

SWALLOW COMMAND MEDICAL DIVISION. DOC-SISRC-MED-GN-1.

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Swallow Command functions relates to flying, and therefore as space is one target of its pending functions it requires a medical section to cover such a major operation.

Such a department will contain many individual sections that specialise in precise problems on ground bases.

Unfortunate, space missions of deep penetrations over years at a time required full medical sections on each Inverse-Gravity-Vehicle operating within the Cosmonauts functions.

As stated, they shall not be referred to as hospitals, but as sickbays.

The medical department will contain a number of specialised sections in which will contain my main knowledge of the past work that will be involved, starting at the front line infantry called nurses, and specialists sections will discussed.

Anyone within the nursing or medical domain is welcome to submit their ideas of what should be included with these discussions on the functions of this department.

All medical staff shall be rank according to their skills, not based on age or looks.

Agree some time has passed since I worked on the wards and later in the laboratory of a hospital and systems have changed and the equipment has greatly improved, based upon the fact that I have been on the receiving end of modern technology as a patient both in the UK and in Thailand.

Having been on both sides of the coin and experience both sides of the action, which places me in a good position to judge what such a system is needed within Swallow Command both base and flight requirements.

NURSING:

From where I am sitting today, it appears that the nursing system within the UK has problems; and to my mind, it appears that too much swing on what nurses should not do is way out to my time on the wards.

Nurses in Thailand do not have such problems, from what I witnessed, that is how it should be, that was how it uses to be when I was in the medical employment, and that is my intention to follow in Swallow Command medical division.

REALITY – PROBLEMS:

A careful demographic analysis of actual and expected sex ratios shows that about 100 million girls are missing – they are dead.

This presents a situation for study to identify WHY.

I have the findings of that problem but will not name the country at this time and it is a worrying one.

Could such happen in **SWALLOW COMMAND**, the answer is possible, but I sincerely hope not, with correct education and good nursing I expect good results with all our staff in their family planning, which will also apply to Cosmonauts on long-term missions.

Education certainly has problems, which I have clearly noticed on YouTube like so many have also noticed, so I am not alone upon that issue.

Intravenous alteplase is safe and effective in routine clinical use when given within three hours of stroke onset.

These two quotes are only just to give examples of what to expect with this section of the company structure and functions.

Because the Homo sapiens structure and functions is complex in design, nurses can specialise in various sections as doctors do likewise.

In reality, there is no other option if **SWALLOW COMMAND** staff is to be cared for in the manner that is expected of pioneers who risks their lives to gain knowledge for the benefits of planet earth.

Technology has indeed advanced since my time in the medical world, including our knowledge base upon the Homo sapiens structural design and functions.

Nursing in **SWALLOW COMMAND** will have a range of diversity divisions where an apprenticeship scheme for prospective student nurses as cadets should be set up in the training centre to prepare aspiring cadet nurses for a nursing degree.

SWALLOW COMMAND needs to ensure that recruitment is from the widest possible pool of applicants, which would help those from non-traditional academic backgrounds.

My major criticism of an all-graduate entry profession is that it could deter those from less academic backgrounds from applying and lead to a less diverse recruitment pool.

SWALLOW COMMAND Medical Division feels that apprenticeships would offer a period of training to help prepare those from less academic background for the challenges of completing a degree.

The key issue here would be the question as to how long an apprenticeship should operate before the cadet start their nursing degree training.

Apprenticeship mode of training is used in electrical and electronics, as I am fully aware of, as I too have been on one of them.

SWALLOW COMMAND MEDICAL DIVISION needs to study how to develop existing and creating new pathways into pre-registration nurse education would provide real opportunities for others with the talent and ambition to progress into nursing, especially space exploration missions where nursing staff are entirely on their own to cope with all health problems during mission operations.

Outside of the actual nurse training problem, there is the question today that many nurses have to own a car for their job. In addition, they have to pay for the rights to park it near their home. Never use to be like that in my days.

However, understand that position from my own experience in Reading, Berkshire, having to keep moving my car to prevent a costly bill being struck on it to pay.

Therefore, **SWALLOW COMMAND COMPLEX** shall have all staff housing inside of its operational grounds so that staff will not be burden with parking fees. I term this as being a real human being to all who work to create a better understanding of our universe and this planet needs and implement them.

Within the United Kingdom our legal body NICE has a hard job, working out what is affordable and what is reasonable in an ever-changing clinical environment.

It is presented regularly with new, life-extending drugs and it has the difficult task of recommending whether or not these drugs should be made available to those in need free of charge.

However, it does not get to negotiate prices or barter on behalf of patients or services.

Instead, health services have to pay what they are told and be grateful for the opportunity to do so.

It is brilliant business for drug companies anxious to gather rewards for their innovation and shareholders, and confident that they have the health service over the proverbial barrel. In addition, of course, politicians of all persuasion will tell you that this is why the internal market works – profit drives innovation.

Only because nothing else has been tried.

I cannot help fantasising about a scenario in which drug companies work as part of **SWALLOW COMMAND MEDICAL DIVISION**, undertaking research, developing products and innovating in space to benefit patients and without the need for share prices and profit.

It would save billions.

The people doing the research and development could still be well rewarded and the health service could work toward a single purpose – patients, including all the staff members of **SWALLOW COMMAND**.

Naïve and unthinkable? Probably.

Unfashionable? Certainly.

In addition, no doubt impossible.

Who would have the political courage to entertain such silliness?

But, is it really beyond *SWALLOW COMMAND MEDICAL DIVISION* to think of organising the way it provide health care and develop and fund the drugs that dominate it to focus on well-being and effectiveness, rather than the financial opportunities they offer.

One other issue for now I shall quote as an update:

05.08.2009	on line ordered goods paid	£526.02
	Dinolight with uv / and white light AM413 FVW handheld PC con	



Ref ID = 0599-2070-0051-2192

13.08.2009	1 GXMDINOLITEAM413 AM413T-FVW UV/White light 1.3MP microscope	457.41
	VAT	68.61
	Total paid	526.02

I have tested this unit on myself and though it is great for medical reasons, I see that it will play a great part also in the studying of materials finishes for unwanted flaws.

In addition, will be applied to investigate the samples from Morris, which he made years ago to show how well they were made and what their present state is like, as these parts have not been in operation since they were produced.

This microscope fills the gap for now between such units, which fixed for study of materials, and the need to look around the subject under investigation.

Nursing is just the front line of operations; the back room carries the major action to solve problems and solution to manage such problems.

These sections are part of the whole medical unit, and should carry their own documents for easy search use.

My task is what could be the greatest problem upon a five or more year's space mission, besides eating, drinking and breathing.

Eating is a real problem for such a time mission, water is but can be supplemented by urine collection; bearing in mind the massive space available within the 64 flight cells can carry many gallons of water.

Thus, I feel water will not be such a problem as actual food will be.

Oxygen appears upon the surface as being a problem for such long durations in space, but I feel the S.E.G. will solve that issue.

Major problems Homo sapiens require a certain amount of solid food and liquid material.

Problem is that this input generate an output, the liquid side can at any age cause problems, which we term bladder problems; lets me explain as clearly as possible what I am talking about, so all can understand this problem, which those who do suffer only understand too well.

NORMAL BLADDER FUNCTION:

The normal bladder has a dual function;

1. **For the majority of the time it acts as a highly compliant storage vessel for urine propelled from the kidneys.**
2. **Periodically the bladder acts as a contractile organ expelling its contents via the urethra.**

The bladder is unique in that it is the only organ comprised of smooth muscle, which is under voluntary control.

The normal urinary bladder accommodates approximately 500 mL of urine at a low pressure.

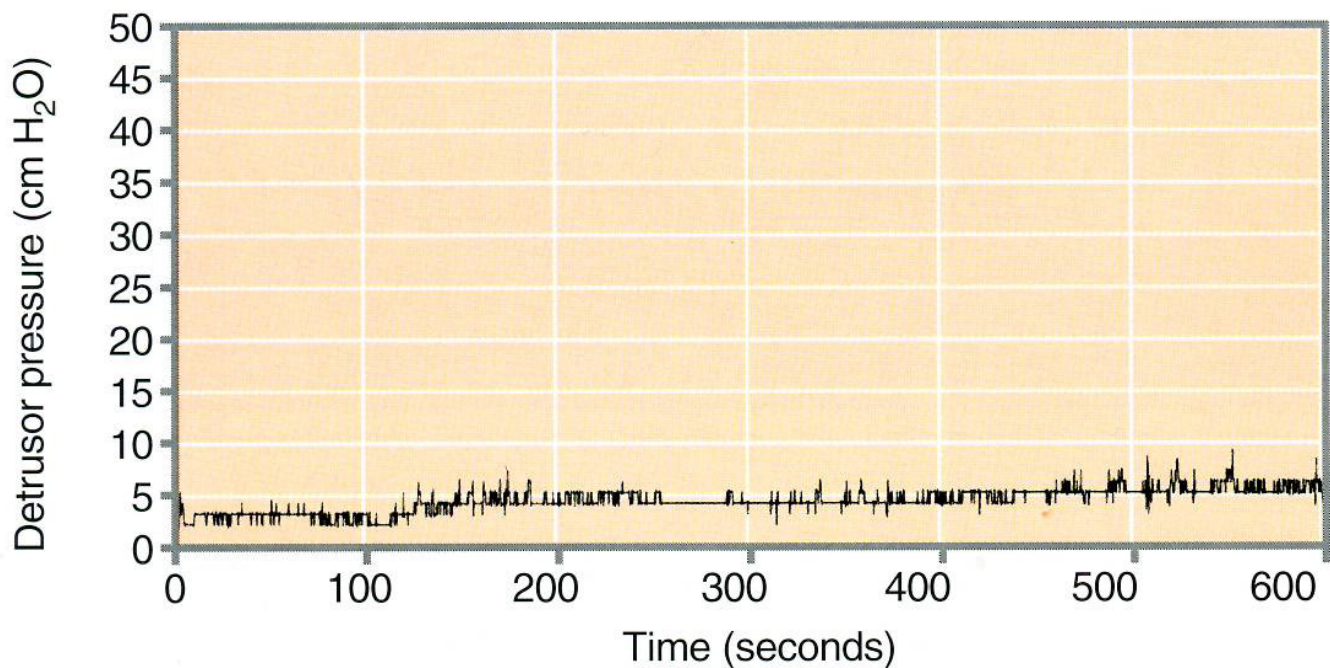


Figure 1. A plot of detrusor pressure versus time during filling to a volume of 500 mL

Measurement of intravesical pressure during bladder filling demonstrates this (Figure 1).

This compliant behaviour of the bladder is probably due to a combination of rearrangement of bladder wall components and viscoelastic properties of the detrusor muscle and its surrounding connective tissue matrix.

The existence of active neurological control of relaxation is controversial but both the storage and voiding phases to my experience requires extensive neurological input.

Effective emptying of the bladder requires the coordinated activity of the urethral sphincter and the detrusor; relaxation of the urethra preceding detrusor contraction allows low resistance voiding.

AS the bladder reaches functional capacity, sensory impulses initiate the urge to void.

This can be voluntarily suppressed so that bladder emptying can occur at a convenient time and place.

Unfortunately I like so many others find that this is not our case of being able to suppressed the action of voiding, it's a case getting your skates on and hope you get to a place in time.

DETRUSOR MUSCLE. (di-troo-ser) n.

A band of smooth muscle fibres that form the outer muscular coat of the urinary bladder and are attached to the pubis.

NEUROLOGICAL CONTROL OF MICTURITION:

The coordinating centres for control of micturition are thought to lie in the pons.

These pontine micturition centres determine the switching from storage to voiding phase and are, in turn, influenced by input from higher centres, including the frontal lobe and hypothalamus.

Fibres from the pons can be traced to Onuf's nucleus, which lies in the sacral region of the spinal cord (Figure 2).

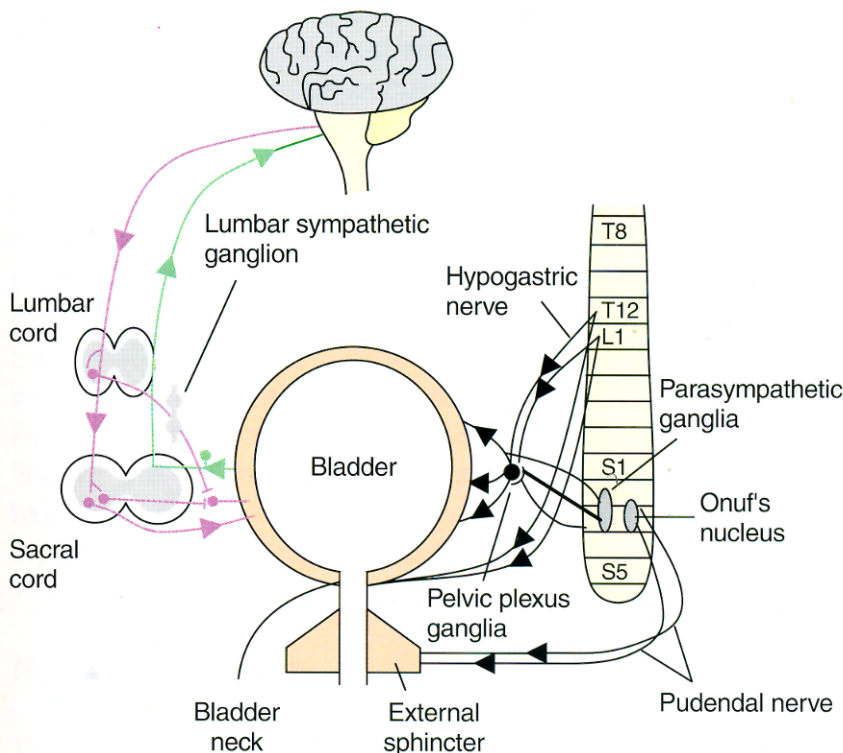


Figure 2.
Efferent nervous supply to the bladder (right-hand side)
And voiding reflexes (Left-hand side).

This nucleus is the source of somatic innervations to the external sphincter mechanism, the pelvic floor and anal sphincter via the pudendal and pelvic nerves.

Parasympathetic fibres from S2 to S4 roots innervate the bladder, either via the ganglia within the pelvic plexuses, which lie on either side of the genitourinary tract, or straight to ganglia on the surface of the bladder.

Sympathetic nerves, which run from the thoracic cord via the hypogastric nerves to the pelvic plexuses, modulate the function of these nerves.

I have not been responsible for some of these words used here, as I never invented them, but I understand your confusion if you are not a medical man. I try to explain some of them for you when I can.

HYPOGASTRIC is the adj

HYPOGASTRIUM (hy-poh-gas-triŭm) n.

That part of the central abdomen situated below the region of the stomach.

PARASYMPATHETIC NERVOUS SYSTEM (pa-ră-sim-pă-thet-ik) n.

One of the two divisions of the autonomic nervous system, having fibres that leave the central nervous system from the brain and the lower portion of the spinal cord and are distributed to blood vessels, glands, and internal organs.

The nerve endings release acetylcholine as a neurotransmitter.

PONS (ponz) n.

Any portion of tissue that joins two parts of an organ.

Of course, I could name some, which are not at this time required.

Now back to the subject:

The sensory afferents of the bladder lie both beneath the urothelium and between the muscle fibres.

They respond to bladder wall tension as filling increases and communicate the urge to void.

They run in both sympathetic and parasympathetic nerves to the dorsal sacral roots.

These then connect with supraspinal centres to allow coordinated voiding (Figure 2).

A guarding reflex influences sphincteric function during filling, the activity of this reflex increases as wall tension increases.

This serves to keep the urethral resistance high in the face of an increasing bladder pressure and is involved in the ability to voluntarily delay micturition.

MICTURITION (mik-tewr-ish-ŏn) n.

Passing urine.

It can be seen that coordinated, socially acceptable micturition is dependent upon many factors and is susceptible to damage or injury at many levels.

Most commonly, neurological damage results in urinary incontinence due to an impaired ability to store urine; impaired voiding can also result.

When disrupted storage occurs with impaired voiding, bladder dysfunction can be particularly severe.

I am just touching on basic problems, in the hope that you can understand these documents are for real experts to study in hope they may have found solutions worth studying as I have been out of the study side since 1968 and need to be up dated on latest concepts to deal with such problems.

This is a very simple problem that **SWALLOW COMMAND MEDICAL DIVISION** has to face, others like the management of continence and urinary catheter care and Uro-oncology are just basic requirements, but shows the determination to generate a space commercial business that is truly sound and functional.

The craft today is not a problem to design and operate; it is you that is the major problem to solve.