

MUNI | SIMU
MED

Limb Injuries II

Lukáš Dadák

Learning Objectives

- Student will learn about amputation and semiamputation.
- Student will learn about other limb injuries and their first aid.

Amputation, semi-amputation

- Loss of part of limb / incomplete amputation

First Aid:

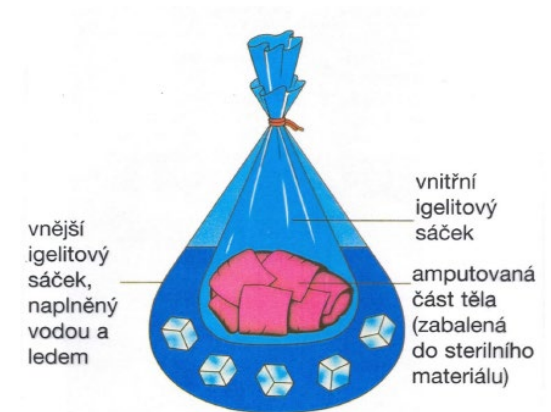
- Stop bleeding on the injured limb
 - massive bleeding = arms, thigh → tourniquet
 - fingers, forearms → pressure bandage.
- Transport the patient for treatment by EMS
- Care to the amputated body part
- Prevent fainting



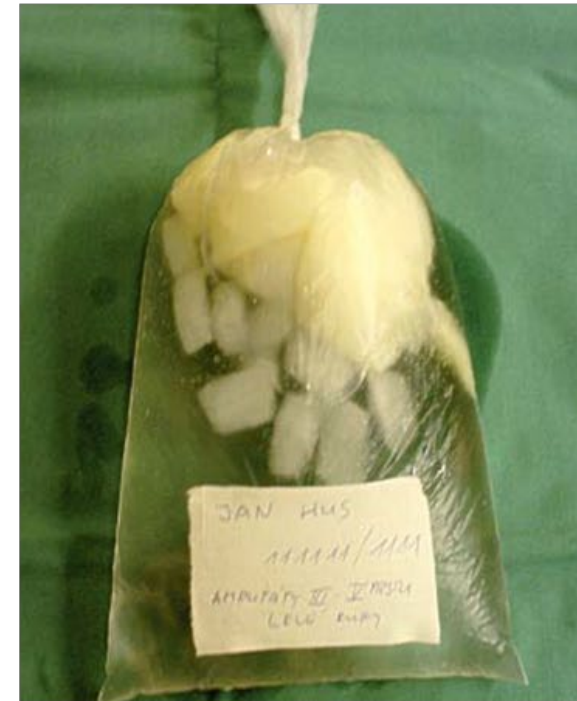
Amputated tissue

- Do not hurt yourself! Take gloves.
 - Rinse off the dirt.
 - Cover with gauze.
 - Put it into a plastic bag.
 - Put all into another bag of water and ice cubes
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- **Wet, but not soaked.**
 - **Cool, but not frozen.**

Why? – To decrease cellular metabolism, decrease detrimental effects of hypoxia, decrease rate of necrosis – prolong viability of amputate – better chance to be replanted.



First Aid



Wet and cool



but not frozen



A moment of inattention ...



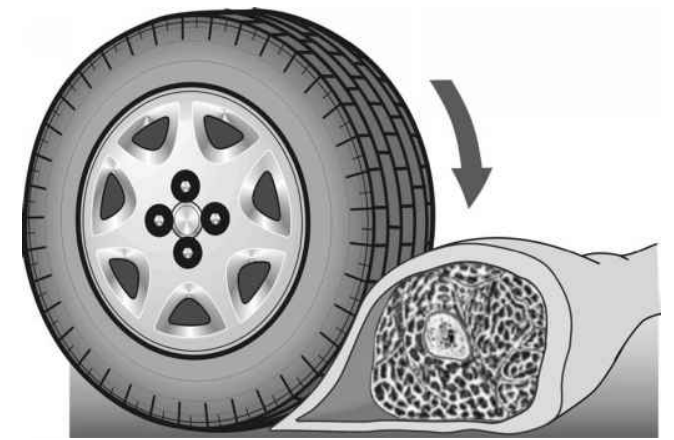
- Hours of operation
- Weeks of rehabilitation

Replantation

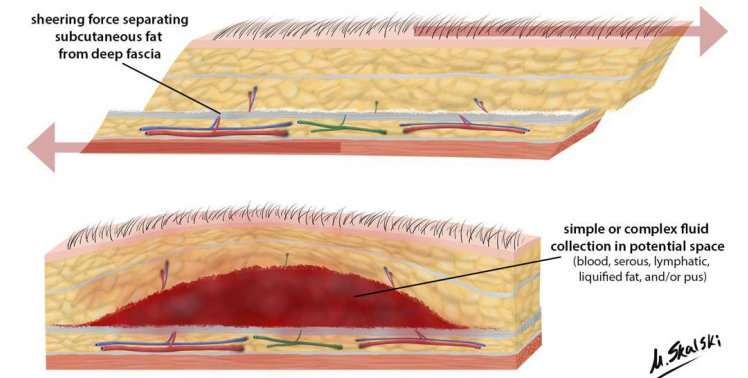
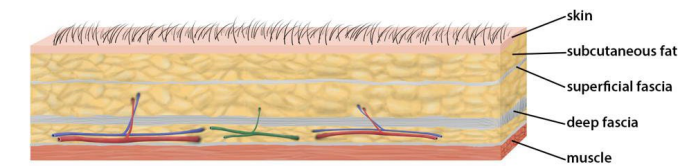


Decollement

- Undesired separation of two or more physiologically and functionally fused structures
- Subcutaneous hemorrhage
- Pale skin poorly perfused
- FA: immobilization, EMS



<https://www.barnardhealth.us/forensic-radiology/soft-tissue-injuries.html>



Case courtesy of Dr Matt Skalski, Radiopaedia.org, rID: 22762

Crush syndrome



<https://www.zzsmsk.cz/Tisk.aspx?clanek=2061>

Crush syndrome

- backfilling, earthquake

Cause:

- ischemia of muscles and other soft tissues,
- leakage of fluid into the tissues
- absorption of substances from damaged tissues

Symptoms:

- soft tissue swelling
- hypovolemic shock
- later renal failure

FA: **SSSABC**

- Extrication
- transport by EMS



<https://www.zzsmsk.cz/Tisk.aspx?clanek=2061>

Acute limb artery occlusion

- Pain,
- Cold, pale skin
- Paresthesias / anesthesia
- Paralysis
- No pulsation on peripheral artery, prolonged CRT

FA:

- sit up, hang the limb below
- do not eat, drink, smoke
- EMS



<https://www.cevnitesin.cz/index.php/cs/pro-pacienty/nemoci-tepen>

Learning Outcomes:

- Student masters first aid during amputation.
- Student is able to recognize the symptoms of backfill syndrome.
- Student is able to describe the symptoms of acute limb artery occlusion.

Resources

- <http://www.solen.cz/pdfs/med/2009/04/12.pdf>
- https://www.wikiskripta.eu/w/Crush_syndrom
- <https://www.medicinapropraxi.cz/pdfs/med/2011/10/08.pdf>

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