

# Multiple O-Rings for Foreskin Restoration

February 3, 2000

Minor update Feb 27,2000

## Introduction

I have been restoring for almost 11 months using the multiple o-ring technique. I achieved very good early results, followed by continuing progress which I would describe as being at the high end of the variations found on the restore list, without the use of any tape and stretching on only a part-time basis. At about 5 weeks I reached a stage where the developing fauxskin would \*spontaneously\* cover about half of the glans, while standing or walking if I wore jockey shorts. This was accomplished with stretching for only 6 to 10 hours/day 5 or six days per week. I wore nothing at night, and stretched only at work, and sometimes one day on the weekends. Since then I have reduced the stretching time to something on the order of 3-4 hours per day a maximum of 5 days per week, with many fairly long rest periods such as vacations and the Christmas holidays. If I wear jockey shorts and “tuck-in” in the morning and every time I pee, I have 100% coverage all day. This happens every weekend when I wear no restoration apparatus at all. If I do not tuck in, I will spontaneously go to about 90% coverage wearing jockeys.

Most importantly there is no taping—everything comes off in seconds and goes on in a very short time. From reading the diaries on the internet, this seems like the best reward/effort ratio I have heard of. Also, the starting materials are cheap—I am selling nothing.

I call the technique multiple o-rings to distinguish it from the classic o-ring methods, which have been well documented. I have seen some criticism of these for slow results, but they all have very high convenience, since there is no taping.

What I will describe below is not exactly the way I have restored. The only reason for this is that over time I have discovered better ways to do some things, and when I think they would work at an earlier stage of restoration, I will describe them as soon as they are appropriate. Since I can't go backwards in restoration to try them out some of the things I describe will be in the “how I should have done it” category rather than “how I did it”.

### But First—Common Sense and Cleanliness

Any restoration technique is going to involve putting stress on your penis. After all, this is how they work. It is easy to overdo things. All I can say is that you need to take it easy on this very important body part. There is a tendency among many of us to want to be the first, the fastest restorer, etc. You have been circumcised for a long time and an extra few weeks isn't going to make much difference in the grand scheme of things. Take your time and don't injure yourself. It is hard to explain in an emergency room.

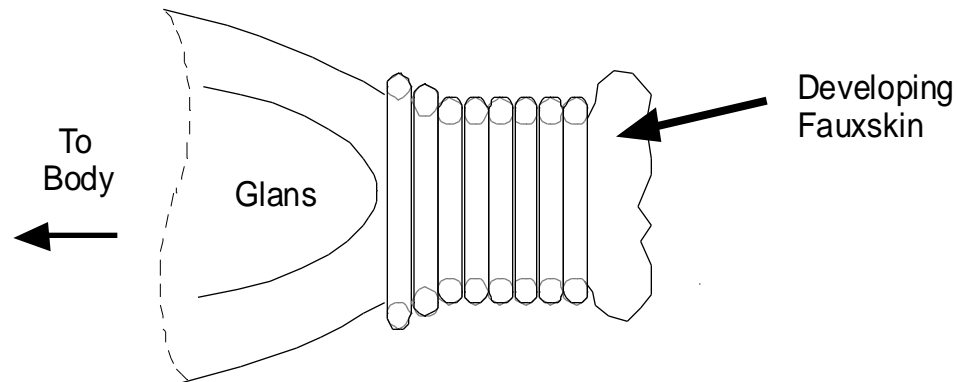
Secondly, keep you apparatus clean. People who tape use a new piece of tape every time. If you use the techniques I describe you will re-use almost everything many, many times. It doesn't have to be sterilized between uses any more than your underpants have to be sterilized, but it does have to be kept clean. Two good ways that incidentally do take care of most bacteria are: (1) Rubbing alcohol—just soak everything in rubbing alcohol overnight, or (2) Efferdent. That's right, the same stuff people use for false teeth. Dump all of your restoration apparatus in a Styrofoam cup with hot water, add an Efferdent tablet and put one of those plastic covers on the cup. Fifteen minutes later take the cup into the restroom, rinse everything and you are ready to go. The contents of the cup are not visible, there are no funny smells, and no reason for anyone to think twice about what you are doing.

Third, wash your hands before you put anything on your dick.

And, VERY IMPORTANT—NEVER SLEEP WITH ANYTHING ON YOUR DICK. I am constantly amazed to hear about people who will put all kinds of things on their penis and then go to sleep. The problem is that you will get an erection, this happens to all of us many times each night. If an o-ring or anything else “strangles” your dick blood will clot inside of it and it may have to be amputated. I personally knew a nurse who treated a guy who had this happen to him, not from restoring, but in a way that proves it can. An extra few hours of restoring is not worth the chance.

## Stage 1 – Only multiple o-rings

I don't have pictures, but I am pasting a diagram here:



Stage 1 -- Multiple O-rings

The diagram shows an eight ring stack, which starts with a large o-ring, continues with an intermediate one and then has six small rings. The sizes that worked for me are: 7/8" I.D., 13/16" I.D. and 3/4" I.D. The section thickness is 1/8" in all sizes, so the O.D. s are: 1 1/8", 1 1/16", and 1". You may need slightly larger or smaller. When I started with o-rings, a 3 ring stack in graduated sizes as described was all I could get on. In a week or so, I noticed some extra skin at the end and decided to put another ring on it. Soon I went to 5 rings, then 7 or 8 as shown in the diagram. At seven weeks I could get 11 rings on, although I usually started in the morning with 9 and after I took the assembly off to urinate the first time during the day, I added two more to get 11 when I put it back on.

### How I Apply It

I start by applying a small amount of cocoa butter cream/lotion just after a shower in the morning. I use Palmer's only because it is the only product the local drug store had for stretch marks, an amount about the size of 2 or 3 peas is enough to keep the skin supple and prevent the stretch marks (!) I was beginning to get.

The cocoa butter lotion makes the skin too slippery for the technique to work immediately, so I wait for an hour or so until the lotion has been absorbed and the skin is dry. I start by rolling the developing fauxskin back and forth in my fingers a few times and tucking the glans back as far as it will comfortably go. Then start with the largest o-ring, the next one, and so on. I pull the fauxskin forward with considerable but comfortable tension and push the o-ring stack back after each ring is added. This takes longer to describe than to do. **An important part of this is to make a conscious effort to firmly pull the inner fauxskin forward and out of the stack of o-rings with each successive o-ring, and to do it again after the whole stack is on.**

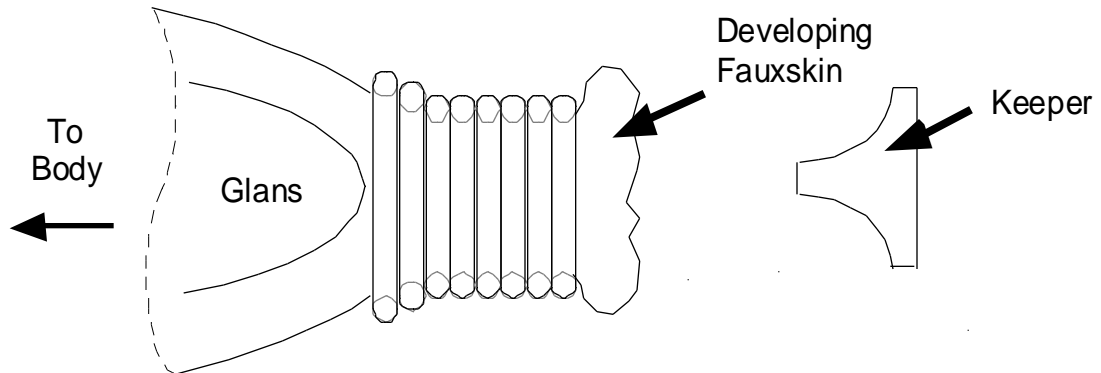
Once there are three or four rings on, the assembly has developed quite a bit of friction on the skin and is difficult to move, which is exactly the effect desired. The correct size ring is one which causes the skin in front of it to bulge out a bit, but which does not cut off circulation. The skin bulge is important—if I put too many rings on, the ones on the end come off over time. One less ring and the whole assembly stays in place until I have to pee.

The rings have to go on one at a time, but can be taken off two or three at a time.

## Stage 2 – multiple o-rings plus a “keeper”

This is where I talk about “how I should have done it”. One of the problems with multiple o-rings alone was that if I put one too many on, the whole stack would slowly pop off one at a time. What was happening is that the fauxskin was creeping backwards along the central hole in a motion very similar to the opposite of an intact man when he gets an erection. This prevented putting as much tension as would have been really desirable on the inner fauxskin.

Bruce W. in New York invented this modification and emailed me about it. What he did was to take a thin sheet of foam rubber and roll it into a miniature dunce cap. He then inserted the pointy end into the hole in the center of the fauxskin after pulling it through the o-rings. (See diagram) A mechanic would call this part a keeper since it keeps other things in place. This allowed two changes.



Stage 2 -- Multiple o-rings plus keeper

1. I could put more o-rings on, since the keeper prevented the popping off problem, and
2. I could use rings that were one size (1/16”) larger, which allowed better blood circulation. The first three rings became 15/16”, 7/8”, and 13/16”.

I didn't learn about the keeper until I had gotten to what I now call stage 3, but for best results the use of a keeper as soon as possible is recommended. The limiting factor here is that if a keeper is used too soon, before the stack of o-rings is long enough, its tip will be pressed against the glans. I think this would end up being uncomfortable, but have no first-hand experience. The correct technique is to pull the inner fauxskin out quite firmly and as evenly around its circumference as can be done with two hands. This will create a small funnel-shaped piece of skin with the small end of the funnel being trapped by the outermost o-ring. There should be a central hole about as large as the end of your little finger 1/2” deep or so. While holding the skin as far out as possible push the tip of the keeper as far down as it will go. After the keeper is initially positioned, work the skin out more and the keeper in further until you can feel the tension in the inner fauxskin. This is a very important part of the method, the idea is to put the inner fauxskin under as much tension as possible and have the keeper prevent it from creeping back on itself.

One issue with the foam rubber keeper is that the surface of the foam must have a fair amount of friction against the skin for this to work. I couldn't find the foam that Bruce used and ended up trying a large number of things, many of which seem pretty silly by now. The best I could do with foam was to carve one out of the solid part of a Nerf arrow. I could get this to the right shape, about 1” diameter at the big end, maybe 3/8” at the small end, but it just didn't have enough friction against my skin to be as effective as it should be.

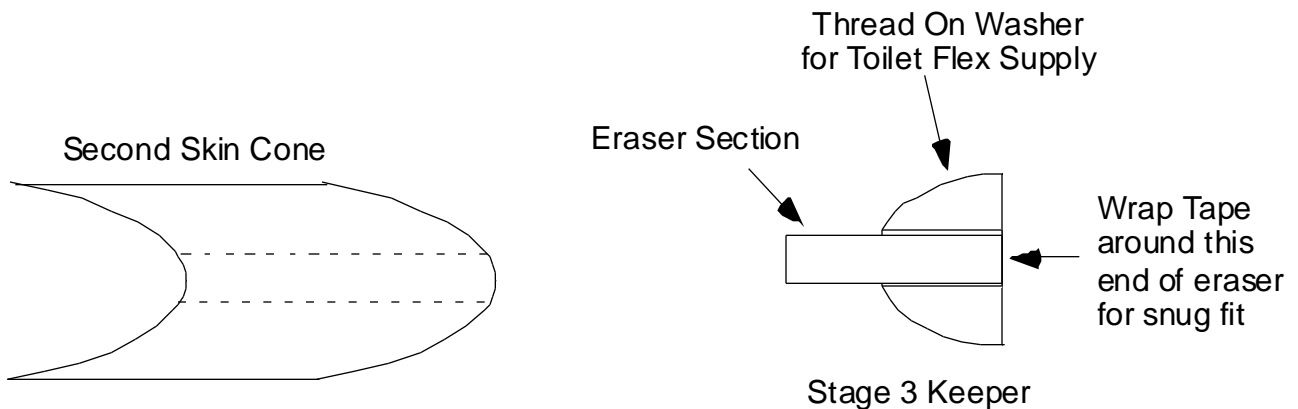
I have recently realized what would be a very good keeper, and if I were just starting stage 2, I would use either a baby pacifier or a baby nipple filled with either foam rubber or clear silicone aquarium sealant to prevent collapse. Not one of the new ergonomic, squashed-looking ones, one of the old-fashioned symmetrical kind. The “business end” of the pacifier is just the right size & shape and has the advantage of being filled with a non-toxic gel which prevents collapse. On the other hand, the aesthetics and size of the brightly colored shield and ring are negatives. I would probably end up making one from a nipple which

could be filled with something to prevent collapse and then trimmed to a suitable size. The shape is right. For a filler, I would experiment with either a piece of foam rubber cut to about the right size, a foam ear plug (squashed and inserted, then allowed to expand) or some clear silicone aquarium sealant poured in and allowed to set up for a few days. I would use aquarium sealant rather than silicone caulking because caulking frequently has something to kill mildew added—sometimes arsenic, sometimes something else equally obnoxious.

In late February, 2000 a restore list member who wishes to remain anonymous came up with a very clever idea for a keeper. He suggests a teardrop-shaped wad of Mircopore tape, wadded up with the sticky side out. I suspect other types of tape would also work, but it seems to me that this type of keeper could allow an earlier start to Stage 2 and could be used throughout Stage 3 also.

### Stage 3 – Multiple o-rings plus Packing

No matter how good the technique of a keeper is, and how much easier the whole process becomes with the slightly larger rings, sooner or later there comes a point where a guy just can't thread any more o-rings onto his willie. For me this was in the 10 to 11 o-ring range. The size of the stack had just gotten out of hand.



### Stage 3 Additions

The solution was to start using some packing. Once you put some packing in front of the glans, you can achieve tension on the fauxskin with a lot fewer o-rings. The best packing I have found is a product called second skin cones from Second Skin Leather Company (you can find them on the internet, search for Second Skin Leather). These are a bit expensive, I paid about \$70 for the weighted version. If I had it to do over again I would get the unweighted ones, but either kind works. What you get are three very “manly” looking objects with a cup for the glans (no the entire glans doesn't have to fit in it, only the tip) and a pee hole through the center. I have a primitive diagram. The real article is much more detailed than I can draw. I do not use them according to the instructions with them and never have. Also, even the smallest one appeared to be very long to me when they arrived. When I tried it, the smallest cone was a bit too long and I ended up making a shorter, not particularly nice-looking, replica of it from the solid part of a Nerf arrow. I used this for about two weeks and then was able to start with the smallest cone.

As they come from the vendor, there are two problems with the second skin cones. First, the pee hole is about 1/4" in diameter. What I found was that peeing thru anything was not a really good idea, any mismatch between the meatus and the entrance to the pee hole leaves a pocket of urine which will dribble out for what seems like hours. The other problem is that if there is any significant pressure between the cone and the glans, the meatus will be pushed into the pee hole and somewhat strangled. This will cause it to turn white and look like a fish mouth which can scare the hell out of a guy. The solution is to decide not

to pee through it and to plug the peehole at the cup end with a small wad of toilet paper. This needs to be big enough to rest on the edges of the peehole, not just to slip inside it.

The second problem is that whoever designed the cones had probably had his frenulum completely removed. Mine had not been and the edge of the cup cut into the frenulum unmercifully. The solution here was to cut a generous arch-shaped window in the part of the cup where the frenulum crosses the edge using a scissors. A little sandpaper smoothed the edges of the cut, and I had a custom-made packing.

Once the problems mentioned are resolved, there are two major differences between Stage 2 and Stage 3. (1) The keeper has to be somewhat different, and (2) You now need lubrication. The difference with the keeper is that you can accept a tip which is much harder than in Stage 2 because the packing absolutely prevents contact with the glans, and the tip of the keeper must be smaller in diameter than in Stage 2 because the best place to put the tip of the keeper is inside the peehole. Putting it in the peehole prevents the only injury I have ever had. It turns out that if the tip of the keeper doesn't go into the peehole you can trap a piece of fauxskin between the tip of the keeper and the second skin cone. Keep it trapped long enough and you can cause a small round sore that takes a few days to heal. The best keeper I was able to come up with was made from two parts. One was a section of eraser from a draftsman's electric eraser. The eraser is a white rubber cylinder about the same diameter as a pencil eraser but about 7" long. I got mine from a bunch of old office supplies that had become obsolete when we went to CAD instead of paper and pencil drafting at work. You can still buy them from art or drafting supply stores. The diameter should be just about right for it to fit inside the peehole of the second skin cone, if it is too big, you can reduce the diameter with sandpaper, but not until you have fitted the second part. The second part comes from a hardware or plumbing supply store and is a "Thread on Washer for Toilet Flex Supply". This is a black rubber hemisphere about 7/8" in diameter with a 3/8" hole through it. Build up the diameter of the eraser with adhesive tape until it is a very tight fit inside the rubber "washer" and then force it into the rounded end of the "washer". Cut the eraser so that the washer plus eraser is about 1 1/4" long (the length you need may vary) and sandpaper the eraser part until it fits easily into the peehole of the second skin cone. You now have something that looks like a very fat golf tee, but made of rubber. This is the best Stage 3 keeper I have been able to come up with. Any suggestions for improvement here or anywhere else are welcome.

Lubrication. The multiple o-ring technique works by putting tension on both the inner and outer fauxskin. If you just insert the packing without lubrication the tension on much of the length of inner fauxskin will be greatly reduced by friction against the packing. The obvious solution is to use lubrication and I have found liquid K-Y (in the small plastic bottle, not the tube) to be very satisfactory for this purpose. If I put it on the packing it just beads up and doesn't seem to coat it very well, so the way I apply it is to put it on the glans and the shaft skin taking care to only get one hand wet with the lubricant, then add a few drops in the cup of the second skin cone and push the cone backwards against the glans, while pulling the fauxskin forward. It is impossible to keep all of the lubricant off of the fauxskin and you need a trick right here, lest the whole thing become a miniature version of a greased pig chase. If you have ever had a Doctor or Dentist try to grasp your tongue you will remember that they usually wrap a piece of cotton gauze around the tongue before pulling on it, and the same type of thing works here. A dry, or even damp, paper towel or a washcloth will allow you to easily grasp the fauxskin while it has the lubricant on it. Rinse the lubricant off the hand which applied it to the shaft and dry it with a paper towel or washcloth, then using the slightly damp washcloth or paper towel as a gripping aid, hold the fauxskin forward and push the packing backwards until you can feel it "seat". Now wipe the excess K-Y off the outside of the fauxskin and start putting o-rings on, just like in Stage 2. When you get as many as you reasonably can on, hold the fauxskin forward and insert the keeper, being careful to get the tip of the keeper into the peehole of the second skin cone. Now, just like in Stage 2, spend 30 to 60 seconds working the inner fauxskin as far out as it will go while pushing the keeper back inside to increase the tension as far as possible.

## **Advantages**

I see a lot of advantages. First, I only had to use tape for the first week or so while I was X-taping, and then a couple of days of taping in a ring. Now that the o-rings will stay on, there has been no taping at all. I can have spontaneous sex whenever I want (very important—aren't we doing this to improve our sex lives).

Size—this is one of the smallest and most discrete ways of restoring I have seen mentioned on the internet. I have corresponded with people who wear it under tight swim trunks in a pool. They claim it is not noticeable, although I take that with a grain of salt. On the other hand, just think about swimming with tape and a strap, or a weight without getting a few questioning looks.

Accident potential—while I was learning how to keep this on, every once in a while one of the rings would come off, but they always stayed in my jockey shorts. Even if an o-ring somehow manages to fall out of my pants leg, it is going to silently hit the floor and probably go unnoticed. Nothing weird-looking and heavy is going to hit the floor with a thud and then roll around just crying out for some kind of explanation.

No metal—I have worn this through airport security (international even) with no problems at all and don't ever expect any. Everything is rubber.

Modular—as the fauxskin grows, I just add another \$0.25 o-ring every week or so. Plus the number of o-rings is an indication of progress, I get periodic positive reinforcement.

Gentle—I have read about skin tears using taping methods, nothing like this has ever happened. I have had one easily preventable injury from having the keeper trap a piece of fauxskin against the packing. Before I started using a keeper, I would fairly frequently have minor blood vessels break under the skin, giving me something that looked like a hickey. I rested from stretching for a day and the discoloration went away. Once I found the keeper idea and increased the size of the o-rings by 1/16" this became a rare (less than once a month) thing. Of course there is some itching as new skin grows, but that happens with any method.

I did have one other bad thing happen, which was that at one point I got an infection under my fingernail. This really hurts and reduces dexterity a lot. Somehow I managed to nick the shaft with that fingernail and then infection transferred to my penis. Fortunately the same antibiotics worked on both the penis (fast) and the fingernail (slow). Taught me to wash my hands before I did anything.

No lateral stretching—the tip of the fauxskin developed by this method has not been stretched over anything and naturally wants to taper to a close. Finishing may be quite a ways down the road, but I think it will be much easier to get a natural look and action if there has been no lateral stretching. As a matter of fact, I noticed early in the process that the circ scar is now trying its best to look just like a frenar band—how about that for good luck.

Cost—until you get to the point where you need the second skin cones the cost is extremely modest. I have paid anywhere from \$0.25 to \$0.49 for the o-rings depending on where I got them. Most hardware stores will have a small selection. The best place I found was a “professional” plumbing supply store where they had a metal cabinet with a wide variety of sizes. I just told them what I wanted and got a whole handful for a few dollars. No questions asked about purpose, etc. A baby pacifier or nipple is another few dollars, the same section of the pharmacy has the cocoa butter, again two or three dollars. If you want to fill the nipple with aquarium sealant that is another few dollars. That is the total cost for materials of any kind until you have tried the method for a few months and have gotten to the point where you need the second skin cones. At that point you have saved enough on not buying tape to pay for the cones. If you need a Nerf arrow, they come in packages of three from most toy stores--about \$5.

How fast is it?

I consider the progress I have made to be on the high end of what I read about on the internet. In five weeks I got to the point of having a partially-functional fauxskin that would spontaneously give me about 1/2 coverage while standing or walking wearing jockey shorts. At six weeks, if I tucked the glans in, it stayed mostly covered all the time wearing the jockeys. For some reason this did not happen nude or wearing boxers. At seven weeks coverage continued to get better, 80% + continuous coverage for hours of moderate activity (sit, stand, walk, go shopping, pick up light packages, etc.) after tucking in if I wear the jockey shorts with no o-rings at all. At 11 months, I get 100% coverage all day if I wear jockeys and tuck in after peeing. In fact, I have to “peel back” or it will dribble and spray funny. O.K. now the question comes up why so little progress between 7 weeks and 11 months? The answer is that the new fauxskin forms with considerable taper, hugs the glans tightly and will hold the glans back inside of itself quite early on. This gives the appearance of having a very short flaccid penis, but as time goes on, the amount of skin increases and while the coverage doesn't dramatically go up, it increases slowly while the apparent flaccid length

increases back to normal. This is about where I am now, and I expect to start getting overhang in the next month or so.

Nude, there is coverage for 10-30 minutes after taking the shorts off. When there isn't coverage the skin is *\*very\** wrinkled.

There is no coverage at all when erect, but the skin on the shaft has gone from being "as tight as a drum" to pretty loose. At 3 or 4 months I started feel the gliding action during intercourse and this has increased over time. As others have mentioned, there has been a noticeable increase in size when erect. Nothing gargantuan, maybe 1/2" in length and 1/4" in diameter. I didn't measure it before or after—this is just from looking.

I am 50 +, so youth is not a factor in the results I am seeing.

How tight was I cut?

I am hetero, so I have very limited (read none) experience with other erect penises, and when flaccid most circumcisions look about the same, especially as one would see them in a locker room.

From the descriptions I read, I seem to have been cut with about average tightness. Until I started to restore, I thought it was normal to have the skin on an erection be taught and immobile. Needless to say there were frequent abrasions from sex, which I thought was a normal result of overdoing things. I have since learned a lot.

A second indication of the tightness of the cut was that when semi-erect there seemed to be some kind of constriction about half-way along the shaft, with a partial turn to the left. This always straightened out with a full erection, and I thought it was just normal. Within the first few weeks of restoration, the constriction and the turn disappeared, never to return. Chalk up one more side effect of mutilation.

How does it work?

The first thing I will say is that I am a chemical, not a mechanical, engineer, and I would like to hear from any mechanical engineers out there for a discussion of how this works mechanically; and anyone who has any medical knowledge of tissue expansion could help a lot with that part.

The way I *\*think\** it works is that the three graduated o-rings at the base of the stack keep the shaft slightly compressed which provides tension on the shaft skin. This is the same effect as the classical o-ring techniques, circumferential taping, and cross-taping. The difference between this and other methods lies in what happens under the stack of o-rings. The developing fauxskin is pulled forward and therefore shrinks in circumference as the stack is applied. When the pulling is stopped the fauxskin tries to contract in length, but must expand in diameter in order to do this. The attempted diametrical expansion creates a lot of friction which prevents the rings from slipping on the skin. The rings contain the expansion and the fact that they touch each other puts them into compression while the skin is in tension.

In mechanical terms, the skin is given a relatively constant strain (elongation), while the stress (force) is allowed to fall where it may. This is fundamentally different than weights or elastic strap tensioning schemes where the stress (force) is relatively constant, and strain (elongation) is not controlled at all. When extra skin is desired for plastic or reconstructive surgery it is usually obtained by implanting a balloon under existing skin and then inflating it hydraulically. Periodically (I get the impression of every few days), the amount of inflation is increased. The tension in the skin may be quite significant immediately after each inflation, but rapidly tapers off as new tissue forms. Then the next inflation step occurs. Anyone with a mechanical engineering background will immediately recognize the similarity in techniques here—the skin is stretched to a constant elongation, possibly with a considerable force, and then held elongated while the force relaxes through an increase in the amount of skin. Then the elongation is increased and the process is repeated. The differences are that the balloon technique is two-dimensional, while multiple o-rings stretches primarily in one direction; and that the balloons are implanted so it is a 24/7 technique. (If anyone wants to try implanting a restoration device in their penis, have at it—I will be content to put on a removable apparatus.)

There are a lot of references in the discussion groups to the fact that higher tensions do not seem to produce faster tissue expansion, and in fact may slow it down. This is entirely consistent with the results of this technique.

I have seen two similar techniques used for tissue expansion in other cultures. (No I don't have the references, but if anyone does it would be interesting to get them). The first is some African cultures where women increase the size of their lips substantially by inserting what has been described as wooden disks between the front teeth and the lips. I have seen pictures of the results, and they are impressive; although the inserted item is not exactly what I would call a disk, since it appears to be more oval than round, and there has to be some shaping to fit the teeth at one end of the oval.

The second is yet other African cultures where women will stretch their necks by wearing a series of what appear to be metal collars which rest on the shoulders and the bottom of the head. Apparently as soon as she gets used to a given number of these collars, another one is added to the stack. Again, substantial stretching occurs, although here we are dealing with a lot more than just skin, so the expansion ration is less than in the case of lips. If you look at a picture or drawing of this, the concept seems very similar to the multiple o-ring idea if one makes allowances for the obvious differences in scale.

The bottom line is that in both cases, the basic technique is tissue expansion through a stepwise increase of a fixed elongation, not a fixed force.

Similarly, in the more commonplace skin expansions due to weight gain and pregnancy, the expansion is being done by what is essentially an incompressible object, again leading to constant (well, O.K. slowly increasing with time) elongation rather than constant force.

## **Disadvantages**

Especially in Stage 1, before a keeper can be used, I have broken minor blood vessels and given myself something that looks for all the world just like a hickey. It goes away on its own after a day of not stretching, and this is something I can live with compared to the skin tears, application, and removal issues associated with taping.

The apparatus must be removed to pee. This takes longer and requires more privacy. There is a compensating factor. I stretched for 5 or 6 hours a day 5 days a week in Stage 1, decreasing to 3 or 4 hours per day 5 days a week in Stage 3. Even at my age I can hold it long enough to only have to pee once while wearing the apparatus. Essentially, short wearing times make it more "pee friendly" than would appear to be the case at first.

The biggest disadvantage is that so many more people use tape I sometimes feel like the lone ranger. On the other hand, when I read about skin tears, wearing a strap at night, leaving tape on for days, etc. I think about stretching for a few hours a day at work and wearing nothing at all at home and feel a lot better.

Which brings us to the question, why do more people use tape? As far as I can see it is mostly because the tape techniques were invented first and they have been more widely publicized. A second reason is that people have used one or two o-rings for quite a while and had very slow progress if any at all. This has given all o-ring techniques a bad name.

## **Blood Circulation**

One of the big questions is always: "doesn't this cut off the circulation to the fauxskin?" The answer is that it does to some extent, but obviously it can be done without problems. The basic precaution is to periodically look at Mr. Willy, every 20 minutes at first, and every couple of hours after several days or weeks of experience. What I find is that the skin always turns a little darker from slightly impaired circulation. The rule of thumb I use is that if the skin is dark enough so that I would worry about it if I didn't have normal skin right next to it for comparison, I take everything off and give it a rest for the day. On the other hand I have to be careful to not just look at the skin in front of the o-rings, compare it to the skin behind the o-rings and say "gee that looks bad". There is a lot of variation in genital coloring and a lot



of variation in blood flow. I would have made no progress at all if I gave up from a very slight discoloration. Think about the discoloration caused by a tight waistband on underwear when you first take them off, or the discoloration caused by a tight bra on a woman. This is clearly acceptable. Anything more is cause to take the o-rings off.

If I take my shoes and socks off quickly and look at my feet there are discolored places that soon go away. The same thing happens with the o-rings, a few minutes after removal any discoloration is gone. Obviously some discoloration is OK, too much and there may be trouble.

I suspect that guys who tape also get some discoloration under the tape—they just can't see it with the tape on.

### **Where to from here?**

I am interested in hearing from others both in general and in several specific areas:

1. Mechanical comments on how it works, and potential improvements.
2. Medical comments on why it works. Especially fixed elongation with stepwise increases vs. fixed force for tissue expansion.
3. References to medical literature on tissue expansion. I have done a web search on tissue expansion and mostly get sites that are advertising plastic and reconstructive surgery. They have layman's explanations of tissue expansion, but none of the research work in this field. I don't have enough of a medical background to really do research in this area, but I could probably understand it if I could find it and read about it. Even a review article at the Scientific American, or somewhat more advanced, level would be appreciated.