

### DEEP WOUND HEALING BY NEGATIVE PRESSURE WOUND THERAPY

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The care of deep wounds is a major challenge to surgeons. Although doctors sew up small clean cuts, the skin above penetrating injuries that are likely to be infected is generally left open, both to allow the doctors to clean the cavity and to allow the body to grow new tissue, called granulation tissue, from the deep wound base. New Tissue fills the wound.

Over weeks to months, the wound becomes sterile and slowly fills with new tissue. Systemic antibiotics are often required to aid the healing process. Sometimes skin and muscle must be surgically moved from other parts of the body to cover areas that would otherwise never completely heal. This is known as grafting.

#### A REMEDY FROM HISTORY

Until a century ago, doctors applied leeches for almost every illness in the mistaken belief that they would draw out "bad blood." Today they are used after microsurgery that re-attaches fingers, toes and other body parts. An operation can fail because tiny blood vessels become clogged. But when a small European leech, *Hirudo medicinalis*, is attached, it sucks out an ounce or two of blood from the clogged vessels. The leech's saliva contains an anti-coagulant and an antiseptic.

The recent technique that is mainly used is Negative-pressure wound therapy (NPWT) which is a therapeutic technique using a vacuum dressing to promote healing in acute or chronic wounds and enhance healing of first and second degree burns. The therapy involves the controlled application of sub-atmospheric pressure to the local wound environment, using a sealed wound dressing connected to a vacuum pump. The use of this



technique in wound management increased dramatically over the 1990s and 2000. A large number of studies have been published and is very useful in diabetic ulcers and chronic bedsores.

NPWT promotes wound healing by applying a vacuum through a special sealed dressing. The continued vacuum draws out fluid from the

wound and increases blood flow to the area. The vacuum may be applied continuously or intermittently, depending on the type of wound being treated and the clinical objectives. Typically, the dressing is changed two to three times per week. The dressings used for the technique include open-cell foam dressings and gauze, sealed with an occlusive dressing intended to contain the vacuum at the wound site. NPWT devices allow delivery of fluids, such as saline or antibiotics to irrigate the wound, intermittent removal of used fluid supports the cleaning and drainage of the wound bed.

- Draws wound edges together
- Provides direct and complete wound bed contact
- Evenly distributes negative pressure
- Removes exudate and infectious materials
- Actively promotes granulation at the cellular level.

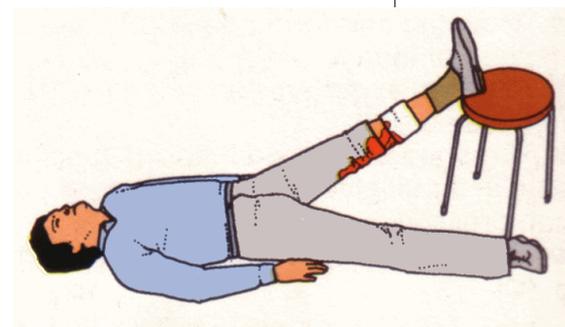


"Be careful about reading health books. You may die of a misprint."

~ Mark Twain

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#### REFERENCES:

Effective wound healing by- Karin Lillis

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"Differentiating Negative Pressure Wound Therapy Devices: An Illustrative Case Series".

<http://woundsresearch.com/files/docs/LomaLinda.pdf>.

## IMMUNIZATION SCHEDULE

AGE	VACCINE	NOTES
Birth	BCG	
	OPV zero	
	Hepatitis B -1	
6 weeks	OPV-1 + IPV-1 / OPV -1	OPV alone if IPV cannot be given
	DTPw-1 / DTPa -1	
	Hepatitis B -2	
10 weeks	Hib -1	
	OPV-2 + IPV-2 / OPV-2	OPV alone if IPV cannot be given
	DTPw-2 / DTPa -2	
14 weeks	Hib -2	
	OPV-3 + IPV-3 / OPV -3	OPV alone if IPV cannot be given
	DTPw-3 / DTPa -3	
9 months	Hepatitis B -3	Third dose of Hepatitis B can be given at 6 months of age
	Hib -3	
	Measles	
15-18 months	OPV-4 + IPV-B1 / OPV -4	OPV alone if IPV cannot be given
	DTPw booster -1 or DTPa booster -1	
	Hib booster	
2 years	MMR -1	
	Typhoid	Revaccination every 3-4 years
	OPV -5	
5 years	DTPw booster -2 or DTPa booster -2	
	MMR -2	The second dose of MMR vaccine can be given at any time 8 weeks after the first dose
	Tdap	
10 years	HPV	Only girls, three doses at 0, 1-2 and 6 months
	<b>Vaccines that can be given after discussion with parents</b>	
More than 6 weeks	Pneumococcal conjugate	3 primary doses at 6, 10, and 14 weeks, followed by a booster at 15-18 months
More than 6 weeks	Rota viral vaccines	(2/3 doses (depending on brand) at 4-8 weeks interval
After 15 months	Varicella	Age less than 13 years: one dose Age more than 13 years: 2 doses at 4-8 weeks interval
After 18 months	Hepatitis A	2 doses at 6-12 months interval

### DID YOU KNOW ?

Red blood cell can circumnavigate body in 20 seconds !!

Nerve Impulses travel at over 400 km/hr (25 mi/hr) !!



## OUR SERVICES

### SECOND MEDICAL OPINION

We provide a second medical opinion service from independent consultants on our empanelled list of qualified doctors. They provide an unbiased opinion of your current medical condition with treatments that are required to cure the illness. We request you to raise a query with us & upload/ attach your current medical diagnosis for us to get back to you with an opinion & the treatment required. Further, if the patient seeking opinion opts to go for a treatment in our network hospitals, other details can be provided.

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Our wellness program offers one of the most comprehensive & thorough medical check up for assessing your health status. The 360 degree screening investigates your health & renders detailed consultations with specialists. The detailed examination will not only identify any ailment you may be suffering from, but also identifies any affliction you might suffer in the future & recommends remedial action for the same. There will be consultations after the tests with renowned consultants & guidance for future course of action if any required.

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2. Digitization of Medical Records. The system picks out data from your scanned medical records & digitizes it so as to process your raw information to give you useful information.
3. Customized Reporting. All the reports submitted by users are processed & a summary/ detailed report is generated as per the user's needs.
4. Intelligent Alerts. Once you upload the data, the system processes it using our algorithms & generates alerts, reminders, warnings, etc to assist your healthcare needs through a very user friendly interface. For example, the CareAsia EMRM system immediately updates your records to show the reports that are out of bounds & what are the parameters that are off limits or it could update the user about a lab report that might be very old & would recommend a retest for the same

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WANT TO SUBMIT  
ARTICLES?  
DO YOU HAVE  
QUERIES?**

**Do write to us with  
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articles on health be  
it humor or  
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