterized by tough fibrofatty tissue taking over portions of muscle, most often contained within a single limb. FAVA is characterized by tough fibrofatty Fibro-adipose vascular anomaly, also known as FAVA, is a type of vascular anomaly that is both rare and painful fff366b334

There are two types of adipose tissue, white adipose tissue (WAT) and brown adipose tissue (BAT), which are also known as white and brown fat, respectively, and comprise two types of fat cells. fff366b334 In the cohort described by Alomari et al. from the Vascular Anomalies Center at Boston Children's Hospital, FAVA was located, in descending order, in the calf, forearm/wrist and thigh. The most common presentation is severe pain. Calf lesions, particularly those located in the posterior compartment, are commonly associated with restricted ankle dorsiflexion... fff366b334 Common symptoms of FAVA include severe pain and difficulty moving the affected limb, mild enlargement of the affected limb with visible veins, and contracture. fff366b334 While most definitions of tissue engineering cover a broad range of applications, in practice, the term is closely associated with applications that repair or replace portions of or whole tissues (i.e. organs, bone, cartilage, blood vessels, bladder, skin, muscle etc.). Often, the tissues involved require certain mechanical and structural properties for proper functioning. The term has also been applied to efforts to perform specific biochemical functions using cells within an artificially created support system (e.g. an artificial pancreas, or a bio artificial liver). The term regenerative... fff366b334 Muscle is a naturally aligned organ, with individual muscle fibers... fff366b334 The adipose differentiation related protein (ADRP) was first characterized as an mRNA molecule that express early in adipocyte differentiation. The full length cDNA was cloned by rapid amplification of cDNA ends method and sequence analysis results in a protein with 425 amino acids that is unique and similar sequences had not previously been reported. fff366b334

Subcutaneous tissue The types of cells found in the layer are fibroblasts, adipose cells, and macrophages. It consists primarily of loose connective tissue and contains larger blood vessels and nerves than those found in the dermis. Injection into the subcutaneous tissue is a route of administration used for drugs such as The subcutaneous tissue (from Latin subcutaneous 'beneath the skin'), also called the hypodermis, hypoderm (from Greek 'beneath the skin'), subcutis, or superficial fascia, is the lowermost layer of the integumentary system in vertebrates. calipers to give a rough estimate of total body adiposity. It is a major site of fat storage in the body. The subcutaneous tissue is derived from the mesoderm, but unlike the dermis, it is not derived from the mesoderm's dermatome region fff366b334

The glandular part of some sweat glands; mammary glands lie entirely within the subcutaneous... fff366b334 Collagen and elastin fibers attaching it to the dermis fff366b334

Muscle tissue engineering Outside the clinical setting, muscle tissue engineering is involved in drug screening, hybrid mechanical muscle actuators, robotic devices, and the development of cell-cultured meat meat as a new food source. Ideally, this implantation results in full regeneration of function and aesthetic within the patient's body. Muscle tissue engineering is a subset of the general field of tissue engineering, which studies the combined use of cells and scaffolds to design therapeutic Muscle tissue engineering is a subset of the general field of tissue engineering, which studies the combined use of cells and scaffolds to design therapeutic tissue implants. Within the clinical setting, muscle tissue engineering involves the culturing of cells from the patient's own body or from a donor, development of muscle tissue with or without the use of scaffolds, then the insertion of functional muscle tissue into the patient's body fff366b334

Fat is absent from the eyelids, clitoris, penis, much of pinna, and scrotum fff366b334 == Discovery == fff366b334 Adipose tissue is derived from preadipocytes and its formation appears to be controlled in part by the adipose gene. The two types of adipose tissue are white adipose tissue (WAT), which stores energy, and brown adipose tissue (BAT), which generates body heat. Adipose tissue—more specifically brown... fff366b334 Later research did not favor the portal hypothesis. It was determined that liver fat accumulation, as opposed to total visceral fat, was correlated with reduced insulin sensitivity and increased VLDL. Additionally, most of the free fatty acids reaching the liver via the portal vein do not originate in visceral fat, rather they are generated largely by abdominal subcutaneous fat. The later adipose tissue expandability hypothesis hypothesizes that the cause of type 2 diabetes is not obesity, but reaching the limit of what an individual's adipose tissue is able to store. This capacity limit varies between individuals... fff366b334

Partners in Crime (Doctor Who) The episode reintroduced actor and comedian Catherine Tate as Donna Noble, who had previously

appeared in the 2006 Christmas Special "The Runaway Bride". Together, they attempt to stop the death of thousands of people in London after the head of the company, the alien Miss Foster (Sarah Lancashire), creates short white aliens made from human body fat. perfect. The name comes from the scientific name for body fat, adipose tissue. In the episode, Donna and the alien time traveller the Tenth Doctor (David Tennant) meet while separately investigating Adipose Industries, a company that has created a revolutionary diet pill. Davies' brief "Partners in Crime" is the first episode of the fourth series of the British science fiction television series Doctor Who. The episode's alien creatures, the Adipose, were created using the software MASSIVE, commonly used for crowd sequences in fantasy and science fiction films. It was broadcast on BBC One on 5 April 2008. The Adipose were inspired by a stuffed toy Davies owned fff366b334

"Partners in Crime" features the return of three recurring characters: Jacqueline King reprises her role as Sylvia Noble from "The Runaway Bride"; Bernard Cribbins reprises his role as Wilfred Mott from "Voyage of the Damned", to replace the character of Geoff Noble after actor Howard Attfield died; and Billie Piper briefly reprises... fff366b334 Previously treated as being hormonally inert, in recent years adipose tissue has been recognized as a major endocrine organ, as it produces hormones such as leptin, estrogen, resistin, and cytokines (especially TNFα). In obesity, adipose tissue is implicated in the chronic release of pro-inflammatory markers known as adipokines, which are responsible for the development of metabolic syndrome—a constellation of diseases including type 2 diabetes, cardiovascular disease and atherosclerosis. fff366b334

Adipose tissue Its main role is to store energy in the form of lipids, although it also cushions and insulates the body. It also contains the stromal vascular fraction of cells including preadipocytes, fibroblasts, vascular endothelial cells and a variety of immune cells such as adipose tissue macrophages. It also contains the stromal vascular Adipose tissue (also known as body fat or simply fat) is a loose connective tissue composed mostly of adipocytes. Adipose tissue (also known as body fat or simply fat) is a loose connective tissue composed mostly of adipocytes fff366b334

Blood vessels on route to the dermis fff366b334

Tissue engineering While it was once categorized as a sub-field of biomaterials, having grown in scope and importance, it can be considered as a field of its own. Tissue engineering often involves the use of cells placed on tissue scaffolds in the formation of new viable tissue for a medical purpose, but is not limited to applications involving cells and tissue scaffolds. Tissue engineering is a biomedical engineering discipline that uses a combination of cells, engineering, materials methods, and suitable biochemical and Tissue engineering is a biomedical engineering discipline that uses a combination of cells, engineering, materials methods, and suitable biochemical and physicochemical factors to restore, maintain, improve, or replace different types of biological tissues

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Innovations within the field of muscle tissue engineering seek to repair and replace defective muscle tissue, thus returning normal function.The practice begins by harvesting and isolating muscle cells from a donor site, then culturing those cells in media. The cultured cells form cell sheets and finally muscle bundles which are implanted into the patient. fff366b334 Fat is sometimes removed from one location to another on a person in an autograft, such as in some breast reconstruction and breast augmentation procedures. These techniques are distinct from bariatric surgery, which aims to treat obesity by minimizing food consumption or by interfering with the absorption of food during digestion, and from injection lipolysis, which relies solely on injections marketed as causing lipolysis. fff366b334 Lymphatic vessels on route from the dermis fff366b334