

Irrigation Notes

Introduction

There must be a large number of people with colostomies who deplore the need continuously to wear a bag (I don't like the word pouch, although I know some prefer it), but who have fought shy of the route to a release from it in the form of irrigation. This is perhaps partly due to the "Carry On" connotations of colonic irrigation, but put that behind you, and consider the advantages of (typically) wearing a bag, if at all, for no more than a couple of hours in every 48 hours.

These notes represent the results of trials and experiments, and my own personal experiences, over the past fifteen years of irrigating. While I would not suggest that every detail is directly applicable to every reader, it should provide a useful starting point for those who wish to give the technique a try. One must remember, however, that all people are different, and each will need ultimately to establish what works best for him or her. Readers who are already irrigating may well be able to use this as a self-help manual, but those who have not tried irrigation might be better advised to regard it a collection of ideas and experiences to discuss with a stoma nurse.

Before embarking on irrigation it is desirable to check with one's consultant that there are no contra-indications. In particular, a heart problem could rule out irrigation, because the introduction of liquid into the colon stimulates the vagus nerve, which slows the heart rate. Irrigation is also only possible with a healthy colon, and is not normally advised for those with a hernia.

How long after surgery should one wait before starting irrigation? There can be a variety of opinions on this question, but my own suggestion is that the time to start is when normal appetite has returned, the digestion no longer feels fragile, and a more or less normal diet has been resumed. Note the words "more or less normal" – they reflect my own experience that although I eat almost all the foods I ever used to, I still avoid even mild curries, which seem to have the effect of stimulating my stoma into unwanted action.

Equipment

Of the simple and basic designs, based on water fed from a plastic bag hanging up, the best irrigation set, in my own experience, is undoubtedly Coloplast Code 1511. This has a liquid crystal temperature indicator, a good flow control, and a well shaped tip (Code 1110). Users of an electric irrigation pump (Irrimatic) made by B Braun all appear to speak highly of it, despite the disadvantage that it is not available on the NHS (except, I believe, in Scotland), and is quite expensive to purchase. I have now been using the Irrimatic myself for nearly three years, and you will find my evaluation of it on the website, entitled **Using the Braun Irrimatic Pump**.

I believe that a position squatting on the wC is conducive to evacuation, but is wrong for introducing liquid into the colon. Accordingly I sit beside the wC on a kitchen stool about 590mm (23") high, so that my hips are only slightly flexed. When away from home I take a lightweight two piece shooting stick, which I can assemble to the same height as the stool. The actual height is not critical, and for anyone else the aim should perhaps be for an angle at the hips around 135° rather than near 90°. Since moving to France, to a house with a small wC separate from the bathroom, I found that there was not really room for a stool, and I solved the problem by buying a folding plastic shower seat, which I fixed to the wall.

Before changing to the Irrimatic, I used a Coloplast flange (Code 1120), secured by an elastic belt (Code 0420), and irrigation sleeves (Code 1560). Although those who sit on the wC shorten them, the sleeves are an ideal length for use with a stool. I offset the sleeve about 30° to my left so that it passes comfortably over my leg. This is easily achieved when fitting the sleeve to the flange, before you put it on, by setting the projecting tab at the "eleven o'clock" position. It is desirable to

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make sure that the sleeve passes over the leg and down into the WC pan without any form of "loop" or horizontal portion; if this precaution is neglected, the weight of any material discharged from the stoma will pull the sleeve out of the WC pan and cause it to discharge on the floor. Anyone who makes this mistake will probably only do it once!

Before using a sleeve I check that the polythene of the sleeve is firmly attached to the flange, since I have had a couple of failures when the two partially parted company. If this happens while you are running the water in, then you may be able to change sleeves and continue. If it happens subsequently, when the stoma is discharging, if you are sitting on the we you can shift your position so that the output finds its way into the pan, but if you are sitting on a stool you have only one course of action: to spot it quickly, and immediately to stand up and lean over the we pan. It will probably be somewhat messy, but not so messy as ignoring the problem! This leads on to another catastrophe situation: when you are spending a night away, and find in the morning that you have the irrigation kit but no sleeve. I can assure you from personal experience that it is possible to perform an irrigation without a sleeve, by kneeling in front of the we and pressing the abdomen against the rim of the pan. Nothing need go on the floor, but you should expect to need a shower afterwards!

Bags, Etc.

Quite often I can feel confident that about half an hour after introducing the water, everything that is going to come out has come out, and I can fit a cap. If I have slight doubts, I fit a small bag to catch any "afterthoughts" - a eonvatec eolodress Plus Mini (eode S903 for a 32mm hole) is ideal. If I am not convinced that it has finished, or I have to go out immediately after irrigating I fit a toilet disposable bag, to avoid the disposal problem.

For those involved with septic tank drainage there are now biodegradable bags, but these can present a problem if the pipework is not well designed to ensure smooth flow. At my own house in France, when I carried out trials with a biodegradable bag it became stuck in the pipework, and I had my toilet half blocked for three weeks while it biodegraded!

Since the stoma remains clean, there is no necessity for the hole in the bag to be a precise fit, and the next size up pre-cut hole is perfectly acceptable. Freedom from skin soreness problems is an additional benefit of irrigation. After an hour or two, or often more conveniently at lunch time, I remove the "afterthought" bag and replace it by a stoma cap. Stoma caps are relatively small, and since they have very little volume, need good filters to cope with the maximum flow of wind likely to occur. One of the smallest, with probably the best filter, is the Braun Petite (eode F00015), which is only a little larger than a credit card, and looks just like the sort of plaster which one might stick on a grazed knee. Having originally bought swimming trunks large enough to cover a stoma bag, I never use them: I prefer the more conventional briefs, and let the stoma cap show. Very few people ever notice: they probably wonder what I was up to, to graze my abdomen in that spot! On holiday, I am happy to go on "clothes optional" beaches, and wear just a stoma cap. If you've got it, flaunt it! The Braun Petite needs no cover over the filter when in water, and it has performed well at the bottom of a swimming pool to make training videos of swimmers, and inside a wet suit when scuba diving. It used to have just one shortcoming: it floated off in sea water, and while the makers strenuously denied the fact, they appear now to have changed it so that even that problem no longer exists.

Organization

The normal recommendation is for the reservoir to be hung so that its lower end is at shoulder level, although I prefer to have it about 150mm (6") higher in order to speed up the procedure. It

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also saves time if one can judge the temperature of the water accurately. I run water into a jug from the hot tap, letting it overflow as the water warms up, and stopping when it feels correct. I have found that with all four fingers in the water, if it is too cold it feels cool around the bases of the fingers, and if too hot it stings the nail beds; when just right there is no particular sensation around the bases of the fingers, but a gentle tingling from the nail beds. I can normally judge it to within 10°C this way. Obviously, the water cools while you are running it in, so it is desirable to start with the temperature at the top of the acceptable range: I set it so that the 38°C and 39°C bars are showing equally. I have heard it said that a slightly higher temperature gives better results, but I have not attempted to verify this.

An alternative way of achieving the correct temperature, if a thermostatic shower control is available which has a safety temperature limit stop, is to set that limit to 39°C and fill the reservoir from the shower head. Note, however, that it is sometimes possible for these settings to be affected by the flow rate, so one's own judgement might possibly be better. Another alternative, if available, is to take advantage of the temperature limiting valve fitted to hot water supplies used by elderly people, and which can normally be set to a temperature around 39°C.

In many holiday resorts around the world the visitor is warned not to drink water from the tap, and some people feel that they should even use bottled water for irrigating. I don't consider that this is necessary, and in such a resort I just use boiled tap water. This requires that the night before I need to irrigate, I boil a kettle of water and pour it into a jug. In the morning I boil another kettle, which provides me with hot water to mix with the now cold water in the jug to produce water of the correct temperature for irrigation.

Another problem when away from home is how to hang up the reservoir bag. One of the solutions when there is no available hook, or any projection which will serve as a hook, is to make an "S" hook out of a wire coat hanger, which will hook over the shower rail or a cupboard door. However, in a bathroom there is usually a mirror or glazed tiles, and my normal practice is to use a "vacuum hook" - a suction cup fitted with a hook. It is as well to be aware, however, that such hooks cannot be relied upon for prolonged periods; used just once they are no problem, but if you are staying in the same place for a week or two it is sensible to take precautions, since few events are less conducive to successful irrigation than the reservoir falling off the wall. Before each use I check the integrity of the support by pulling on the hook, and I also use two hooks, so that I never rely on just one. The Coloplast reservoir has a slot as well as a suspension hole, and I arrange to have a second vacuum hook engaging with this slot. There are some smooth surfaces on which, although the suction is maintained, the hook slides under load, and if this is the case you are back to the coat hanger. Another useful aid is a Velcro strip, which can be looped over a convenient rail.

How Much Water?

The quantity of water required will depend on the length of colon remaining. Mine has only been shortened by the amount required to enable it to be "plumbed in" to the stoma, so that the recommended quantity would normally be from 1.0 litre to a maximum of about 1.5 litres. Beginners are usually advised to start with between 0.7 litre and 1.0 litre, and to increase the amount as and when they feel comfortable doing so, and depending on the interval between irrigations. I originally thought that in my case a marginal increase in the volume to 1.6 litres seemed to improve the reliability of complete elimination. However, I have since carried out experiments on the optimum quantity of water to use for a given interval between irrigations, and the results have been surprising: that for a given interval there is an optimum amount of water, and too much can be almost as bad as too little. I discovered that 1.6 litres gave me two days just slightly erratically, but was if anything just as good for three days, and I now use 1D litres for a three day cycle. You

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may wish to refer to a separate Technical Note entitled ***Optimising Your Irrigation Technique*** for a more detailed account of how the optimum quantity of water can be established for a given irrigation interval.

The reservoir should initially be overfilled, so that running the excess water out will eliminate air from the tube and the flow control. Actually putting the water into the reservoir can be awkward. I have found that if I hold it with the scale facing me, put my thumb in the hole in the nearer side and my forefinger in the hole in the far side, I can then spread it open with the other three fingers inside, and pouring the water in becomes easy.

Putting the Cone In

I lubricate the tip with Aquagel, and also rub a little around the stoma, although this may well be an unnecessary "belt and braces" procedure. If for any reason Aquagel is difficult to obtain, an excellent alternative is K-Y Jelly. I introduce the tip into the stoma with two fingers of the left hand, one on either side of the tube, and pressing inside the cone, somewhat like a glove puppet, which I find gives good control over the entry and the angle at which it is positioned. Depending on how your stoma is formed, you may find it best to "wiggle" the cone in with a somewhat conical motion, to ensure that it is entering the colon, rather than stopping in an "atrium", which sometimes exists just behind the stoma. If you are using a cone which very nearly fits the hole in the flange, it is necessary to ensure that the flange is not pushing the cone out of position, because if this happens you will find it very difficult to obtain a good seal between the cone and the stoma. I find that the best technique is to hold the flange well clear of the skin while pushing the cone well in, and then lower the flange carefully into position without displacing the cone. It is important to obtain a good seal between the cone and the stoma, and you will do no harm by pressing the cone in just about as far as it will go: the stoma and the skin are very elastic! If sealing presents a problem, then if you are using an elastic belt and plastic flange, tighten the belt somewhat, to improve the rigidity of the abdominal wall around the stoma.

Technique

Often the colon will initially not accept a high flow rate, and it may be found helpful to restrict the flow rate until it is found that the flow rate increases smoothly as the flow control valve is opened. Unless the user feels uncomfortable with the maximum flow, the flow control can be left at its maximum setting so long as the water is flowing freely into the stoma. If the flow slows very considerably, or stops altogether, then it is often helpful to take a deep breath and let it out rapidly; it is often suggested that this serves to relax the colon, although I suspect that the effect is more one of "nudging" the colon with the diaphragm. On occasions that the flow slows or stops repeatedly, I find it advantageous to pull the abdomen in (using the *transversus abdominis* muscle) and lift the rib cage to achieve a more upright posture. In the event that the flow reverses momentarily, then the flow control should be closed for a short while to avoid forcing contaminated water into the reservoir. When the reservoir is empty, I find it useful to wait a few seconds for the water level in the tube to the flow control to stabilize, which it usually does just about at nipple level. This represents the pressure within the abdomen, and is an indication that a good seal has been obtained between the cone and the stoma. Sometimes the water will almost immediately be forced back towards the reservoir, and it is then desirable to close the flow control for a few seconds to prevent water being ejected prematurely from the stoma when the tip is removed. One advantage of the Irrimatic pump is that it has a non-return valve in the tube, which then cannot be contaminated by water forced back from the colon. Typically it takes me between five and ten minutes to introduce the water, although some may find that it takes up to fifteen minutes, depending, of course, how much water is being used.

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After sealing the top opening of the sleeve, I allow about twenty minutes for the colon to empty while reading a "put-downable" book, then unseal the sleeve, wash it out with a jug of water (warm is more comfortable), flush the we while rinsing the end of the sleeve in the clean water entering, and then loop the sleeve up, tucking the end into the top opening, and rolling it a few turns round the sealing strip. It is then very important to fold both ends of the sealing strip inwards, **making sure that the folds come within the width of the tucked in lower end of the sleeve**. If this is not done, and there is a further discharge from the stoma, it is perfectly possible for the end of the sleeve to pull out and dump the contents on the floor, an occurrence which doesn't bear thinking about! (Another mistake that is only made once!) It is by no means essential to spend time with the sleeve looped up, and if the user has developed enough experience to be reasonably confident that there is nothing more to come, then it is practicable to shower, and apply an "afterthought" bag, or if very confident, a cap. "Afterthoughts" are usually fairly liquid, and are easily washed away if they occur in the shower. One indication that emptying has finished can often be the emission of wind which was driven back up the colon as the water was introduced. I used to find it convenient to spend twenty minutes or so with the sleeve looped up, checking emails and looking at my bank account on the computer, and found that on about 30% of occasions further emptying took place during that period; however, if I was in a hurry, I omitted that stage. It is worth noting that the longer the period between irrigations, and the larger the amount of water, the longer the time needed for emptying, and particularly for "afterthoughts".

Timing

Questions are often asked about the need for consistency of timing, I think that there are two relevant points. One is that to a certain extent one is back in early childhood, and could be dealing with toilet training all over again: there is then no substitute for being "regular". The other relates to the capacity of the colon to hold faeces. It is fairly well established that a person with a reasonable length of colon remaining, particularly those who have lost the rectum and the colon has only been shortened enough to get the "plumbing" right, can expect on a normal diet to be continent without difficulty for 48 hours. It follows that if one varies the time of day for irrigation, it is going to go over the 48 hours when an early irrigation is followed by a late one, and the result could be a disappointing failure to last the desired time. One must not be too dogmatic: one might get away with it perfectly well, so feel free to try it, but I would suggest that anyone remembers that they could be pushing their luck!

Turning now to time of day and meal times, I don't feel that the answer is at all clear cut. Meals and defaecation tend in a conventionally equipped person to be related by the gastro-colic reflex, so that, for example, after breakfast one tends to want to go to the loo. I have found no evidence for this reflex in a colostomate who irrigates, and possibly it would be more accurate to regard it as the gastro-rectal reflex, which won't occur if there is no rectum. Obviously as the stomach empties into the duodenum, the rate of discharge in turn from the ileum into the colon will increase, but the possible "knock-on" effect of the colon discharging does not seem to occur with a colon which is cleared by irrigation. I feel that this could be a subject for experiment, but would comment that it is likely to be best if a person is totally comfortable with the way the timing fits their day. Being worried about whether one can finish irrigation in time not to upset a tight timetable is the perfect recipe for an unsuccessful irrigation. I actually find it best, if I am on my own, to irrigate when I get up, then loop the irrigation sleeve up while I have breakfast, in case there is something more to come, and after breakfast have my shower so that I can feel perfectly clean for the whole day. More recently, I have been irrigating between dinner and bed time, when I can feel completely free from time pressures.

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Effectiveness of Irrigation

Most of the time, I found that irrigation was so effective that nothing was emitted from the stoma for a period of 48 hours, which I have since increased to 72 hours, and any bag or stoma cap remains perfectly clean, except for a slight trace of mucus. Occasionally, the effect of irrigation does not last for the full time, and it is evident that the colon is not emptying as well as it usually does. This can be due to a change of diet, such as eating out or when visiting friends. Sometimes the effect can last for several irrigations, and may be due to some disturbance of the bacteria of the gut. One must remember that a colon is a live thing, with its own likes and dislikes, and idiosyncrasies. The situation may sometimes be improved by restricting the rate at which water is run into the colon, but in due course it will correct itself. More drastic disturbance results from taking oral antibiotics, and this can be helped by eating live yogurt, as explained later under **Diet**. It has to be accepted that no two ostomates are the same, and only personal experiment will determine how long one can remain continent after an irrigation, and the optimum quantity of water require to achieve it.

Diet

I have always enjoyed a high fibre diet, and I continue to do so, having found that it is beneficial for effective irrigation, and I assist it with more than the recommended five servings of fruit and vegetables each day. My preference is for granary bread, and a typical day's fruit intake would include a whole grapefruit, two apples, and two or three (small) oranges, in addition to green vegetables at one or two meals. Another useful contribution is the regular consumption of Omega 3 fatty acids in the form of fish oil capsules. Consistency of dietary habits certainly seems helpful. I have never enjoyed strong curries, but now even avoid mild ones, since they tend to stimulate the stoma into unwanted action. Any food containing chillies is also probably best avoided. I would also advise caution over apparently innocuous highly spiced "nibbles", often offered with pre-prandial drinks; some of these can be worse than curry!

Provided a reasonably normal diet can be maintained, travelling of itself does not present problems, and I have never had any difficulty with flying. During holidays in hot climates where it was difficult to get granary bread, I had often found that almost every irrigation was a partial failure, and I had wondered whether the problem was the bread or the quality of fruit available: often not quite what one would buy at Tesco, there is a temptation to reduce the quantity consumed. However, when in the UK, with my diet remaining totally normal, a particularly hot summer had also thrown up problems with the completeness of irrigation, I came to the conclusion that the more fundamental problem could well be dehydration. Athletes are taught that by the time they feel thirsty, they are already dehydrated, which is why they try to keep their water bottles handy, and if practicable will aim to drink some water every fifteen or twenty minutes. How many of us do the same? Avoid drinking water which is very cold: it is slow to be absorbed, and stays in your stomach giving you the impression that you are no longer thirsty, even though your body still needs it. If you find room temperature water unpalatable, try adding a little lemon juice (PLJ in the UK, or *Puleo eitron vert* in France, for example).

It is often said that we should all drink about 2 litres of water a day, and at the risk of over-simplification, it may be regarded that what we fail to drink has to be extracted from the contents of the colon, causing harder faeces which will respond less well to irrigation. While I would hesitate to claim any proof, my own recent experience has been that a water intake of about 2 litres a day seems to result in softer and more liquid faeces output, and a rapid and more complete irrigation, typically with no "afterthoughts". In hot climates a greater water intake would be desirable. To sum it up, if you become dehydrated, your colon will try to make up for the deficiency, in the same way that a camel economises on water. Remember, camels can't irrigate: don't be a camel!

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Following a course of oral antibiotics, I took 100g of Danone Actimel every morning to restore irrigation performance, and was so pleased with the result that I have since continued it. Admittedly one can argue that it is not necessary, but while I am able to enjoy my present irrigation performance, I feel little inclination to experiment. On irrigation days I drink a glass of water after the Actimel and before irrigating, and usually another one while irrigating, which may possibly assist completeness by stimulating flow from the small intestine.

Wind

One of the benefits of irrigation is that it minimises the problem of wind (or flatus, as we should call it), because flatus is caused, not by fizzy drinks, but by fermentation of the contents of the colon, and the principal aim of irrigation is of course to remove material from the colon. Those who irrigate may often have observed that the more liquid discharge is often visibly bubbly: evidence that it is fermenting.

A consideration which may be relevant relates to the inverted "U" shape of the colon, which means that when you are standing up, any flatus that you have in the colon will reside in the transverse colon, and may not readily escape from a stoma in the descending colon. The result can be the apparent completion of irrigation, followed some time later by a substantial discharge of flatus and the remaining contents of the colon.

If you feel that the discharge from the colon appears to have stopped, but has been less than you would have expected, it may be worth while looping the discharge sleeve up and temporarily sealing it, and then lying down for about ten minutes. You could well find that this releases flatus which is causing a hold-up, and enables the colon to finish discharging completely, minimising the likelihood of an unpleasant surprise later.

Other Considerations

Hair growth on the skin round the stoma can be a problem in two ways: it makes bags and caps painful to remove, and it can lead to leakage. It is usually desirable to shave about once a week, and I used to shave in the shower using a BIC *Sensitive Skin* disposable razor; one of which lasted me for several months. With irrigation, the skin round the stoma is seldom in contact with faeces and soreness is unlikely to be a problem, so I used to use shower gel (Sanex) on the skin when shaving. With the introduction of washable electric shavers, I have given up wet shaving round my stoma, and now use an electric shaver, knowing that if my stoma does misbehave, I can wash the shaver clean. I used to use an adhesive remover (Lift - Code 5500 for wipes or Appeel - Code 3500 for liquid or Code 3505 for wipes) if necessary to remove traces of adhesive from the skin so that I could shave without it gumming up the razor, but now I shave after I have showered and dried, and the problem doesn't occur. For much of the time washing removes the adhesive traces on the skin, but doesn't remove them from the irrigation flange. It is helpful to remove the bag or cap which was in place before irrigating, using an adhesive remover spray in order to minimise the amount of adhesive which remains to be picked up by the flange, although the latter will probably benefit anyway from occasional cleaning with adhesive remover or bathroom cleaner spray. An accumulation of adhesive deposits makes it more difficult to wash clean after use.

I was told that the irrigation set should be replaced every three months, but I never did this. So long as the flow control valve was working properly (they used to give trouble, but the material appears since to have been changed), every couple of months, or when I detected discolouration, I filled the reservoir with warm water, put a capful of Milton in it, and put the tip also into the solution, and left it for a few hours. In this way I could use the same set for eighteen months without detriment; the need for change was usually determined by the control valve failing to shut off

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completely. On the other hand, while it was suggested that I could wash the irrigation sleeves and reuse them, I never do it, because the polythene picks up odours, and for what little it must cost I don't particularly want a smelly sleeve hanging around for two or three days at a time.

As a consequence of normal olfactory fatigue, I don't find (personally) that odour arising from the irrigation procedure causes a problem, but if for other people it does, Naturcare Spray (Code 1100) provides a solution. It is one of the few "air fresheners" which introduces no smell of its own, and it even works well to eliminate the smell of tobacco smoke, a property which has sometimes proved useful if I have visitors who insist on smoking. More recently, I have used AuriCare Faecal Odour Eliminator (Code ACD125), and this also appears very effective. I have not been able to obtain enough opinions to offer a performance comparison between the two, however.

Conclusion

I hope that these notes may have proved useful, but if anyone finds them misleading or unclear, or would like to contribute from their own experience, please advise me. It will probably be best to contact me on adrian@stomadata.com or adrian@stoma.fr.

Adrian March
C A Consultant
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