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## Mel's Project - Part I: Progress from 1997-2003

Mel Senior

### Abstract:

The progress (over the course of ~six years: 1997-2003) in terms of total growth of shaft skin and various measures of "growth rates" for one restorer (me, Mel Senior) is reviewed. Restoration methods included *Tape Rings*, *T-Tapes*, *Packing*, *Weights* as well as an internal expanding packing system (the *DILE*). Measurements of growth were made periodically (using 2 different methods of measurement: Tape Strip vs Cardboard Tube). Results show that good growth only occurred when I was an "active" restorer (and not taking "breaks") and that initial increases were due to a "non-growth stretch" (~0.5 inches) of shaft skin; when a restoration effort was stopped a "de-stretch" also occurred. Overall growth of shaft skin during this period was ~5.25 inches with ~4.5 inches of this growth occurring during the first year of restoration. Interestingly, this increase in shaft skin perhaps "released" ~1.4 inches of previously restricted erect penis shaft. Growth rates in shaft skin during periods of intense/active restoration ("Restoration Effort Periods" – REPs) ranged from ~0.061 to 0.135 inches per week. *Tape Rings* and *T-Tapes* appeared to focus growth on the "below POE" (Point of Equilibrium) skin, while the use of an internal expanding packing system (the *DILE*) appeared to focus growth on the "above POE" skin (when used without a strap) or balanced growth between "above POE" and "below POE" (when used with a strap). The use of the *DILE* (with a strap) resulted in a growth rate (when normalized to starting skin length) of "above POE" skin that was ~2x faster than that of "below POE" skin (~0.016 vs 0.006 in/wk/start inch). Additionally, increased growth rates with increases in available shaft skin (i.e., "exponential growth") is suggested by the available data, however this phenomena needs to be investigated further. The data contained within this report suggest that an internal expanding packing system (the *DILE*) can help promote growth of the "above POE" skin (which would include "inner skin").

### Introduction:

Over the past ~2000 years, circumcised men have tried various methods to repair the damage done to their foreskins (i.e., foreskin restoration). Methods have ranged from metal rings (made from copper, I believe) to various packing systems. In recent years, men have even turned to surgical methods for restoring their foreskins. Beyond these surgical methods, a variety of non-surgical methods are available. These include the use of medical tapes, a variety of internal packing and weighed devices as well as metal and silicone cones. Internal expanding packing devices are also now available. All of these systems rely on the principle that when placed under a modest

amount of tension, the shaft skin of the penis will grow in an effort to alleviate this tension. The same principle occurs when earlobes are "stretched" by some tribal cultures.

The purpose of this report is to chronicle my (Mel Senior's) progress over the course of approximately six years (~1997-2003) of my Foreskin Restoration Effort (~1997-2006). I am still restoring my foreskin and a second report will someday be made available. This current report is based on the results of one restorer and, as such, is simply provided as a single "Case Study". By no means can the observations made or the "lose" conclusions drawn herein be extended or applied to all or even any other restorer.

It is important to note that a majority of my restoration effort has relied on the use of an internal expanding packing system (the *DILE*) that I developed (with help/suggestions from other restorers) and a majority of my observations are based on "non-*DILE*" periods of tugging vs "*DILE*" periods of tugging.

## Methods and Materials:

### The Subject (Mel Senior)

At the start of this "Project" (in Aug, 1997), I was (and still am) a healthy (for the most part, though slightly overweight), married (still is!), 31 year old Caucasian male. My interest in restoring my foreskin came about for a variety of reasons, but the idea that I was altered at birth and that this alteration may have resulted in a loss of sexual pleasure was by far the most important contributing factor. I was (and still am) a non-smoker and only have an occasional alcoholic beverage.

### Time Frame (~6 years)

During the ~six year period covered by this report (Aug. 1997 to Sept. 2003) I lost ~25 lbs, moved from the west coast to the east coast, changed jobs once, moved my household twice and sired Mel Jr. (who is intact and is 7 years old as of this writing!).

One of the most important parameters to change during this ~six year period was my *actual* restoration "effort". After ~two years of intense restoration, my efforts tailed off to the occasional tugging. This was the result of 1) being pretty much happy with my progress and 2) life getting too busy.

It is important to note that there was a period of time during which there was no tugging what so ever (~nine months during my move from west coast to east coast), with only a retainer ring being used. Additionally, during the last ~three years of this ~six year period (i.e., from ~2000~2003), there were only occasional attempts at continuing with restoration; little effort, beyond sporadic *Weights* and *Packing* occurred between 2000-2003. However, as of this writing (Oct. 2006), I have refocused my efforts on restoring my

foreskin and it is my hope that a second progress report will be produced some time in the future.

### Methods of Restoring

During this ~six year period I kept as detailed documentation as possible concerning my methods and progress. The original intent, however, was to simply "keep track" of things, and not for any greater purpose (i.e., writing this report).

Initial efforts relied on *Tape Rings* and *T-Tapes*. Soon after, I decided to use some *Packing* (various foam inserts). As time progressed, I put much effort into developing a system that could help focus tension on "inner skin" as this was the skin upon which I wanted to focus my attention. After a few months of Research and Development and much encouragement from other restorers....

### **The *DILE* was born!**

The *DILE* (Dual-action Incremental Longitudinal Expander - first introduced for sale ~1998; see "Evolution of the *DILE*" at [www.dileinsert.com](http://www.dileinsert.com)) is an internal packing system that can be expanded within the enclosed foreskin by turning a threaded nylon bolt. The expansion of the *DILE* occurs when a threaded "knob" on the bolt travels away from a bottom "knob." In the original *DILE*, this bottom "knob" was imbedded in length of Nerf foam. This device relied on a *T-Tape* and could be worn with or without a strap. Newer versions of the *DILE* no longer rely on foam inserts and now both *Tapeless* and *T-Tape* versions are available.

I have used the *DILE* (in various forms) on and off for the ~six years covered by this report (~1997-2003). During the last ~three years (2000-2003), a majority of my restoration effort however relied on various types of *Packing* (Nerf foam) and *Weights* (fishing weights), simply because I was happy with my growth and *T-Taping* had become too tedious.

### Methods of Measuring Progress

**General Comment Regarding Mel's Methods of Measurement:** While actively restoring, measurements of progress were taken either weekly or bi-weekly (or in some instances less

frequently). Measurements were made using one of the below described two methods. It is important to note, however, that because these two methods are somewhat different, lengths of shaft skin determined with one method cannot be directly compared with those determined with the other (see *Results and Discussion* for further comment) Additionally, because my preferred method of measurement (see *Method 2*, below) relied on *T-Tapes*, when not "taping" (i.e., while using *Packing* and *Weights*) no or few measurements were taken.

**Method 1 - Tape Strip (weeks 0 - 38):** My initial measurements of shaft skin relied on strips of tape being placed along the dorsal side of the shaft (while erect). POE (Point Of Equilibrium) was first marked (while flaccid) and then an erection was acquired. The strip of tape was then aligned vertically with the edge of the corna and then, with the skin pulled towards the body, the tape would be "stuck" to the tightened skin. Once the tape got too close to the bottom of the shaft (where the bunched up skin was), the skin with tape already applied to it would be pulled away from the body so that the remaining skin could be "taped." The end of "shaft skin" was marked at the first occurrence of pubic hair. The tape would then be removed and the length of shaft skin would then be measured (in inches to the nearest 16th).

**Method 2 - Cardboard Tube (weeks 38 - 140):** At one point the above method became impractical (too much skin bunching up at the base of the shaft), so I strated using a different method of measuring progress. As before, POE would be marked (while flaccid), and then an erection would be acquired. The edge of the corna (in center of shaft) would be marked and then, while pulling the shaft skin back towards the body, the distance between the corna mark and POE would then be measured by placing a ruler next to the shaft. This measurement (in inches to the nearest 16th) would then be recorded (= corna to POE). I would then apply a *T-Tape* (while erect) along POE and would then place the shaft into a cardboard tube having a wedge of the cardboard (a "V") removed from the "away from body" end. Then, whiling holding onto the dorsal side of *T-Tape*, the *T-Tape* would be pulled as far as possible through the tube so that POE (which was under the *T-Tape*) could be marked on the tube along the edge of the "V". The distance from the bottom of

the tube to the POE-mark (on the tube) would then be measured (in inches to the nearest 16th) (= POE to base). The prior measurement (corna to POE) and this measurement (POE to base) would then added to yield the "Total" length. Additionally, when this method of measurement was adopted, I started to include a measurement of "inner skin" (i.e., "pink skin"), however these measurements may be too variable to use in any analysis, as they rely on determining the exact "junction" between pink "inner skin" and "outer skin". If I can resolve this potential problem, a future report may contain a detailed analysis of the growth of "inner skin."

### Calculations of Growth

Growth rates of shaft skin were calculated over the course of a variety of "Restoration Effort Periods" (REP) using the following guidelines:

- the REP had to be at least six weeks in length
- the same restoration method had to be used
- the same measurement method had to be used
- measurements of "Total" skin length and "below POE" skin length had to have been taken
- no more than two "breaks" could have occurred during the REP
- the REP could not include the "non-growth stretch"
- the REP could not include the "plateau" in growth that is often experienced

Growth of shaft skin ("Total" and "below POE") was calculated by taking the average length of the shaft skin for the first two weeks of the REP, subtracted from the average length of the shaft skin for the last two weeks of the REP. Growth rate was then calculated by dividing this change in length (inches) by the duration of the REP (weeks).

For example, if the REP ran from week 1 through week 6, the calculation would be as follows:

End length - Start length = change in length  
(ave. wk 5&6) - (ave. wk 1&2) =  $\Delta$  in length

Duration of REP = 5.5 wks - 1.5 wks = 4 wks

Growth Rate =  $\Delta$  in length / 4 wks

### Statistical Analysis

Because this study has a sample size of one (n=1), there is no way to conduct any kind of statistical analysis. As such, the data will simply be presented as "...this was how it went for Mel..." The purpose of this report is simply to state the facts of my own progress and to provide some kind of interpretation of these results. Extending these results beyond the confines of Mel is inappropriate.

### **Results and Discussion:**

#### Overview of Figure 1

Indeed, this figure is very busy, but if we take it one step at a time, it will all become much clearer. The x-axis shows time, in weeks [note: because the time period covers ~six years (1997-2003), I've renumbered weeks that occur beyond week 80 to make them fit on the graph; this has no bearing on data analysis]. The time frame for this graph covers ~six years (1997-2003) of my restoration effort and years are listed in boxes across the bottom of the graph (i.e., the graph starts in 1997 and ends in 2003). The y-axis is "Total Length of Shaft Skin" (in inches).

The entire length of each stacked bar is "Total Length of Shaft Skin" (broken down into "inner skin - above POE", "outer skin - above POE" and "below POE"). POE is at the junction of "below POE" and "outer - above POE" (refer to the stacked bar at week ~140).

Changes in restoration efforts and methods are shown across the top (i.e., *Tape Rings*, *DILE*, *T-Tape*, etc...) and are encompassed within shaped boxes (i.e., yellow portion of graph is "sporadic with weights and packing...").

A change in the measurement method (*Method 1* vs *Method 2*) occurred between weeks ~36 and 38 and is indicated by the note across the top of Figure 1 and the line running vertically between weeks 36 and 38.

A red asterisk indicates a "break" in tugging (of at least 4-5 days in length). The nine month "break" between weeks ~80 and 100 is indicated by a large

red asterisk. This was when I moved from the west coast to east coast, started a new job and bought a house (way too busy to tug!).

#### Mel's Growth - Overall (Figure 1)

**Gains Over 6 Years:** I started off at week 0 with ~5 inches of shaft skin. Over the course of the next year, I gained ~6.0 inches in skin, attaining ~11.0 inches total (by week ~52). It should be noted that I switched to *Method 2* (cardboard tube) for taking measurements just prior to my one year anniversary (see line between weeks ~36 and 38). You can see that there is an approximate 1.5 inch increase in length when this method (*Method 2*) was used for the first time (week 38). This increase is most certainly due a change in the method of measurement and not to a real increase in growth. If those 1.5 inches are subtracted from the ~11.0 inches at the end of year one (~week 52), my shaft skin would have been ~9.5 inches in length (an increase of ~4.5 inches over the ~5 inches at the beginning). Over the course of the next few years (with only sporadic tugging) I have not only retained this length, but have made additional, though modest, gains (~11.75 inches in shaft skin in 2003).

Additionally, over the course of this ~six year period, the length of my "inner skin" (i.e., "pink skin") increased from ~1.75 inches (see week ~38 - first measurement of "inner skin") to ~2.5 inches (see week ~140; year 6), which is an increase of ~0.75 inches. It is important to note that this increase in the length of "inner skin" may be of function of both an actual growth of skin, but also in a "conversion" of "outer skin" to "inner skin."

#### **Losses During "Breaks" and Initial "Non-Growth Stretch":**

You can see that "breaks" in tugging (weeks marked with red stars) result in some amount of loss in skin. For instance, approximately 1.75 inches of skin was lost during an approximate nine month break between weeks ~80 and 100 (note: week 100 on the graph is really week 128). However, you should also note that when restoration efforts are first initiated, either from the very beginning (see weeks 0 and 1) or after a break (see weeks 100 and 101), there is an initial increase in length which most certainly

is related to a "non-growth stretch" and not to any real gains in length. These "non-growth stretch" increases are approximately 0.5 inches in length. Therefore, the loss that occurred during the nine month break (between weeks ~80 and 100) was, perhaps, partly due to some "de-stretch" (i.e., a rebounding of stretched tissue) as well as to some, as of yet, undetermined factor. You should also note that after about seven weeks of tugging, I regained the length that was lost during the nine-month hiatus and, for the most part, that regained skin was retained until the year 2003.

**Possible Increase in Erect Length:** When first starting out (the only data point I have is from ~1998 - see dashed line starting at ~ week 80 and running towards the right side of the graph), my erect length was ~6.3 inches. As of this writing (and because of reinitiating my restoration efforts), I had the occasion to re-measure my erect length. It was 7.75 inches (see solid line starting at ~ week 100 and running towards the left side of the graph). This is an increase of ~1.40 inches. This increase in erect length could be a function of any (or a combination) of the following reasons: 1) my initial ~5 inches of shaft skin was keeping this length "hidden" and the shaft skin grown since this time has allowed this "hidden" length to escape, 2) different methods of measuring erect length were used (I have no recollection as to how the 6.3 inch erect length was obtained) or 3) there could have been an increase in the length of erectile tissue. Presently, there is no way to discern the exact reason for this apparent increase in erect penis length.

**Consequences of Increased Erect Length:** This increase in erect length (if real) may be one of the reasons why I appear to be chasing a moving target in terms of my desired coverage/goals (i.e., full coverage while erect) and not attaining them. If the shaft has been increasing in length with increases in shaft skin, there is no wonder why I cannot seem to "keep pace". At one point, one has to assume however that no additional shaft will be "released" (or grown?) and that any additional shaft skin will go towards erect coverage and not towards covering additional shaft length.

### Mel's Growth Rates (Figure 1)

**Overall Growth Rates:** Over the course of the ~six year period covered by this report, I experienced growth rates of shaft skin ("Total" length) anywhere from 0.061 - 0.135 inches per week. These growth rates were inter-dispersed among periods of no tugging (with no growth) and, in some cases, periods of loss. Fastest rates were during times of intense effort, whereas slower rates were during times of less effort.

**General Considerations of Growth Rates During Specific "Restoration Effort Periods":** The below listing of growth rates during specific "Restoration Effort Periods" (REP) should be viewed with caution, as the specific rates are quite sensitive to the weeks chosen as the "start" and "end" of the REP. I tried my very best to be "fair" in terms of not biasing these results (see listing of criteria for choosing periods as listed above in *Methods and Materials*). For instance, had I included the apparent spike in growth between weeks ~36 and 38 (when I changed my measuring method), that would have yielded a much higher growth rate for REP-B (the first time I used the *DILE*). Also, there was another "odd" data point around that first use of the *DILE* (see week 35 and 36; an increase in ~1.5 inches in a week, which is quite unlikely), so that data point was also not included. As such, use caution when interpreting these growth rates.

**REP- A (weeks 4/5 through weeks 19/20):** During this period, I used *Tape Rings* and *T-Tapes* with straps and attained a "Total" growth rate of ~0.113 inches per week. The "below POE" growth rate was ~0.095 inches per week and this "below POE" growth accounted for ~84% of total growth (in length) during this period. Note that there were 2 breaks in tugging during this period (at weeks ~11 and 14), so increases/rates of growth may be underestimates, as this REP may have included some "de-stretch" of gained length.

This data suggests that *Tape Rings* and *T-Tapes* and the manner in which I used them resulted in good growth of skin "below POE" (~84% of total length increase), but not much growth "above POE" (~16% of total length increase). This also suggests that my method of using *Tape Rings* and *T-tapes* focused tension on skin "below POE".

**REP - B (weeks 27/28 through weeks 31/32):**

During this period, I used the *DILE* for the first time. These initial uses were with *T-Tapes*, but without a strap. "Total" growth rate during this period was ~0.118 per week. The "below POE" growth rate was ~0.021 inches per week and this "below POE" growth accounted for ~18% of total growth (in length) during this period.

This data suggests that the *DILE* and the manner in which I used it (without a strap) resulted in good growth of skin "above POE" (~82% of total length increase) and not much growth "below POE" (~18% of total length increase). This also suggests that my method of using the *DILE* (without a strap) focused tension on skin "above POE" (which would include "inner skin"). It also should be noted that the overall growth during this REP (REP-B) was similar to that attained during REP-A when using *Tape Rings* or *T-Tapes* were used.

**REP - C (weeks 40/41 through weeks 59/60):**

During this period, I used the *DILE* with *T-Tapes* and a strap. "Total" growth rate during this period was ~0.061 per week. The "below POE" growth rate was ~0.030 inches per week and this "below POE" growth accounted for ~50% of total growth (in length) during this period. Note that there were 2 breaks in tugging during this period (at weeks ~44 and 54), so increases/rates of growth may be underestimates, as this REP may have included some "de-stretch" of gained length.

This data suggests that the *DILE* and the manner in which I used it (with a strap) resulted in good growth of skin both "above POE" (~50% of total length increase) and "below POE" (~50% of total length increase). This data also suggests that my method of using the *DILE* (with a strap) helped to balance the tension at POE, promoting equal growth on both sides of POE. It should be noted that the growth rate during this point was the lowest of all growth rates among the four REPs. Upon further examination of my data sheets, I have determined that this REP included a time period when my wife and I were trying to conceive our second child (i.e., I was "on the clock" quite often during this time and *T-Taping* for only a few days out of each week). The lower growth rate experience during this REP may therefore be due to this sporadic taping.

**REP - D (weeks 130/132 through weeks 135/137):**

During this period, I used the *DILE* with *T-Tapes* and a strap. "Total" growth rate during this period was ~0.135 per week. The "below POE" growth rate was ~0.073 inches per week and this "below POE" growth accounted for ~54% of total growth (in length) during this period.

This data again suggests that the *DILE* and the manner in which I used it (with a strap) resulted in good growth of skin both "above POE" (~46% of total length increase) and "below POE" (~54% of total length increase). This data also suggests that my method of using the *DILE* (with a strap) helped to balance the tension at POE (though not perfectly in this instance), promoting good growth on both sides of POE. It should be noted that the growth experienced during this period (with no breaks) was the highest growth rate of all REPs (~0.135 in/wk).

**Mel's Growth Rates (Table 1)**

**Overall Growth Rates:** Table 1 shows the raw data that was used to calculate the growth rates during the above listed "Restoration Effort Periods" (i.e., REP-A, REP-B, REP-C and REP-D). Beyond the rates and percentages that have already been reviewed (see above and Fig. 1), a few other interesting results can be highlighted. These are detailed below.

**Growth Rate as a Function of Initial Length - Total Length (Is Exponential Growth Occurring?):** If normalized to the length of skin at the start of the REP, the growth per week per inch of initial "Total" skin (inch/week/start inch) ranges from 0.006 - 0.018 (see Table 1, second to last column). The highest rates were during REP-A (*Tape Rings* and *T-Tapes*; weeks ~4-19) and REP-B (*DILE*, without a strap; weeks ~27-31), with all but one of the rates being 0.013-0.018.

There has been some interest in determining if the growth rate of shaft tissue increases with increases in available shaft skin (i.e., does "exponential growth" of tissue occur?).

From a pure "hypothetical" standpoint, a data set in support of exponential growth of shaft skin would look something like this:

*Hypothetical Case of  
"Exponential Growth"*

<u>REP-X</u>	vs	<u>REP-Y</u>
start length = 5 in.		start length = 10 in.
0.05 inch per week		0.1 inch per week
0.01 in/wk/start in.		0.01 in/wk/start in.

"Exponential growth" of shaft skin would be indicated if the rate of growth (inch/week), normalized to starting length (start inch) (i.e., in./wk/start in.) was similar across the growth periods.

At this point (and with only four growth periods being available) it is difficult to discern if "exponential growth" (as calculated/hypothesized above) occurred during the six years covered by this report. However, of the four "start inch" normalized growth rates, three of them are quite similar (REP-A=0.018, REP-B=0.017, REP-D=0.013). More research into the possible phenomena of "exponential growth" is needed before any conclusions can be made, however, I am hopeful that this process is indeed occurring.

**Growth Rate as a Function of Initial Length - above POE vs. below POE:** The growth rate per inch of initial "below POE" skin (in/wk/start in) ranges from 0.004 - 0.020, whereas that for "above POE" skin ranges from 0.010 - 0.062 (Table 1, second to last column). In general, the highest "above POE" rates occurred during periods when the *DILE* was being used. Interestingly, when the *DILE* was being used with a strap (REP-C and REP-D) the "above POE" rates were ~2x that of the "below POE" rates (REP-C: 0.010 vs 0.004; REP-D: 0.022 vs 0.009) and when used without a strap (REP-B) the "above POE" rate (in/wk/start in) was ~15x that of the "below POE" rate (0.062 vs 0.004).

This data suggests that when the *DILE* was used with a strap, the "above POE" skin grew at a rate that was ~2x faster than "below POE" skin. The opposite effect occurred during REP-A (when *Tape Rings* and *T-Tapes* were being used), where the "below POE" growth rate (in/wk/start in.) was 0.020 and that of the "above POE" skin 0.012.

## Conclusions:

No conclusions can or should be drawn (again, this is a sample size of 1), however, I will make the following generalizations about my progress to date and the methods that I have used.

Increases in foreskin growth occurred best when I was an "active restorer." Initial increases were due to a "non-growth stretch" (~0.5 inches) and this "non-growth stretch" was often lost (a "de-stretch" occurred) following breaks in tugging. An initial tight erection was perhaps rectified by the addition of shaft skin and may have resulted in the "release" of previously hidden/restricted erect shaft length (i.e., an increase in erect length); though a possible an increase in erectile tissue length cannot be ruled out.

Growth rates of shaft tissue ranged from negative growth (during periods of no tugging - i.e., loss) to 0.135 inches per week during periods of active and intense tugging. An average growth rate was ~0.1 inch per week.

Using *Tape Rings* and *T-Tapes* seemed to focus tension (and growth) on the "below POE" skin, whereas the use of an internal expanding packing system (the *DILE*) without a strap appeared to focus tension (and growth) on the "above POE" skin.

Using an internal expanding packing system (the *DILE*) with a strap, however, balanced the tension (and growth) ~50%:50%, between "above POE" and "below POE" skin.

When using the *DILE* with a strap, "above POE" skin appeared to grow at a rate ~2x faster than the "below POE" skin and when used without a strap, "above POE" growth rate was ~15x that of the "below POE" growth rate. These growth rates should help to increase the length of "inner skin" (though a comparison of "inner skin" growth was not the focus of this report).

Once foreskin tissue is grown and after a period of "de-stretch", I retained a large majority of the length grown during the "Restoration Effort Periods".

Presently, there is still too little evidence (and data) to support the idea that "exponential growth" occurs with increased shaft tissue length,

however the data does suggest that this is a real possibility.

Finally, it is important to note that there is only one "non-*DILE*" period (REP-A) with which to compare "*DILE*" periods (REP-B, REP-C and REP-D). Any far reaching conclusions regarding the use/non-use of the *DILE* should be made with caution (pending additional studies comparing different methods of restoration).

### **Recommendations:**

It is highly recommended that future restores keep very accurate records of their progress. Even though this will be tedious, the information may be "priceless" as you try to evaluate what types of system/methods/regimes worked best for you.

It is probably best to avoid measuring your skin too often. The growth is slow, so bi-weekly, tri-weekly or even monthly measurements may be better (and more accurate/encouraging) than weekly measure-ments.

If, however, you want to keep a detailed "growth record", you may wish to adopt the following system of measurement.

- measure prior to any tugging (t=0)
- measure after 1 week of tugging
- measure after 2 weeks of tugging
- take no measurements for X weeks (X=2,3,4,5....)
- measure after the second to last week of the "Restoration Effort Period"
- measure after the last week of the "Restoration Effort Period"

Then, use the average of the first two weeks and last two weeks as your "bench marks" for

comparison (as done in this report). The restorer should avoid using the "non-growth stretch" (change in length between t=0 and after the first week of tugging) in any comparisons, as this increase may very well be lost upon cessation of tugging effort.

Also, it is advisable to be consistent with you method of measurement or at the very least, if you change methods, take a "double" measurement (using the old and new methods) every so often. This will allow you to more appropriately compare your results/document your progress.

Above all - KEEP TUGGING! You will make progress (though it will be slow at times). If you get discouraged, take a break, then get back on that HORSE!

### **Acknowledgements:**

I would also like to thank bioprof and jwkuehne for providing useful comments (and help with conversion to a PDF file), Steve for offering to host the PDF file on <http://foreskinrestorationchat.info/> and grayline10 who's interest in getting a *DILE* in the fall of 2006 prompted me to get back involved with me FSR effort. But, above all, I have to thank Mrs. Mel for putting up with the many changes of "Mel" during this six year period.

### **References:**

Yeah, right! I've already spent too much time writing this! But feel free to visit [www.dileinsert.com](http://www.dileinsert.com) and take a peak "Mel's Project" (in the index) for updates on my research.

Table 1. This is the "raw data" that was used to calculate increases in "Total" shaft skin as well as increases in "above POE" and "below POE" shaft skin. These increases in skin were then used to calculate a variety of growth rates [inches per week (in./wk); inches per week, normalized to start length (in/wk/start inch)] over the course of various "Restoration Effort Periods" (REP). Blocked cells contain data that is presented in Figure 1. The shaded columns (inch/wk/start inch) is covered in the *Results and Discussion*.

Restoration Effort Period (REP) - A (Tape Rings and T-Tapes)											
	Start of REP			End of REP		ave c&d	change	%	inch/wk	inch/wk/ start inch	% of increase
	wk-a	wk-b	ave a&b	wk-c	wk-d						
week	4.00	5.00	4.50	19.00	20.00	19.50	15.50				
Total	6.00	6.50	6.25	7.69	8.00	7.84	1.75	28.00	0.113	0.018	100.0
above POE	1.44	1.50	1.47	1.69	1.75	1.72	0.28	19.17	0.018	0.012	16.1
below POE	4.56	5.00	4.78	6.00	6.25	6.13	1.47	30.71	0.095	0.020	83.9
Restoration Effort Period (REP) - B (DILE without strap)											
	Start of REP			End of REP		ave c&d	change	%	inch/wk	inch/wk/ start inch	% of increase
	wk-a	wk-b	ave a&b	wk-c	wk-d						
week	27.00	28.00	27.50	31.00	32.00	31.50	4.50				
Total	6.88	7.06	6.97	7.44	7.50	7.47	0.53	7.63	0.118	0.017	100.0
above POE	1.50	1.63	1.56	1.88	2.00	1.94	0.44	28.00	0.097	0.062	82.3
below POE	5.38	5.44	5.41	5.56	5.50	5.53	0.09	1.74	0.021	0.004	17.7
Restoration Effort Period (REP) - C (DILE with strap)											
	Start of REP			End of REP		ave c&d	change	%	inch/wk	inch/wk/ start inch	% of increase
	wk-a	wk-b	ave a&b	wk-c	wk-d						
week	40.00	41.00	40.50	59.00	60.00	59.50	19.50				
Total	10.38	10.50	10.44	11.50	11.63	11.56	1.19	11.38	0.061	0.006	100.0
above POE	2.81	3.00	2.91	3.50	3.50	3.50	0.59	20.43	0.030	0.010	50.0
below POE	7.56	7.50	7.53	8.00	8.13	8.06	0.59	7.88	0.030	0.004	50.0
Restoration Effort Period (REP) - D (DILE with strap)											
	Start of REP			End of REP		ave c&d	change	%	inch/wk	inch/wk/ start inch	% of increase
	wk-a	wk-b	ave a&b	wk-c	wk-d						
week	130.00	132.00	131.00	135.00	137.00	136.00	6.00				
Total	10.63	10.75	10.69	11.44	11.50	11.47	0.81	7.60	0.135	0.013	100.0
above POE	2.88	2.88	2.88	3.31	3.25	3.28	0.38	13.04	0.063	0.022	46.2
below POE	7.75	7.88	7.81	8.12	8.25	8.19	0.44	5.60	0.073	0.009	53.8

Figure 1. Mel's progress over ~6 years of his restoration effort. The 6 year time frame is broken down into "sections" (as per Restoration Method: Tape Rings, DILE, etc) and total shaft skin is shown as a "stacked bar" encompassing "below POE", "outer skin - above POE" and "inner skin - above POE". POE is at the junction between "below POE" and "outer skin - above POE." Measurements were made using tape strips or cardboard tubes. Red stars indicate "breaks" in tugging. Growth rates were calculated over the course of 4 different "Restoration Effort Periods" (A, B, C and D). Small filled circles indicate the total length of shaft skin for weeks that were either not used to calculate of growth rates nor used to illustrate important aspects of the data.

