So just what is cellulite exactly?

Cellulite – its existence and supposed cure is one of the most hotly contested topics. Plastic surgeon Mr James G M McDiarmid sets the record straight.

The fitness question:

The term ‘cellulite’ (aka adiposis edematosa, gynoid lipodystrophy, or orange peel syndrome) was first coined in the 1920s and is a term used to describe the dimpling appearance of skin typically seen in the thighs and gluteal regions of post-pubertal females. Opinion is divided as to whether cellulite represents a disorder or simply the condition of many women since cellulite exists in 80-90% of the normal population.

Is it caused by a particular kind of fat?

In a word, no. At least not in the sense of being a different type of adipose tissue. As a plastic surgeon who frequently operates in this area, I can categorically assure you that there is no magical difference in the fat found in dimply thighs than in smooth thighs – it looks exactly the same because it is macro and microscopically identical. The cynical promotion of universally ineffective creams, wraps, lipomassage, laser and other treatments for cellulite makes my hackles rise. These treatments bring only temporary benefits and are the worst kind of snake oil.

What causes the dimply effect?

Anatomically, the fat deposits in the thigh and buttock regions have multiple collagen strands connecting the deep fascia with the skin (fig 1). These strands exist to support the soft tissues and behave rather like tie-throws on a traditional mattress. The collagenous architecture of the skin is determined by gender and has been present since birth. During adolescence, fat in females starts to be preferentially deposited in the hips, thighs and bottom – this is why changes tend to be seen around adolescence. Cellulite tends to worsen in appearance with age, most likely due to thinning of the overlying skin.

Why don’t men get it?

Some men’s skin occasionally has a cellulite appearance – particularly males with low testosterone levels such as those with Kleinfeilster’s syndrome, hypogonadism, castrated males or men on anti-androgen therapy for prostate cancer. The reason men’s skin rarely gets a cellulite appearance is down to three main factors. Firstly, men tend to have thicker skin that smoothes out contour irregularities more effectively. Secondly, men (who are not in a state of hypogonadism) have different body fat distribution and tend to lay fat down inside the abdominal cavity rather than in the typical female areas. Finally, and perhaps most importantly, men have a different connective tissue morphology – rather than having mainly vertically orientated collagen strands, the architecture of male subcutaneous collagen is far more horizontally orientated.

Do treatments work?

Drinking water This is largely ineffective as the kidneys simply get rid of the excess water consumed – the kidneys are just too smart for this to work.

Detoxing There is zero evidence to support the efficacy of this treatment. Attempting to rid the body of toxins with short, intense periods of purging and cleansing has no scientific rationale to support its use. It represents pseudoscientific baloney in its true form.

Dry brushing Other treatments such as dry brushing may stimulate the skin to thicken it but will not help by ‘increasing circulation’.

Creams By and large, these are completely ineffective and a great money-spinner for lots of (mainly French) cosmetic manufacturers. Other than conditioning the overlying skin, which may have a very minimal effect in people with dry skin states, the ‘fat-firming’ claims about these creams are completely without substance. The exception to this rule is Retinova, Retin A or Tretinoin, which are prescription-only medicines (they do not feature in any over-the-counter cosmetics) and have been shown to slightly improve the appearance of cellulite when applied topically. This is due to their skin-thickening effect. Beware the retinol and retinoid ingredients that are far weaker than the prescription-only retins. These are added to over-the-counter products in an attempt to confuse the consumer that one retin is as good as another.

Surgery When the fat deposits are of normal thickness, as found in non-obese individuals, there is no stress on the collagen mattress tie-throughs and little dimpling is evident. When there is a greater than ideal thickness of fat cells then the dimpling starts. So a simple solution is to lose weight, right? Yes – reducing subcutaneous fat thickness can help as long as the overlying skin has adequate elasticity and has not been overstretched.

However, exercise and clean eating is always a far better way to lose weight than liposuction (yes, you heard it here from a plastic surgeon). Liposuction can actually make the cellulite dimpling worse by removing subcutaneous tissue volume and making the skin looser.

I always advise overweight patients requesting recontouring treatments such as liposuction or abdominoplasty to make some permanent lifestyle changes. Foremost among these are commencing regular cardio training sessions, quitting smoking (being a non-smoker has no direct effect on the appearance of cellulite but it does put the patient at a far lower risk of complications if they do end up having surgery) and eating a healthy diet. Natural weight loss through exercise provides a far better, more even, soft tissue contour than lipo ever could.

In cases where the collagen tie-throughs are causing extreme dimpling, there is a surgical solution. A plastic surgeon called Luiz Toledo has developed a technique of ‘subcision’ (fig 2) where the fibrous tie-throughs are divided with a special liposuction cannula called a ‘pickle fork cannula’. Fat can also be injected in between the divided ends of the collagen strands in an attempt to volumise the dimply area and prevent the surgically released tie-throughs sticking back together. This technique has some merit and may help in extreme cases. This is a permanent solution but it often requires repeating.

Fig 1

Fig 2

THE FORMATION OF CELLULITE

Healthy

Unhealthy

1. Task Accumulation
2. Marginal Fat Cells
3. Poor Circulation
4. Abstinence of Consuming Tissue
5. Asian Heredity

Free reasons that cellulite form:

1. Fat deposition in dimply thighs than in smooth thighs
2. Greater overlying skin thickness. The distribution of adipose tissue as well as possibly due to genetic differences in Afro Caribbean descent, and this is a term used to describe the dimpling appearance of skin typically seen in the thighs and gluteal regions of post-pubertal females. Opinion is divided as to whether cellulite represents a disorder or simply the condition of many women since cellulite exists in 80-90% of the normal population.

Genetic differences

It is more common in Caucasian women than in Asians or women of Asian descent, and this is possibly due to genetic differences in distribution of adipose tissue as well as greater overlying skin thickness. The skin of ethnic groups less affected can be up to 50% thicker and can therefore mask irregularities in the underlying fat more effectively.

Finally, and perhaps most importantly, men have a different connective tissue morphology – rather than having mainly vertically orientated collagen strands, the architecture of male subcutaneous collagen is far more horizontally orientated.

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There are no specific cellulite-busting exercises though.

Increasing the volume of soft tissue within the skin envelope may help take up the slack skin. Increasing muscle mass may also reduce the appearance because it creates a firmer base and, in conjunction with fat loss, is the best way to reduce the appearance. However, the activity needs to be maintained as inactivity would lead to a relapse. There are no specific cellulite-busting exercises though.

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