BASIC PRACTICAL SKILLS IN SURGERY

Guidelines
for the training of specialists
of the second (master's) level of higher education
field of knowledge 22 «Public Health» speciality 222 «Medicine»
for an objective structured practical (clinical) examination in 2024

МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
Харківський національний медичний університет

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БАЗОВІ ПРАКТИЧНІ НАВИЧКИ З ХІРУРГІЇ

Методичні вказівки
для підготовки фахівців
другого (магістерського) рівня вищої освіти
галузі знань 22 «Охорона здоров'я»,
спеціальності 222 «Медицина»
до об'єктивного структурованого
практичного (клінічного) іспиту 2024

Затверджено
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2024

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Compiled by
I. A. Kryvoruchko
V. V. Boyko
V. I. Lupaltsov
N. M. Goncharova
S. I. Shevchenko
V. M. Cheverda
D. O. Yevtushenko
A. V. Syvozhelizov
S. I. Estrin
O. M. Shevchenko
A. I. Yagniuk
V. V. Lesnyi
V. P. Kolesnyk
P. V. Svirepo
T. M. Firsyk
A. G. Drozdova
O. V. Pasichnyk
O. V. Yevtushenko

Базові практичні навички з хірургії : метод. вказ. для підготовки фахівців другого (магістерського) рівня вищої освіти галузі знань 22 «Охорона здоров'я» спеціальності 222 «Медицина» до об'єктивного структурованого практичного (клінічного) іспиту 2024 / упоряд. І. А. Криворучко, В. В. Бойко, В. І. Лупальцов та ін. Харків : ХНМУ, 2023. 16 с.

Упорядники
І. А. Криворучко
В. В. Бойко
В. І. Лупальцов
Н. М. Гончарова
С. І. Шевченко
В. М. Чеверда
Д. О. Євтушенко
А. В. Сивожелізов
А. І. Ягнюк
В. В. Лєсний
В. П. Колєсник
П. В. Свірепо
Т. М. Фірсик
А. Г. Дроздова
О. В. Пасічник
О. В. Євтушенко

Introduction

Simulation training is an essential component in the training of surgical specialists. It includes a range of modern techniques, from simulators that control the quality of skin suturing to virtual SimLab Soft operating rooms. Medical errors made by specialists at the beginning of their professional growth, when mastering new advanced techniques, and during difficult clinical situations in serious patients, are a painful and unpopular issue in modern medical society. To address this issue, it is necessary to conduct a comprehensive study and receive technical training in basic surgical skills using simulators and trainers. It is important to maintain a formal register, avoid filler words, and use precise subject-specific vocabulary when appropriate.

The guidelines provide a list of basic surgical skills, their implementation methods, as well as indications and contraindications for surgical procedures. Enhancing the quality of professional training for healthcare professionals at any level requires a balanced combination of theoretical and practical components. Practical skills, based on thorough theoretical knowledge, are crucial for successfully training future doctors.

The structure of surgical guidelines:

1. Level of preparation - students who have completed their studies in the specialty 222 «Medicine», specialisation «Surgery».
2. Competences to be tested: the applicant's skills to perform a surgical procedure that is safe for the patient and the practitioner:

GC 3 – Ability to apply knowledge in practical situations

GC4 – Ability to adapt and act in a new situation

PC9 – Skills of performing medical manipulations

3. Objective: theoretical mastering and demonstration of surgical skills in the simulation centre of KhNMU.
4. Information for students (content of the material of methodological instructions)

1. SUTURE REMOVAL

The purpose of this practical skill, taught at the Departments of Surgery at Kharkiv National Medical University, is to remove surgical sutures that were previously applied during surgery.

(**For more information:** Ellen Richards, Alistair Brown, Subhanitthaya Chottianchaiwat, John Frewen, Roy Powell, Emily McGrath, Timing of suture removal to reduce scarring in skin surgery: a randomized assessor-blinded feasibility trial, Clinical and Experimental Dermatology, 2023;, llad401, https://doi.org/10.1093/ced/llad401).

1. Ensure proper doctor-patient positioning and establish contact with the patient by greeting them, introducing yourself, and indicating your role.
2. Obtain informed consent for any diagnostic manipulations.
3. When treating the hands surgically, wear gloves and sterile clothing, as well as glasses.
4. Begin by removing the bandage, inspecting the wound, and determining the number of stitches that need to be removed.
5. The seams should be treated with an antiseptic solution, using a gauze napkin held in tweezers.
6. To remove the stitches, gently lift the knot of the seam with tweezers and cut the thread that appears above the skin with scissors.
7. Then, carefully pull out the tip of the thread with the knot without applying too much force, while holding the seam slightly with tweezers.
8. To ensure the integrity of the skin, treat the wound with an antiseptic.
9. Cover the surface of the wound with a sterile napkin and fix it with adhesive plaster.
10. Additionally, clarify the patient's well-being.

To sum up, sutures are gently elevated with forceps, and one side of the suture is cut. The suture is then gently grasped by the knot and gently pulled toward the wound or suture line until the suture material is completely removed. If the suture is pulled away from the suture line, the wound edges may separate **(***Figure 1*).

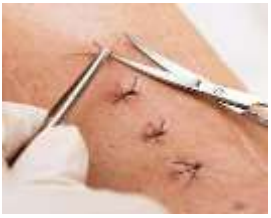

Рис. 1.
https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.royalclinicdubai.com%2Fen-ae%2Fhome-healthcare%2Fsuture-removal-at-home%2F&psig=AOvVaw0E_iebaGPcSsBAkkBHhmmU&ust=1710308317757000&source=images&cd=vfe&opi=89978449&ved=2ahUKEwjdv5SPge6EAxUAjf0HHQrpBa4Qr4kDegQIARBl

2. CATHETERIZATION OF THE URINARY BLADDER WITH A FOLEY CATHETER

The aim of this practical skill, taught at the Departments of Surgery at Kharkiv National Medical University, is to obtain urine from the bladder in case of urinary retention.

(**For more information**:
https://www.cdc.gov/infectioncontrol/guidelines/cauti/authors.html:
Guideline for Prevention of Catheter-Associated Urinary Tract Infections, 2009)

1. Establishing contact with the patient (greeting, introducing yourself, stating your role), the correct position of the doctor-patient (female patient: lying on her back, legs bent at the knees, hips apart - Valentine's position; male patient: lying on his back, hips apart).
2. Obtain informed consent for diagnostic manipulation.
3. Place an oilcloth under the patient and a container for urine between the legs.
4. Treat hands with an antiseptic at a hygienic level
5. Perform a visual and physical examination of the external genitalia, determine the level of bladder filling.
6. For men: hold the penis in a vertical position, move the foreskin to expose the head of the penis, hold it with one hand between the middle and ring fingers and spread the external opening of the urethra;

For women: spread the labia minora with the thumb and forefinger of one hand.

7. Treat the external opening of the urethra with a ball of gauze soaked in a neutral antiseptic solution (for men: the head of the penis around the external opening of the urethra from top to bottom – from the urethra to the circumference).
8. With the other hand, take the catheter with sterile tweezers at a distance of 5–7 cm from its end, apply sterile grease to the distal end of the catheter, insert the end of the catheter into the external opening of the urethra.
9. Gradually move the catheter deeper into the urethra (in women – 10 cm, in men – to a depth of 15–20 cm, holding the catheter with forceps every 3–5 cm, while the hand should gradually lower the penis towards the scrotum, taking into account anatomical features) before the appearance of urine. Introduce 10 ml of sterile liquid (saline) into the balloon port. Connect the catheter to the urine collection container (***Figure 2***).
10. To check the patient's well-being.

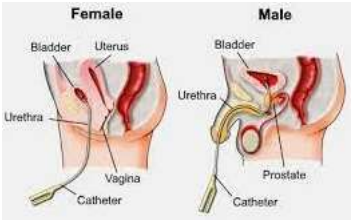

Рис. 2.
https://www.google.com/url?sa=i&url=https%3A%2F%2Fnurseslabs.com%2Furinary-catheterization-nursing-procedure-management%2F&psig=AOvVaw0CIcNmWkmaL3KCbdm4aSNc&ust=1710308781058000&source=images&cd=vfe&opi=89978449&ved=2ahUKEwiUlIrsgu6EAxVKk_0HHT4AC2oQr4kDegQIARBR

3. APPLYING THE SCHANTS COLLAR

The aim of this practical skill, taught at the Departments of Surgery at Kharkiv National Medical University, is to immobilise the cervical spine.
(**For more information:** https://www.medika.kiev.ua/en/vorotnik-shanca-primenenie-pokazaniya-i-protivopokazaniya/ – Shants collar – application, indications and contraindications)

1. The patient-doctor positioning should be corrected to 'correct positioning of the patient and doctor'.
2. To ensure proper application of the Schants collar, place a 20 cm by 20 cm cotton-gauze pillow under the nape of the neck.
3. The collar should be placed with the ends in front so that the lower strip reaches the collarbones and the upper part corresponds to the chin with the notch.
4. Check the fit by ensuring that one finger can pass between the collar and the patient's neck.
5. Fasten the ends of the Schants collar with the provided fasteners (*Figure 3*).
6. It is important to clarify the patient's well-being.

Рис. 3.
https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.healthcentral.com%2Fcondition%2Fneck-pain%2Fneck-braces-type-spinal-brace&psig=AOvVaw13GNl1U6D48NaSjB7aooCe&ust=1710309448210000&source=images&cd=vfe&opi=89978449&ved=2ahUKEwiF65mqhe6EAxVol_0HHVJXDb8Qr4kDegQIARAw

4. CONICOTOMY

The purpose of this practical skill, which is taught at the Department of Surgery at Kharkiv National Medical University, is to perform a conicotomy (**For more information:** Andersson ML, Møller AM, Pace NL. Emergency cricothyroidotomy for airway management. Cochrane Database Syst Rev.;2017(3):CD010921. doi: 10.1002/14651858.CD010921.pub2)

1. To ensure safety for both yourself and the victim, confidently indicate your role and the correct location of the patient-doctor. Obtain informed consent for any diagnostic manipulations, whether possible or impossible.

2. Before performing any surgical procedures on the hands, confidently wear sterile clothing, gloves, and glasses. Confidently palpate and stabilize the larynx. Stand next to the patient's shoulder. Unbend the patient's head. Palpate the larynx with your non-dominant hand. Confidently fixate the cricoid cartilage with your 1st and 3rd fingers, and precisely mark the incision site with your index finger. To cut the membrane, hold the scalpel at a 60-degree angle to the skin in your right hand. Make a 1.5 cm horizontal cut in the membrane with the sharp part of the blade facing the operator. Limit the depth of the cut to the length of the blade.

3. Then, hold the lumen of the trachea and perform caudal traction of the larynx with confidence.

4. To create the maximum lumen of the trachea, use a scalpel as a guide and hang the lumen with a tracheal hook.

5. Then, hook the cricoid cartilage and rotate the hook downwards. Perform traction on it caudally and hold the lumen of the trachea while performing caudal traction of the larynx.

6. Rotate the hook downwards, hook the cricoid cartilage, and perform traction on it caudally to create the maximum lumen of the trachea.

7. Insert the intubation tube, inflate the cuff, and check the symmetry of ventilation (*Figure 4*).

To sum up, conicotomy, from *conus* [*elasticus*] – "[*elastic*] *cone*" + + Greek. *τομη* – "*incision*") is a surgical operation, which is an emergency medical aid and is represented by a median dissection of the larynx between the cricoid and thyroid cartilages within the cricothyroid ligament.

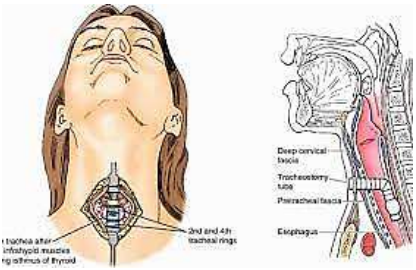

Рис. 4.
https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.msdmanuals.com%2Fen-kr%2Fprofessional%2Fcritical-care-medicine%2Fhow-to-do-other-airway-procedures%2Fhow-to-do-a-percutaneous-cricothyrotomy&psig=AOvVaw0PAvlj2dMOKhWb6_yLWhUs&ust=1710309775690000&source=images&cd=vfe&opi=89978449&ved=2ahUKEwic0q3Ghu6EAxWcqf0HHfTWBwkQr4kDegQIARBX

5. APPLICATION OF A TOURNIQUET C.A.T. IN CASE OF ARTERIAL BLEEDING

The aim of this practical skill taught at the Department of Surgery of Kharkiv National Medical University is to stop bleeding in case of limb injuries. (**For more information:** Steins K, Goolsby C, Grönbäck A-M, et al. Recommendations for placement of bleeding control kits in public spaces—A simulation study. Disaster Med Public Health Prep. 17(e527), 1–6. DOI: https://doi.org/10.1017/dmp.2023.190)

1. When administering first aid, prioritize safety for both yourself and the victim. Wear protective gear such as gloves and glasses.
2. Properly position the patient and establish a connection with them.
3. Obtain informed consent before performing any diagnostic procedures.
4. When applying a tourniquet, ensure it is correctly placed above the bleeding site.
5. To apply a tourniquet, place it in the upper third of the shoulder or thigh.
6. Twist the rod three times to stop the bleeding and check for the absence of a pulse below the wound. This will effectively stop the bleeding and prevent further injury.
7. Twist the rod three times to stop the bleeding and check for the absence of a pulse below the wound.
8. Fasten the twist in the clip, securing the timing tape. Wrap the rest of the tape around the limb through the clip and over the rod (**Figure 5**).
9. Record the time of tourniquet application. Confirm the patient's condition and provide information on any necessary follow-up actions.

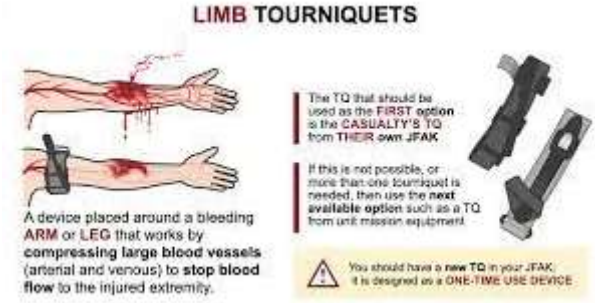

Figure 5.
https://www.google.com/url?sa=i&url=https%3A%2F%2Fbooks.allogy.com%2Fv1%2Ftenant%2F8%2Fbooks%2Fe16e129a-d516-4834-9287-aece1dc41454&psig=AOvVaw3-jM65ASVKVoePXMw2Gsnl&ust=1710310946371000&source=images&cd=vfe&opi=89978449&ved=2ahUKEwifrcr0iu6EAxUogv0HHdQvAKwQr4kDegQIARA2

6. OVERLAY SKIN SUTURES

The aim of this practical skill taught at the Department of Surgery of Kharkiv National Medical University is to join the edges of the wound.

(**For more information:** 1. Tajirian AL, Goldberg DJ. A review of sutures and other skin closure materials. J Cosmet Laser Ther. 2010;12(6):296–302. DOI: 10.3109/14764172.2010.538413.

2. Sarah Louise Gillanders, Steven Anderson, Lisa Mellon, Leonie Heskin. A systematic review and meta-analysis: Do absorbable or non-absorbable suture materials differ in cosmetic outcomes in patients requiring primary closure of facial wounds? Journal of Plastic, Reconstructive & Aesthetic Surgery. 2018; 71(12):1682-1692. https://doi.org/10.1016/j.bjps.2018.08.027)

1. Proper positioning of the patient-doctor relationship is crucial. Contact with the patient should be established by greeting them, introducing yourself, and indicating your role.

2. Informed consent for diagnostic manipulations is necessary.

3. Hands should be treated with an antiseptic before performing any surgical procedures while wearing gloves.

4. To correctly grasp the needle holder, firmly hold the handles with your dominant hand and place your index and ring fingers in the rings of the needle holder. Then, secure the holder near the intersection of the handles with your middle finger.

5. To load the thread into the needle, confidently grab the needle with a needle holder. Then, firmly fix the end of the thread with the thumb of the subdominant hand and pass the thread under the sharp end of the needle and the jaws of the needle holder with the dominant hand. Finally, pull the thread through the eye of the needle from above.

6. Next, confidently grasp the tweezers with the subdominant hand, positioning the terminal phalanxes of II and III fingers on one side and a terminal phalanx of I finger on the other side, according to the type of writing pen.

7. To properly fix the wound, grab the edge farthest from the surgeon with tweezers and move it outward and upward.

Thread the needle and suture material correctly using the needle holder in the appropriate direction for the type of stitch.

8. Create a knot manually or with tools, and cut the thread edges 1–1.5 cm away from the knot (*Figure 6*).

Рис. 6.
https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.chkadels.com%2FTrailblazer-Practice-Suture-Kit-Stainless-Steel-To-51174%2F51174.html&psig=AOvVaw0sju-5oKyqi4bwrAb-k1Rv&ust=1710311417229000&source=images&cd=vfe&opi=89978449&ved=2ahUKEwjgoI3VjO6EAxUcgP0HHf0HAQ8Qr4kDegUIARCqAQ

7. APPLYING AN OCCLUSIVE DRESSING IN OPEN PNEUMOTHORAX

The aim of this practical skill taught at the Department of Surgery of Kharkiv National Medical University is ensuring adequate ventilation of the lungs. (**For more information:** 1. Kong VY, Liu M, Sartorius B, Clarke DL. Open pneumothorax: the spectrum and outcome of management based on Advanced Trauma Life Support recommendations. Eur J Trauma Emerg Surg. 2015;41(4):401–4. DOI: 10.1007/s00068-014-0469-5.
2. Tokuda R, Okada Y, Nagashima F, Kobayashi M, Ishii W, Iizuka R. Open pneumothorax with extensive thoracic defects sustained in a fall: a case report. Surg Case Rep. 2022;8(1):204. DOI: 10.1186/s40792-022-01555-x.)

1. Greet the patient, introduce yourself, and state your role.
2. Obtain informed consent for any diagnostic manipulations.
3. To ensure proper treatment of a patient, follow these steps in order: apply antiseptic to your hands at a hygienic level; select the necessary bandage.
4. Apply antiseptic to the skin surrounding the wound.
5. Place a sterile napkin over the wound. Note that the occlusal pad should extend at least 1.5 cm beyond the napkin. Secure the gauze with adhesive tape.
6. Next, apply the polyethylene layer directly (*Figure7a*) or completely cover the wound with both pads of the single pack using the side of the rubberised tray that is not stitched with coloured thread.
7. Finally, secure the bandage in place (*Figure 7b*).
8. Throughout the process, it is crucial to monitor the patient's well-being.

In summary, the occlusive dressing is intended for temporary use in the event of an open pneumothorax. The main purpose of the medical device is to prevent the development of a painful attack and to improve the patient's well-being.

Рис. 7.
https://www.google.com/url?sa=i&url=https%3A%2F%2Fquizlet.com%2F715514289%2F5-trauma-emergencies-flash-cards%2F&psig=AOvVaw20YNXMESYpOw9EvA3CYq3s&ust=1710311814134000&source=images&cd=vfe&opi=89978449&ved=2ahUKEwjzsq6Sju6EAxVVov0HHadlB8MQr4kDegQIARBN

8. PALPATION OF THE BREAST

The aim of this practical skill taught at the Department of Surgery of Kharkiv National Medical University is determination of deviation from the mammary norm.

(**For more information**: Laufer S, D'Angelo AD, Kwan C, Ray RD, Yudkowsky R, Boulet JR, McGaghie WC, Pugh CM. Rescuing the Clinical Breast Examination: Advances in Classifying Technique and Assessing Physician Competency. Ann Surg. 2017;266(6):1069-1074. DOI: 10.1097/SLA.0000000000002024.)

1. Correct positioning of the patient-doctor and establishing contact with the patient are essential, including greeting, introduction, and indication of your role.
2. It is important to obtain informed consent for diagnostic manipulations and to treat hands with antiseptic at a hygienic level.
3. During the assessment, it is important to evaluate the symmetry (symmetric, asymmetric) and shape (presence/absence of deformations) of the affected area.
4. It is also crucial to note the presence of swelling of the glands (local or diffuse) and any skin changes such as hyperemia, increased vascular pattern, lemon peel symptom, umbilical symptom (retraction of the skin above the tumor), or eczema around the nipple.
5. Palpation is performed objectively, beginning with a potentially healthy gland. Use pads II-IV of the fingers of the leading hand and make small circular movements, moving concentrically in the direction of the nipple while fixing the gland with the free hand (*Figure 8*).
6. Pathological formations should be identified and characterized.
7. The areola and nipple should also be correctly palpated by squeezing the nipple with the first and second fingers.
8. It is important to determine any deviations from the norm.
9. Throughout the process, it is crucial to monitor the patient's well-being.

Рис. 8.
https://www.google.com/url?sa=i&url=https%3A%2F%2Fstanfordmedicine25.stanford.edu%2Fthe25%2FBreastExam.html&psig=AOvVaw0cPF8mupIzhqj9NNMkV6oI&ust=1710314428562000&source=images&cd=vfe&opi=89978449&ved=2ahUKEwjRtILxl-6EAxXS0bsIHQQ1BYoQr4kDegQIARBG

9. DIAGNOSTIC PUNCTURE OF THE PLEURAL CAVITY

The purpose of this practical skill taught at the Departments of Surgery of Kharkiv National Medical University is to determine the contents of the pleural cavity.

(**For more information**: Laufer S, D'Angelo AD, Kwan C, Ray RD, Yudkowsky R, Boulet JR, McGaghie WC, Pugh CM. Rescuing the Clinical Breast Examination: Advances in Classifying Technique and Assessing Physician Competency. Ann Surg. 2017;266(6):1069–1074. DOI: 10.1097/SLA.0000000000002024.)

1. Establish the correct location for the patient-doctor interaction and greet the patient confidently. Introduce yourself and clearly state your role. Inquire about any relevant features of their medical history, such as allergic reactions to medications.

2. Confidently obtain informed consent for any diagnostic procedures.

3. During surgical treatment of hands, it is crucial to wear gloves, sterile clothing, and glasses.

4. The puncture site should be carefully selected, preferably the 6th or 7th intercostal space along the midaxillary line, 1–2 intercostal spaces below the expected fluid level. This ensures a safe and effective procedure. Treat the puncture site with an antiseptic solution, using a gauze napkin held in tweezers.

5. Anaesthetize the intended site of the puncture. Connect the puncture needle to the syringe and perform the puncture correctly.

6. Insert the needle perpendicularly into the puncture site along the upper edge of the rib with your free hand. Push the needle deep while pulling the piston towards you. If liquid appears in the syringe, stop the needle advance.

7. To properly evacuate the pleural cavity, it is necessary to remove any subjective evaluations unless clearly marked as such. It is important to ensure that the entire volume of fluid is removed from the cavity, if possible.

8. After the procedure, an aseptic bandage should be applied to the puncture site.

9. Additionally, it is recommended to inquire about the patient's well-being.

In summary, a pleural puncture (from the Greek thōrax + kentesis = chest + + piercing) is a medical procedure used to remove fluid from the pleural cavity for diagnostic or therapeutic purposes.

Рис. 9.
https://www.google.com/url?sa=i&url=https%3A%2F%2Faci.health.nsw.gov.au%2Fnetworks%2Feci%2Fclinical%2Fclinical-tools%2Frespiratory%2Fpleural-effusion%2Fpleural-tap-thoracentesis&psig=AOvVaw1YfmFMLYlkiNK40RDzjTAt&ust=1710314861539000&source=images&cd=vfe&opi=89978449&ved=2ahUKEwiznr2_me6EAxWLoP0HHRNeAJUQr4kDegQIARBR

10. APPLICATION OF A NASAL SLING BANDAGE

The Department of Surgery at Kharkiv National Medical University teaches a practical skill that aims to effectively protect the injured area and stop bleeding. (**For more information**: https://joyamedicalsupplies.com.au/the-bandafix-nasal-sling-when-its-needed-and-how-it-helps/)

1. The doctor-patient interaction should take place in a seated position.
2. It is crucial to establish contact with the patient through a greeting and introduction while defining the doctor's role.
3. Before any diagnostic procedures are carried out, the doctor must obtain informed consent.
4. Additionally, the doctor should treat their hands with antiseptic and put on rubber gloves before preparing a bandage:

- Cut a 70-80 cm strip from a 20 cm wide bandage.

5. Prepare the bandage by cutting it with scissors, leaving a 5–6 cm section in the middle.
6. Place the bandage on the tip of your nose with the uncut section facing upwards.
7. After securing the mask by crossing the cut ends, lifting the lower tapes over the ears and tying them at the back of the head, and lowering the upper tapes, passing them under the ears and tying them around the neck (*Figure 10*).
8. Ensure to check how the patient is feeling.

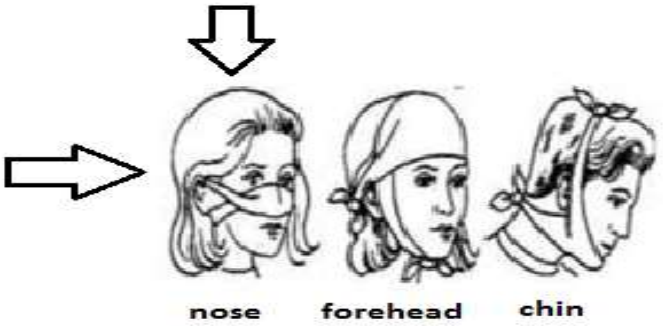

Рис. 10.
https://svitppt.com.ua/rizne/metodi-nakladannya-pov-yazok.html)

11. FINGER EXAMINATION OF THE RECTUM

The Department of Surgery at Kharkiv National Medical University teaches practical skills **aimed at examining** the pararectal area, assessing the condition of the rectal sphincter system and the rectum itself, detecting foreign bodies and tumours, and evaluating the pelvic organs.

(**For more information**:

1. Jones, D., Friend, C., Dreher, A. et al. The diagnostic test accuracy of rectal examination for prostate cancer diagnosis in symptomatic patients: a systematic review. BMC Fam Pract 19, 79 (2018). https://doi.org/10.1186/s12875-018-0765-y;

2. Juan A. Villanueva Herrero; Abdullah Abdussalam; Anup Kasi. Rectal Exam.2023. https://www.ncbi.nlm.nih.gov/books/NBK537356/)

1. When establishing contact with the patient, greet them and introduce yourself, indicating your role. The recommended position for the doctor-patient interaction is lying on the side with the legs bent at the hip and knee joints or in the knee-elbow position.

2. Obtain informed consent for diagnostic manipulations.

3. Treat your hands with an antiseptic at a hygienic level while wearing gloves. Apply an abundant amount of oil to your index finger before inspecting the anal area.

4. Perform a thorough rectal examination by inserting your index finger into the anus and palpating the walls of the anal canal, as well as the entire accessible length of the intestinal wall. Ensure to examine the rectal ampoule as well.

5. Confidently evaluate the condition of the rectal ampoule lumen, including any gaps or narrowing, as well as the nature of any discharge, such as mucous, bloody, or purulent.

6. Evaluate the condition of the rectal sphincter's lumen and tone.

7. Assess the condition of the rectal ampulla's lumen, including any gaps or narrowings, the presence of tumours, and the type of discharge (*Figure 11*).

– Determine the nature of the discharge, whether it is

– Assess the patient's faeces for any abnormalities, including mucous, blood, or pus, and note the colour.

– Evaluate the condition of the prostate gland in men and the uterus in women.

8. Clearly indicate any abnormalities with a yes or no answer.

9. Finally, confidently assess the patient's overall condition.

Рис. 11.
https://www.google.com/url?sa=i&url=https%3A%2F%2Fmyhealth.alberta.ca%2FHealth%2Fpages%2Fconditions.aspx%3Fhwid%3Dtp10654&psig=AOvVaw1fkNLIp96RmdKWsNQsgyl7&ust=1710317603578000&source=images&cd=vfe&opi=89978449&ved=2ahUKEwiXgv7ao-6EAxWgpf0HHZqTDCoQr4kDegQIARA1

12. TRANSPORT IMMOBILIZATION FOR BONE FRACTURE OF THE LOWER LIMB

The Departments of Surgery at Kharkiv National Medical University confidently teaches practical skills for examining the lower limbs and its immobilisation in case of injury.

(**For more information**:

1.https://richtlijnendatabase.nl/en/richtlijn/open_fractures_of_the_lower_limb/diagnosis_treatment_of_open_limb_fractures/open_limb_fractures_in_prehospital_setting.html#related_products_wrapper;

2. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8800956/)

1. Position yourself correctly for doctor-patient interaction, including greeting, introduction, and indication of your role.

2. Obtain informed consent for diagnostic procedures.

3. Practice proper hand hygiene by using antiseptic.

4. Inspect the injury site to determine the nature of the injury.

5. To alleviate pain, position the limb in an average physiological position. Bend the foot at the ankle joint to a 90 angle in relation to the lower leg and bend the knee joint to a 170° angle.

6. Then, place the injured limb on the prepared back splint, ensuring it is bent at a right angle in the area of the heel. Finally, lay the second tire on the outer surface from the upper third of the thigh to the foot. Position the third tyre from the side on the inner surface of the limb, starting from the middle third of the thigh and extending to the foot.

7. To fix the splint, apply a figure-eight bandage from the bottom of the foot, leaving the toes exposed. Continue spirally applying the bandage to the lower leg and the lower third of the thigh to secure the splint to the limb. Tie the knot to secure the end of the bandage (*Figure 12*).

8. Remember to clarify the patient's well-being with confidence.

Рис. 12.

https://www.google.com/url?sa=i&url=https%3A%2F%2Fm.youtube.com%2Fwatch%3Fv%3DAo7KmzXMxNg&psig=AOvVaw2HO7uUdGsiIgi_JVTt4Ae8&ust=1710318529174000&source=images&cd=vfe&opi=89978449&ved=2ahUKEwiK96uUp-6EAxUbuP0HHRocB2QQr4kDegQIARBL

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2. Order of the Ministry of Health of Ukraine of 02.04.2010 No. 297 On Approval of Standards and Clinical Protocols for the Provision of Medical Care in the Speciality ‘Surgery’. https://zakon.rada.gov.ua/rada/show/v0297282-10#Text

3. Emergency Surgery: Textbook for students of VI courses of medical faculties of medical universities. Corresponding Member of the NAMSU, Professor V. V. Boyko, Corresponding Member of the NAMSU, Professor V. M. Lisovyi. Kharkiv: NTMT, 2019. 512 p.

Навчальне видання

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Упорядники Криворучко Ігор Андрійович
Бойко Валерій Володимирович
Лупальцов Володимир Іванович
Гончарова Наталія Миколаївна
Шевченко Станіслав Іванович
Чеверда Віктор Михайлович
Євтушенко Денис Олександрович
Сивожелізов Андрій Володимирович
Ягнюк Андрій Іванович
Лєсний Вадим Вікторович
Колесник Варвара Петрівна
Свірепо Павло Васильович
Фірсик Тетяна Миколаївна
Дроздова Анастасія Геннадіївна
Пасічник Олександр Васильович
Євтушенко Олександр Васильович

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Редакційно-видавничий відділ
ХНМУ, пр. Науки, 4, м. Харків, 61022
izdatknmurio@gmail.com, vid.redact@knmu.edu.ua

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