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PILLS, POTIONS, PRICKS, PUMPS AND PRAYERS!

Men are more interested in discussing ways to improve their manhood now the taboos of yesteryear are gone, says Mr (Dr) Niro Sivathasan*

Men are increasingly feeling empowered to make very personal changes to their bodies, very much like women have felt since the 1980s. This is arguably due to the 'wider' exposure to suggestive images in the West's increasingly less-conservative societies, with associated soft-porn creating a form of 'aspirational ideal'.

An increasing number of millennial females are pining for 'bigger booties' or 'BBLs' (Brazilian Butt Lifts), when in the not-so-distant past, small but perky was en-vogue. Similarly, men are seeking larger penises, perhaps contributed to by the Internet-assisted proliferation of pornographic material. It is interesting to note that especially in Greco-Roman periods and during other subsequent periods, smaller penises were seen as better and preferable.

As one of just a handful of surgeons in the world being able to offer various types of augmentation phalloplasty and being an international key-opinion leader in cosmetic medicine, I have been asked countless times by patients and peers to provide insight into key aspects of this very niche area of medicine. Accordingly, I have written this piece covering penoplasties, both non-surgical and surgical in approach.

Size is everything

Comparable to what happens in the world of breast enlargement, many men typically dabble with pills, potions, and pumps in their foray into the world of penile enlargement (augmentation phalloplasties). However, it is only possible to increase the length of the penis by a surgical procedure; this is because approximately one-third of the penis is buried under the skin and it is supported by ligaments which are, effectively, the continuation of the abdominal muscles, and these need to be cut.

There is absolutely no verified pill or potion which will increase the size of the penis. Pills and potions typically contain vitamins, minerals, and herbs, and promise all manner of changes to the penis. Aside from preying on the finances of gullible men, there are actually a few reports of these products having the potential to cause harm by virtue of questionable ingredients and contamination. In fact, one American university found that some of the products contained traces of lead and animal faeces.

Owing to media spin, and celebrity endorsement of the cosmetic use of PRP (Platelet Rich Plasma), a variety of blood-based non-surgical genital interventions have 'shot' to popularity. There are many catchy and trademarked names, such as 'O Shot®' and 'P-Shot®', and these essentially involve the injection of plasma (effectively containing growth factors) extracted beforehand from the patient's blood. There is no meaningful scientific validation regarding these 'lifestyle' interventions, and most doctors are, very rightly, sceptical. Quite simply, they do not physically enhance the penis and any alleged improvement in length and strength of orgasms is, in my very strong opinion, simply psychological. In fact, the blood's plasma which is injected into the penis shall, of course, temporarily add volume, but the penis' blood flow will wash it all away – and one could logically argue injecting normal saline would achieve similar transient aesthetics.

Vacuum devices have been around for many years and they do work, albeit temporarily. Penis pumps involve placing a cylinder over the penis and then creating a vacuum by pumping out the air from inside it. This causes the penis to become engorged with blood, giving a temporarily larger manhood. These devices have a role for men suffering with impotence, but

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excessive and/or long-term use may lead to the formation of 'boggy' penile tissues and a gradual weakening in the strength of an erection.

'Scrotox' (or the use of botulinum toxin to smooth scrotal wrinkles by relaxing the rugae produced by the dartos muscle) and the demand for making the testicles hang lower, were reasonably popular during the last few years; but I have noted the demand for this to have plateaued. Instead men are decidedly seeking major surgical interventions to give long-lasting, definitive results.

In summary, just as with prayers, there is no evidence that any of the aforementioned modalities provide any form of meaningful increase in penile size, beyond the power of suggestion!

Penile anatomy

The penis serves as a reproductive organ and external excretory organ, for males. It has several tissue layers, and its main anatomical areas are:

- **Shaft or body** (cylindrical structure of up to 30° in curvature, which contains erectile columns);
- **Neck** (between the body and glans);
- **Corona** (the flared part of the penile glans, which is prominent at the base of the head as a rim);
- **Glans Proper or head** (the rounded, spongy tip of the penis);
- **External Urethral Meatus** (opening of the urethra, for passage of urine and sperm);
- **Foreskin** (loose fold of skin covering the glans).

Regarding the three erectile columns, two are known as corpora cavernosa and are formed of trabecular smooth muscle and erectile tissue, and one, known as the corpus spongiosum, contains the urethra. The major supporting ligament is known as the dorsal suspensory ligament, and there are two others called fungiform ligaments.

Girth has a greater sexual bearing than length, but many 'men' are obsessed with the length of their penis - and this is not being driven by women.

Measuring the length of a penis in its flaccid state is meaningless for a variety of reasons. Only erect length provides meaningful data, and even then, it is the 'stretched penile length' (SPL) which is useful. SPL measures the penis' length from the tip of the glans to the penile base abutting the symphysis pubis, and whilst it is the only accepted metric, many people make errors when measuring this distance.

So, what is the average length of a penis? Reports in medical literature appear to vary quite significantly depending on the number of people surveyed and how the survey was undertaken. Also, the country where the survey was performed has a significant bearing on this number. Regardless, it appears that the vast majority of penises are typically 3" long when flaccid (and just over 3" in girth) and around 5.5" long when erect (and just over 4.5" in girth), but with the range for the erect length typically being between 4" (10cm) and 7" (18cm).

Penile blood flow is better in younger men and in those who don't have microvascular disease (e.g., due to long-term smoking). Also, given that muscles atrophy when not regularly used, it is technically feasible to say that infrequent erections and/or very short-lasting erections could lead to muscle loss and a lack of stretching of the overlying membrane (tunica albuginea).

I'd like to highlight at this juncture, how scientific studies are frequently, but unsurprisingly, twisted by headline-hungry journalists. Even as recently as last year, worldwide media had a large role to play in propagating misinformation pertaining to a simple study on penis-length. Journalists misquoted the study which was presented at the annual congress convened by the *American Society for Reproductive Medicine* and proceeded to falsely publish that men with small penises are likely to be infertile. In fact, penile length has no bearing on the degree of fertility.

Length or girth?

There is no doubt that perceived attractiveness boosts confidence, which in turn improves interactions with people; and this becomes a positively reinforcing situation. This tenet is widely recognised, now; and men are increasingly less shy to have injectables (such as soft-tissue fillers) to their faces, hair transplantations, liposuction to address stubborn love handles, and to address their 'moobs' (gynaecomastia surgery).

Akin to changes in preferences for the fullness of female figures through the centuries, it seems that at the present time, bigger is better for penises, too – regardless of how misdirected that is; misdirected because penile length is not as important as girth insofar as stimulating women (due to the female erogenous zone being closer to the outside) and, in fact, long penises may, during intercourse, hit the cervix causing discomfort especially to the woman.

Lengthening and widening of the penis are distinct procedures which may be done separately but are frequently combined during a single episode of general anaesthesia. Widening of the penis may be for the shaft and/or the glans (head), so it is fair to say that there are three considerations here, i.e. the shaft's length, the shaft's width, and the glans' size. The advantage of undertaking interventions to address all three aspects of penile size is very simple: to optimise relative proportions to maintain a natural look.

Patients must be aware of the anaesthesia-requirements. At a very simple level, the instillation of soft-tissue fillers may be done with the patient awake and having local/topical anaesthetic, whereas a general anaesthetic is ideal for anything more surgical (although depending on the procedure, deep sedation may be enough).

Augmentation procedures, whether non-surgical or surgical, are elective and the onus is absolutely on the patient to ask all questions, to undertake the necessary preparation, and to understand the risks (or risk-benefit trade-off). These factors contribute to the process of informed consent.

Lengthening & widening

Penile lengthening requires invasive surgery. In contrast, widening of the penile shaft (as distinct to the penile head or glans), may be effected using non-surgical or surgical means. It is important for prospective patients to note that the gain in length is determined by how much tissue is available (hidden under the skin), and that the increase in length is primarily in the flaccid state; 'erect gains' are typically 0.5 inches at best, in my

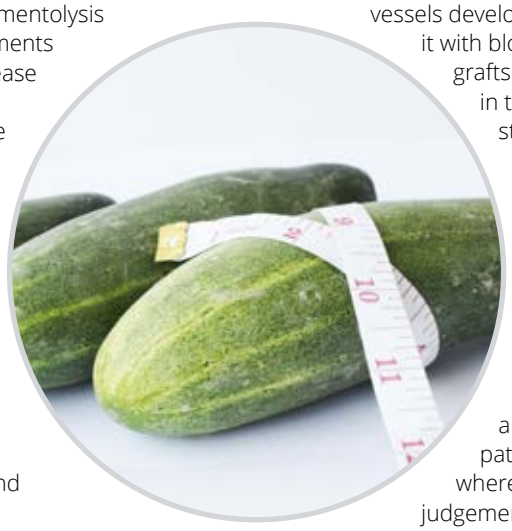
opinion. Patients must recognise that there is a risk of significant scar-tissue-formation after lengthening, with the penis becoming 'reattached' to the pelvic bone and leading to loss of gained length. Patients must also appreciate that the formation of scar tissue has a large genetic component, and that post-operative stretching protocols are very important. I personally recommend the use of a penile traction device AND the use of exercises, to help combat the degree of 'potential' loss.

There are different methods to increase the width of the penis. Non-surgical modalities are nearly always temporary in nature, and whilst cheaper than surgery, require multiple 'lifetime top-ups'. They involve allogenic fillers, just like those which are popular amongst women wanting bigger lips, being injected under the deep fascia of the penis. It is important to note that if the fillers are wrongly injected (into corpora cavernosa - the erectile cylinders of the penis), it is possible to damage the erectile mechanism.

There are two key surgical techniques to increase the girth: lipo-transfer (i.e. minimally invasive, autologous filling) and dermal fat grafts. Lipo-transfer to the penis is a relatively elementary approach, and involves undertaking liposuction in a small area, and then injecting the suctioned fat into the penis. Disappointingly, it is very typical for over 50% of the transferred fat to be lost after just 6-12 months! Surgeons try to compensate for this inevitable loss by overfilling the penis with fat in a 'single' sitting – which is usually to fulfil over-zealous claims; however, this outcome is short-lived and in these overfilled cases, >75% of the fat is lost around one year after the operation (due to the extra fat not receiving the nourishment required to survive).

'Free dermal fat grafts' (DFGs), which were traditionally used to fill contour defects, such as after trauma, are the gold standard. They are physically comprised of the dermis of the skin and an in-tact layer of subcutaneous fat, so they are entirely natural. The results with this approach are not just natural in feel, but also last forever.

The advantage of undertaking lengthening and widening of the penile shaft at the same time is that the DFGs may be tailored to the freed erectile cylinders. This is very important in my opinion, such that I don't undertake solely widening with DFGs without first undertaking ligamentolysis (freeing the ligaments of the penis). Please note that I do undertake penile lengthening (ligamentolysis and V-Y advancement flap) on its own and offer other options to patients wanting other individual steps (e.g., glans augmentation and scrotoplasty).



DFGs are called 'free' tissue-grafts because they are moved without having a blood-supply, and the survival of this tissue depends upon the establishment of a new blood supply. Their survival is facilitated by:

- Not disturbing the area (e.g., from trauma or use), meaning post-operative bed-rest is very important;
- Not impeding the development of new blood vessels (angiogenesis)/ not reducing blood-flow. For instance, patients must completely stop smoking in the first six weeks after the operation.

DFGs in the penis are placed between fascial planes whilst avoiding injury to the nerves of the penis. This approach requires attention-to-detail and employs specialised techniques. Even if the operation goes very well and a good blood-supply is established, patients need to be aware that the following may occur, though immensely unlikely:

- Fibrosis of the fat, typically around eight weeks after the operation;
- Formation of a fistula (an abnormal channel from the outside world to the graft). This has the potential for causing an infection of the graft, and the compromised skin may need to be excised.

Larger DFGs (i.e. grafts containing more fat) are not always appropriate. Aside of potentially being unable to fit into the penile skin envelope (and having a compressive/restrictive effect on the overlying skin), the greater the amount of fat in the graft, the greater the 'nutrient demand' of the graft, meaning greater potential compromise to the viability of this tissue whilst new vessels develop to supply it with blood. So, thin grafts (giving <1cm in thickness) are statistically more likely to survive than thicker grafts – this is common sense – but such is likely to create a degree of disappointment amongst patients. This is where expertise/ judgement is relevant, and why the practice of surgery is, as I have always submitted, an art based on an imprecise science. The judgement call needs to consider multiple factors, including that grafts shrink/contract during the engraftment process.

I do 'not' take these grafts from the gluteal folds, simply to avoid operating on both sides of the patient (i.e. front and back). Imagine having major surgery on the front of your body and on the back, with the pain and grossly compromised mobility which would accompany such an approach! Sitting down, going to the toilet, and walking, shall all be made much more painful, and there shall be a significant risk of having stretched scars if there are large cuts around the buttocks. Additionally, the risk of infection is higher when operating around sweaty folds of healing skin, so it is better to avoid operating around the buttocks. Having the operative incision located in one area means a quicker return to normal function. Lastly, there is a higher risk of chronic discomfort when harvesting large chunks of soft-tissue from the gluteal folds.

Relative proportions are very important; so, just like making the head larger to match the shaft, it is certainly a good idea to debulk fat from the groin and lower tummy (i.e. the suprapubic and inferior abdominal area) to make the penis generally look larger. The suprapubic area is considered to be a 'privileged fat zone' because it has a propensity to experience fat-accumulation and this fat may be rather fibrous; so, surgical debulking of this (mons pubis lipectomy) improves the general appearance of the region.

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As for any surgical procedure, phalloplasties are not without risk, and in addition to seeking a surgeon who has been fellowship-trained in this endeavour, it is important for patients to know that post-operative performance in the bedroom has a large psychological component – meaning, such performance cannot be predicted during the pre-operative consultation. Patients must also recognise that as with nearly everything in life, there is always a trade-off; and in the case of penile lengthening, there shall be a reduction in the angle of erection.

Patient compliance

Due to misunderstandings, particularly amongst the bulk of the medical community, augmentation penoplasties have wrongly been labelled as ineffective; the art is in choosing the suitable approach for an appropriate patient – the right procedure for the right patient! It goes without saying that healing responses are unpredictable and significantly vary between individuals, but in my experience, the results have been overwhelmingly successful and have changed the lives of 'patient' men.

Why the emphasis on patience being a temperamental requirement? Well, breast augmentations typically take 3-6 months for the final result to be evident, whilst penile augmentations take 12 months for the end result and require discipline during the process of healing.

Surgical phalloplasties have been undertaken for decades and the techniques have, unsurprisingly, become refined with time. This is hyper-niche surgery and its success is very much dependent on the educational commitments and training undertaken by the surgeon. Reconstructive surgeries to correct penile issues, including from failed cosmetic procedures, are usually expensive and fraught with a higher risk of complications, especially nerve damage.

I cannot emphasise enough that, regardless of the operation, patient-compliance with post-operative protocols makes or breaks the outcome. The problem affecting the world of aesthetic medicine and surgery is that a significant number of patients see interventions differently to emergency procedures; and such inappropriate viewing of these procedures as 'lifestyle' ones, leads to disrespect or disdain to what the medical doctor has requested.

Regarding penile lengthening (which partly includes cutting of the suspensory ligament of the penis, also known as suspensory ligament-release), penis-stretching exercises should be undertaken as directed by the surgeon. This typically involves pulling on the neck of the penis (i.e. just behind the head) once 6-8 weeks have passed after surgery, and purposeful traction should be in multiple directions in order to effect uniform stretching. I make a point of covering my protocol as part of the initial consultation, and if patients suggest that they are unlikely to be compliant, then I strongly suggest that they may not see tangible improvements in penile length in such cases.

Given that I commonly address other issues which affect the perceived penile length, e.g., penoscrotal webbing (which is an extension of skin onto the underside or ventrum of the penis), I recommend that patients firmly massage all incision sites, ideally twice per day and with the use of an agent based on aloe vera or silicone, for 6 weeks once 6 post-operative weeks have passed. My protocol integrates manual exercise, firm massage, and the use of traction devices to 'distract' (stretch) the penis. Such activities may help to straighten curved penises, too. After one year, if a patient has gained an inch in length, that would be considered a successful outcome. Remember, other changes to the area frequently also give an appearance of the penis being longer than that.

Some surgeons suggest the sole use of penile weights or the use of traction devices. The evidence is that if these are not applied for many hours for most days of the week, they are generally ineffective on their own.

Patients must necessarily take responsibility and ownership of poor outcomes where they have failed to follow instructions. As part of this process, consent and documentation needs to be appropriately observed, particularly given the proliferation of ambulance-chasing lawyers. I am well-known amongst my colleagues for empowering physicians and surgeons to be much firmer with patients. It must be made explicitly clear to patients that there is no parity when it comes to medical knowledge between non-doctors and doctors.

Augmentation phalloplasties effected by ligamentolysis and free tissue transfer employing dermal fat grafts are, I believe, the gold standard, and produce the most consistent results out of all surgical approaches in this field. The cherry on the top (pun intended) is to then use soft-tissue fillers to address the penile head. Whilst all of this may be undertaken on an outpatient-basis, I strongly encourage my patients to spend the first night in hospital, particularly as demands for pain-relief cannot be predicted.

Other options

The following is a list of techniques employed by other surgeons, which I do not offer in my practice. That is not to say that they are all ineffective.

1. Despite being an ardent proponent of lipo-transfer to, for example, the face, I do 'not' undertake fat-transfer to augment the penis due to the significant unpredictability of the result (i.e. the outcome's poor longevity and aesthetics, e.g., risks of irregularities, and 'cobblestoning'/calcification).
2. Acellular dermal matrices, such as Alloderm™, are usually immunogenetically treated tissues from cadavers. These were initially used in burns victims with extensive burns who had an inadequate amount of their own healthy skin available to use to address the damaged areas. Acellular dermal matrices are used by a small number of surgeons, in an off-label fashion, to stabilise fat transferred after liposuction. I cannot see the overall benefit of this approach when it is possible to use the patient's own tissue (as DFGs) to effect the same, if not better, outcome.
3. Another approach being used by, quite literally, a handful of surgeons is the use of a silicone sheath around the penis. This is known as a pericorporeal silicone sleeve. I am, at the present time, not convinced by this approach in part due to the notable risk of infection of the silicone sheath.
4. Some surgeons use the technique developed by *Perovic and Djordjevic* and manipulate the penis' erectile cylinders (corpora cavernosa) by,

essentially, 'disassembling' them and then reconstructing them with the use of costochondral interpositional grafts (i.e. use of tissue harvested from the ribs to lengthen the penis). My concern with this approach is the significant risk of injury to the nerves which provide sensation to the penis.

5. Another manipulation technique involving the corpora employs saphenous grafts. I have not seen consistently reliable and aesthetically impressive results with this approach. This is a good juncture to highlight the importance of scrutinising images for differences in magnification, lighting, and timelines (e.g., pre- and post-operative images are only meaningful many months down the line, once intervention-associated swelling has subsided).
6. Implantation devices are for those who cannot achieve an erection. The commonest complaint pertaining to these is their feel and the punctuation (unnatural) in sexual performance. Some surgeons use these just to increase the penis' physical dimensions, but I disagree with this approach.
7. The use of PMMA (e.g. Artefill™), silicone injections, and paraffin injections (to volumise the penile shaft) have a risk of migration and formation of granulomata. Given that these materials persist, there is a risk of encapsulation-associated contracture and scarring in late-phases.

The choice of technique must depend on suitability for the patient, but it also depends on the doctor's opinion, training, and vested interests; but, the most important thing is to be able to justify a chosen approach and to be able to demonstrate satisfactory outcomes with said approach.

Of course, nothing in guaranteed in life – aside of death and taxes – and cosmetic surgical procedures are particularly prone to disappointment compared with other operations. Accordingly, as a take-home, patients are counselled that 5% may have a suboptimal outcome, which may be multifactorial. For example, paradoxical shortening of the penis may occur after a lengthening procedure owing to post-operative infection, genetically high-risk of thick scarring, and non-compliance by patients in the post-operative phase.

Conclusion

Various studies have shown that around 40% of men have expressed a desire for a larger manhood, though such is not the expectation of most women. Indeed, a very common concern which my patients share with me is their wish to sexually please their partners. Satisfaction from an increase in girth is higher than from length-increase.

I have found that the majority of men who are concerned, are in their 20s or in their 50s and above. Underlying feelings of inadequacy may be misappropriated, and sometimes formal counselling is most relevant. Over recent years, men have formed on-line groups to discuss their concerns, and to receive support and guidance from their peers. Though there are no standardised measurements, many men wrongly believe they have a micropenis (which typically runs in families and is due to hormonal deficiency) – and this has the potential to be propagated by members of self-help groups who may have many ill-formulated opinions.

The best doctor to see if troubled by such concerns is a doctor who can offer both non-surgical AND surgical interventions, AND whom the patient feels they are able to positively engage with. This is important in order to satisfy the aesthetic demands, financial elasticity, and for a medically appropriate appraisal.

If a patient suffers with erectile dysfunction (i.e. the ability to achieve and maintain an erection), this ideally needs to be addressed prior to any cosmetic interventions.

Patients must, of course, be realistic with their expectations re: the size which may be attained. The success of surgical interventions is not without discipline and consistent efforts on the part of the patient. For those who invest in post-operative compliance, the results may be physically, psychologically, and sexually very rewarding, with men reporting feeling more confident and self-assured.

My recommendation is to only use dermal fat grafts if a life-long, natural-feeling increase in girth is desired, and where the budget allows for a surgical option. Of course, the patient must understand the risks of surgery (anaesthesia-related, e.g., cardiac arrest, and surgery-related, e.g., wound breakdown and partial or total death of the tissue graft).

Patients wanting penile lengthening must have the commitment and fortitude to undertake stretching exercises every day for many months, once approval is granted by the surgeon. I additionally advise the use of a traction device applied for at least 8 hours at a time, for at least 2 days of the week, again, once I have given the all clear.

At a very simplified level, a non-surgical approach is ideal for those who just want to see if they like having a wider penis, and/or have limited available downtime (to recover after surgery), and/or where the cost is an issue, and/or where the risks of surgery are unacceptable.

Sometimes, the best pathway for a patient is to save his money and to go on a trip of a lifetime. After all, happiness and memories are made in many ways!

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