Slow Medicine
Measured Respectful Equitable

CHOOSING WISELY ITALY
Doing more does not mean doing better

Società Italiana di Pediatria

Tests, treatments and procedures at risk of inappropriateness in Italy
that Physicians and Patients should talk about.

Five Recommendations from the Italian Society of Pediatrics (SIP) on the prevention of surgical site infections in neonatal and pediatric age

1	**Do not substitute careful hand hygiene for just wearing gloves**
	In neonatal and pediatric settings, surgical site infections (SSIs) occur in 2-10% of surgical procedures and are associated with prolonged hospitalization, increased mortality, and increased costs to the health care system. Most SSIs are acquired in the operating room and in more than 50% of cases are preventable. Hand hygiene and proper use of gloves are the fundamental practice to prevent their occurrence. Hand hygiene should be performed before and after patient contact, before handling medical devices whether or not gloves are used, after contact with biological fluids or secretions, mucous membrane, nonintact skin, or wound dressings, when in the course of care one moves from one contaminated body site to another of the same patient, after contact with contaminated surfaces and objects in the immediate vicinity of the patient, after removing sterile or nonsterile gloves, and before handling medications or preparing food. The use of gloves is never a substitute for and should be associated with hand disinfection.
2	**Do not neglect careful disinfection of the baby's skin with alcohol-based antiseptic solutions and that of the newborn with chlorhexidine or iodophore before any surgical procedure**
	Preoperative preparation of the surgical infant and child includes disinfection of intact skin, which should be performed immediately before surgery within the operating room. Skin disinfection and preparation play an important role in the prevention of surgical site infections (SSIs), as the first source of infection is microorganisms on the patient's skin. The commensal skin flora includes many microorganisms with low pathogenicity, such as coagulase-negative *Staphylococci* and *Corinebacteria*, but also potentially pathogenic strains such as *Staphylococcus aureus*. The purpose of skin disinfection is to minimize the microbial load on the patient's skin before incising the skin barrier to help limit the risk of SSIs. Evidence shows that to reduce SSIs, the use of alcohol-based antiseptic solutions for surgical site skin preparation is more effective than aqueous solutions. There is no evidence to perform intraoperative skin disinfection before suturing.
3	**Do not perform peri-operative antibiotic prophylaxis when it is not necessary**
	The choice of administering peri-operative antibiotics depends on the type of surgery, the related infectious risk, and the patient's underlying condition. The goal of proper peri-operative antibiotic prophylaxis is on the one hand to prevent morbidity and mortality related to surgical site infections (SSIs), and on the other hand to reduce misuse and inappropriate use of antibiotics so as to reduce adverse events from unnecessary drugs and the phenomenon of antibiotic resistance. Antimicrobial prophylaxis is recommended in all surgical procedures associated with a high rate of SSIs (e.g., clean-contaminated or contaminated procedures) or where potential serious complications secondary to infection can be expected (e.g., in the implantation of prosthetic materials or other foreign devices). In surgeries considered clean, however, antibiotic prophylaxis does not reduce the possible occurrence of SSIs. The choice, therefore, to perform antibiotic prophylaxis and the decision of the appropriate molecule and doses must be carefully weighed in each individual case. Clinicians are advised to follow available guidelines.
4	**Do not administer antibiotic for peri-operative prophylaxis before 60 minutes prior to surgical incision and do not continue it postoperatively unless specifically indicated**
	Administration of peri-operative antibiotics within 60 minutes after the start of surgery, and particularly after skin incision, appears to ensure adequate drug concentration in the serum and tissues at the site of surgery so as to reduce the risk of postoperative infection. The antibiotic of choice in peri-operative prophylaxis should be active against the most common pathogens present at the surgical site and should be administered at an appropriate dosage, for the shortest possible time suitable to achieve effective serum and tissue concentrations and minimize adverse effects. Generally, a single dose of antibiotic prior to the procedure is sufficient; however, additional intraoperative administration may be necessary if the duration of the procedure exceeds the two half-lives of the antimicrobial agent used or if excessive blood loss occurs during the procedure. Prolonged administration of peri-operative prophylaxis should be reserved for selected cases (e.g., presence of catheters/drainage, underlying infections) as it may result in selection of antibiotic- resistant bacterial strains, the emergence of nosocomial infections, and the occurrence of *Clostridium difficile* colitis
5	**Do not overlook the risk of patient colonization by multi-resistant microorganisms**
	Surgical site infections (SSIs) are increasingly sustained by microorganisms resistant to several antibiotics, particularly methicillin-resistant *S. aureus* (MRSA) and extended-spectrum beta-lactamase- producing *Enterobacteria* (ESBLs). In the patient undergoing neurosurgery or transnasal endoscopic surgery, screening for nasal colonization by S. aureus is suggested in cases with preoperative MRSA colonization, history of MRSA infection, infants and infants less than three months of age who have been hospitalized since birth or who have complex heart disease. In the patient undergoing orthopedic or cardiothoracic surgery, routine nasal screening for S. aureus is recommended. Rectal screening for ESBL *Enterobacteria* should be performed in the infant admitted to the neonatal intensive care unit.

Please note that these items are provided only for information and are not intended as a substitute for consultation with a clinician. Patients with any specific questions about the items on this list or their individual situation should consult their clinician.

May 2022

How this list was created

The document was produced with the application of the RAND/UCLA appropriateness method by a multidisciplinary group of experts from various Italian scientific societies, consisting of pediatricians, neonatologists, infectious disease specialists, pediatric surgeons, anesthesiologists, pharmacologists, and microbiologists. The following scientific societies were involved: Italian Society of Pediatrics (SIP), Italian Society of Neonatology (SIN), Italian Society of Pediatric Infectiology (SITIP), Italian Society of Infectious and Tropical Diseases (SIMIT), Italian Society of Pediatric Surgery (SICP), Italian Society of Microbiology (SIM), Italian Society of Pharmacology (SIF), Italian Society of Neonatal and Pediatric Anesthesia and Resuscitation (SARNEPI), and Italian Society of Respiratory Diseases of Childhood (SIMRI).

Sources

1	1. Boyce JM, Pittet D; Healthcare Infection Control Practices Advisory Committee; HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. Guideline for Hand Hygiene in Health-Care Settings. Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. Society for Healthcare Epidemiology of America/Association for Professionals in Infection Control/Infectious Diseases Society of America. MMWR Recomm Rep. 2002 Oct 25;51(RR-16):1-45. 2. Leaper D, Burman-Roy S, Palanca A, et al. Guideline Development Group. Prevention and treatment of surgical site infection: summary of NICE guidance. BMJ. 2008 Oct;337:a1924. 3. WHO Guidelines on Hand Hygiene in Health Care: First Global Patient Safety Challenge Clean Care Is Safer Care. Geneva: World Health Organization; 2009.
2	1. Agenzia Sanitaria e Sociale Regionale dell'Emilia-Romagna. Prevenzione delle infezioni del sito chirurgico. Dossier 261-2017 ISSN 1591-223X. Centrostampa Regione Emilia-Romagna, Bologna, luglio 2017. 2. Esposito S, Rigotti E, Argentiero A, et al. Antimicrobial Prophylaxis for Urologic Procedures in Paediatric Patients: A RAND/UCLA Appropriateness Method Consensus Study in Italy. Antibiotics 2022; Epub Feb 23. https://www.mdpi.com/2079-6382/11/3/296/html 3. Jolivet S, Lucet JC. Surgical field and skin preparation. Orthop Traumatol Surg Res. 2019;105(1S):S1-S6.
3	1. Bianchini S, Rigotti E, Monaco S, et al. Surgical Antimicrobial Prophylaxis in Abdominal Surgery for Neonates and Paediatrics: A RAND/UCLA Appropriateness Method Consensus Study. Antibiotics 2022; Epub Feb 21. https://www.mdpi.com/2079-6382/11/2/279 2. Bratzler DW, Dellinger EP, Olsen KM, et al. Clinical practice guidelines for antimicrobial prophylaxis in surgery. Surg Infect (Larchmt). 2013;14:73-156. 3. Tarchini G, Liau KH, Solomkin JS. Antimicrobial Stewardship in Surgery: Challenges and Opportunities. Clin Infect Dis. 2017;64(Suppl_2):S112-S114.
4	1. European Centre for Disease Prevention and Control. Systematic review and evidence-based guidance on perioperative antibiotic prophylaxis. Stockholm: ECDC; 2013. 2. De Chiara S, Chiumello D, Nicolini R, Vigorelli M, Cesana B, Bottino N, Giurati G, Caspani ML, Gattinoni L. Prolongation of antibiotic prophylaxis after clean and clean-contaminated surgery and surgical site infection. Minerva Anestesiol. 2010 Jun;76(6):413-419. 3. Opri F, Bianchini S, Nicoletti L, et al. Surgical Antimicrobial Prophylaxis in Patients of Neonatal and Pediatric Age Undergoing Orthopedic and Hand Surgery: A RAND/UCLA Appropriateness Method Consensus Study. Antibiotics 2022; Epub Feb 22. https://www.mdpi.com/2079-6382/11/3/289
5	1. Bianchini S, Rigotti E, Nicoletti L, et al. Surgical Antimicrobial Prophylaxis in Neonates and Children with Special High-Risk Conditions: A RAND/UCLA Appropriateness Method Consensus Study. Antibiotics 2022; Epub Feb 14. https://www.mdpi.com/2079-6382/11/2/246. 2. Siegel JD, Rhinehart E, Jackson M, Chiarello L; Healthcare Infection Control Practices Advisory Committee. Management of multidrug-resistant organisms in health care settings, 2006. Am J Infect Control. 2007;35(10 Suppl 2):S165-93. 3. Tacconelli E, Cataldo MA, Dancer SJ, et al. ESCMID guidelines for the management of the infection control measures to reduce transmission of multidrug-resistant Gram-negative bacteria in hospitalized patients. Clin Microbiol Infect. 2014 Jan;20 Suppl 1:1-55.

Slow Medicine ETS, an Italian Third Sector organization of health professionals, patients and citizens promoting a Measured, Respectful and Equitable Medicine, launched the campaign **"Doing more does not mean doing better-Choosing Wisely Italy"** in Italy at the end of 2012, similar to Choosing Wisely in the USA. The campaign aims to help physicians, other health professionals, patients and citizens engage in conversations about tests, treatments and procedures at risk of inappropriateness in Italy, for informed and shared choices. The campaign is part of the Choosing Wisely International movement. Partners of the campaign are the National Federation of Medical Doctors' and Dentists' Orders (FNOMCeO), that of Registered Nurses' Orders (FNOPI), the Academy of Nursing Sciences (ASI), National Union of Radiologists (SNR), Tuscany regional health agency, PartecipaSalute, Altroconsumo, the Federation for Social Services and Healthcare of Aut. Prov. of Bolzano, Zadig.
www.choosingwiselyitaly.org; www.slowmedicine.it

The **Italian Society of Pediatrics (SIP)** was born in 1898 and, with its 11 thousand members, represents the common home of all Italian pediatricians because University, hospital, family and community pediatricians participate. The mission of SIP is to promote and protect the physical and mental health of newborns, children and adolescents, of all cultures and ethnicities, defending their rights in society from conception. A total of 19 Regional Sections belong to the SIP. SIP carries out publishing, training and research activities, NON PROFIT. Further information is available at the link https://sip.it/