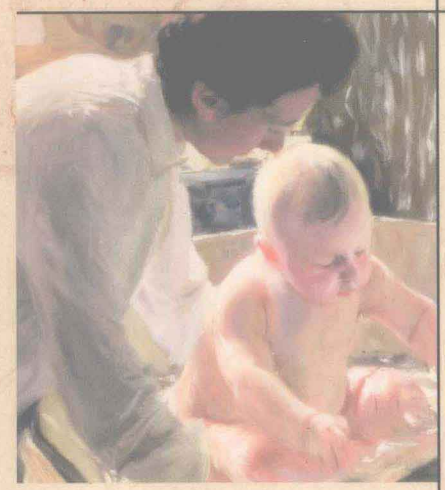
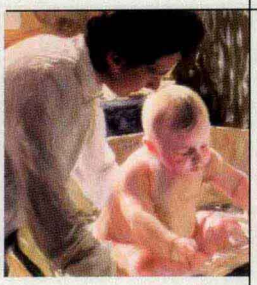
Ruth Bindler & Jane Ball

quick reference to

PEDIATRIC CLINICAL SKILLS



to accompany Ball & Bindler
Pediatric Nursing, Caring for Children, 2nd edition



quick reference to

PEDIATRIC CLINICAL SKILLS

Ruth Bindler, RNC, MS
Associate Professor
Intercollegiate Center for Nursing Education
Washington State University
Spokane, Washington

Jane Ball, RN, CPNP, DrPH
Director
Emergency Medical Services for Children National Resource Center
Children's National Medical Center
Washington, DC

Appleton & Lange
Stamford, Connecticut

www.appletonlange.com

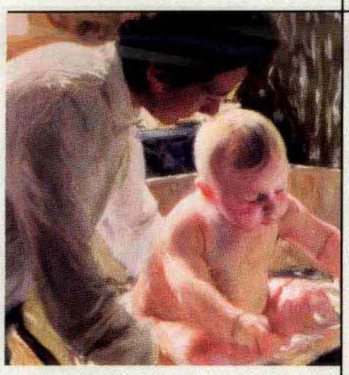
99 00 01 02 03 / 10 9 8 7 6 5 4 3 2 1

Prentice Hall International (UK) Limited, *London*
Prentice Hall of Australia Pty. Limited, *Sydney*
Prentice Hall Canada, Inc., *Toronto*
Prentice Hall Hispanoamericana, S.A., *Mexico*
Prentice Hall of India Private Limited, *New Delhi*
Prentice Hall of Japan, Inc., *Tokyo*
Simon & Schuster Asia Pte. Ltd., *Singapore*
Editora Prentice Hall do Brasil Ltda., *Rio de Janeiro*
Prentice Hall, *Upper Saddle River, New Jersey*

ISBN: 0-8385-8123-4

Acquisitions Editor: David P. Carroll
Production Editors: Karen Davis, Angela Dion
Designers: Libby Schmitz, Aimee Nordin

PRINTED IN THE UNITED STATES OF AMERICA



quick reference to

PEDIATRIC CLINICAL SKILLS

PREFACE

This *Quick Reference to Pediatric Clinical Skills* is designed to accompany the second edition of *Pediatric Nursing: Caring for Children*. An earlier version of this content was included as an atlas in the first edition of that book.

All of the skills content has been thoroughly updated, expanded, and reformatted, reflecting changes since the last edition. New skills have been added, new photographs provided to supplement existing skills, and new guidelines added for the use of protective equipment (gowns, masks, goggles, gloves). The format and organization of the *Quick Reference* continue to enable students to quickly learn and review what they need to do, when, and why. The *Quick Reference* has been bound and packaged separately from the text to enable students to carry it with them into clinical settings.

It is assumed that the student using this *Quick Reference* has had a course and practice in basic psychomotor skill performance. The information in this reference thus concentrates on pediatric variations of the most frequently used skills.

► ACKNOWLEDGMENTS

As with any published work, this *Quick Reference* is possible only because of the dedication and hard work of many people. Marcia Wellington provided the material for the first edition. Her contribution was thoughtful and provided guidance for those performing skills on children. Jane Novoa reviewed and provided important feedback for the first edition and George Dodson took all of the photographs.

The skills and procedures in this *Quick Reference* were carefully reviewed by Neysa Dobson for accuracy and currency. In addition, Karen Frank reviewed the original edition and provided feedback. Photos were taken by Roy Ramsey and content assistance during photography was provided by Neysa Dobson.

Throughout the entire process, Appleton & Lange editor David Carroll provided encouragement and support. His vision for this separate reference guide was instrumental in our taking this new approach. Our developmental editor, Donna Frassetto, has revised copy and suggested changes with a perceptive awareness of the needs of the reader and the presentation of material. Her role is an essential and creative one.

Ruth Bindler
Jane Ball

INTRODUCTION

Children often undergo various procedures during diagnostic evaluation and hospitalization. These procedures, although similar to procedures performed on adults, differ in several ways. Nurses must therefore be knowledgeable about skills performed on children as well as variations in preparation, equipment, positioning, and specific steps when performing procedures on children.

Preparation for procedures must take into account a child's developmental stage and cognitive ability (see the discussion in Chapter 2 in the text of Ball and Bindler's *Pediatric Nursing*). General guidelines for preparing the child are outlined in the accompanying box. Follow these guidelines before beginning any procedure. After the procedure, provide emotional support and comfort the child.

Children should be taken either to a treatment room or to another room for potentially painful or frightening procedures. The child's room and the facility playroom are thus kept as "safe" areas in which painful procedures are not performed. It is best to have the parents present to support the child, either during or after the procedure. Other personnel can restrain the child. In this way, the child does not perceive the parents as participating in a hurtful activity.

Several steps should be taken when performing any procedure. These steps are listed in the accompanying box. Protective barriers such as clean or sterile gloves, gown, mask, and goggles should be worn during any procedure that may involve contact with blood or body fluids. Always check to see if the child has a latex allergy; if so, nonlatex gloves and equipment must be used.

The procedures in the *Quick Reference* are grouped into 12 units for ease of reference:

- Informed consent
- Positioning and restraint
- Transport
- Isolation precautions
- Physical assessment
- Specimen collection
- Administration of medication
- Intravenous access
- Cardiorespiratory care
- Nutrition
- Elimination
- Irrigation

Each procedure is presented concisely to emphasize essential information. Many procedures begin with brief lists of preparatory actions and equipment. These lists are not meant to be all-inclusive. Rather, they are

GENERAL GUIDELINES

- Explain the procedure to the child and family.
- Ask if they have any questions about the procedure.
- If the parent agrees to hold the child, demonstrate exactly what you want done. Make sure that the parent feels comfortable about assisting with the procedure.
- Be familiar with the equipment.
- If the parent will not be present, reassure the child that the parent will return after the procedure has been completed.

PROCEDURAL STEPS

1. Identify yourself to the child and parents.
2. Check the physician's orders.
3. Identify the child.
4. Give instructions and explanations to the child and parent.
5. Wash your hands.
6. Gather the necessary equipment.
7. Put on gloves.*
8. Begin the procedure.
9. Document findings.

*Gloves should be worn when it is possible that contact with mucous membranes, nonintact skin, or any body substances will occur. Gloves should be changed between different patient contacts.

intended to highlight equipment and information that is most important when performing the procedure on a child.

The procedures themselves are presented in a condensed format. It is understood that students have already learned the basic steps involved in these procedures. *The intent of this presentation is, therefore, to highlight essential steps and pediatric variations with which the nurse should be familiar.* Students should consult their hospital or institution procedure manual or other references for more detailed and specific information.

CONTENTS

7. ADMINISTRATION OF MEDICATION / 47

8. INTRAVENOUS ACCESS / 63

9. CARDIORESPIRATORY CARE / 79

10. NUTRITION / 111

11. ELIMINATION / 119

12. IRRIGATION / 127

APPENDICES / 131

INFORMED CONSENT 1

► UNIT OUTLINE

Informed consent involves obtaining written permission from the parent (or legal guardian) or the patient to perform specific procedures. Both legally and ethically necessary, informed consent requires that the parent or legal guardian and patient (to the level of the child's ability) clearly understand the procedure or treatment to be performed, any risk factors involved, and alternative methods available to achieve the same end. Without signed permission for medical management, the physician, nurse, or other health care provider could be found guilty of assault and battery.

► GENERAL GUIDELINES

Guidelines have been established to ensure that informed consent is obtained for medical care. Additional guidelines are available when performing research on children. These are not presented here.

- Information must be presented to the individual responsible for making an informed decision to allow him or her to weigh the benefits of the proposed treatment or procedure against the potential for complications. This information should be presented in simple, easy-to-understand terms. All questions and concerns should be answered honestly. If necessary, an interpreter should be used to ensure clear communication.

- The person making the decision must be over the age of majority (ie, the age at which full civil rights are accorded—18 years in most states) and must be competent (ie, he or she must be able to make a decision based on the information received). The person needs to understand the proposed medical management and any risks. In some states, adolescents between the ages of 13 and 18 years are able to sign for some treatment alone (ie, birth control, substance abuse treatment). Know the parameters of the state law where you practice nursing.
- The decision reached must be voluntary. The person making the decision must not be coerced, forced, or placed under duress while considering the options.

Although general written consent for care is obtained within the hospital setting during the admission process, specific consent must be obtained for procedures or treatments that include:

- Major surgery
- Minor surgery such as a cutdown, incision and drainage, closed reduction of a fracture, or fracture pinning
- Invasive diagnostic tests such as lumbar puncture, bone marrow aspiration, biopsy, cardiac catheterization, or endoscopy
- Treatments that may involve high risk, such as radiation therapy, chemotherapy, or dialysis
- Any procedure or treatment that falls under the auspices of research
- Photographing patients, even when done for educational purposes

► PEDIATRIC CONSIDERATIONS

Informed consent for the child involves the following additional considerations that must be addressed:

- *When the child is a minor* (has not reached the age of majority—under the age of 18 years in most states), his or her parent or legal guardian must give consent for all procedures or treatments.
- *If the parent or guardian is unavailable,* the person in charge of the child (eg, relative, baby-sitter, teacher, or camp counselor) may give consent for emergency treatment if the person has signed, written permission from the parent/guardian to authorize care in his or her absence.
- *If the parent or guardian can be contacted by telephone,* verbal consent can be obtained with two witnesses listening simultaneously. The consent should be recorded for later signature.
- *If the child is an emancipated minor* (under the age of 18 years but is legally independent), the child may give informed consent for medical care. Common examples of emancipated minors include teenagers who are married, in the military, living apart from their parents and financially independent, or parents themselves.
- *When the child is a minor living in a state providing the right for nonemancipated teens to make certain health care decisions,* the child may give permission only for those conditions identified in state law, and only at the ages specified by that particular state. Some examples of the treatments that many states permit adolescents to sign for include birth control, treatment of sexually transmitted diseases, contraceptive and abortion counseling and services, substance abuse, and mental illness.

POSITIONING AND RESTRAINT 2

► UNIT OUTLINE

CLINICAL TIP

The American Academy of Pediatrics has established guidelines on the use of physical restraint for children and adolescents in the acute care setting. They recommend:

- Explaining the procedure to the child
- Obtaining a written or verbal order for restraint from the physician, stating the type of restraint and its expected duration
- Providing an immediate explanation to the family about the need for restraint and documenting this in the medical record
- Performing assessments: Is the restraint applied correctly? Are skin and neurovascular status intact? Is the restraint accomplishing its purpose? Is there a need to continue using restraint?

When a child must be held in position for a procedure, it is important to try to use an assistant rather than a mechanical restraint for this purpose. Though some parents are comfortable holding their child for a procedure, most prefer to be close and to act as a support person, while allowing health care professionals to provide restraint. This allows the parent to be free to provide support and to avoid the role of holding the child for a painful or stressful procedure. The child then can view the parent as a source of solace rather than as someone who brings pain. With the parent nearby, the child will be far less anxious and will not feel that he or she is being punished.

Some parents find it hard to be present during an uncomfortable procedure and prefer to be available afterward to comfort the child. This wish should be respected.

When necessary, a restraint board or mummy restraint can be used.

► HUMAN RESTRAINT

Be sure that the person providing restraint clearly understands what body parts must be held still and how to do this safely.

RESTRAINING A CHILD FOR INTRAVENOUS ACCESS/INJECTION

Procedure

- Place the child in a supine position on a bed or stretcher.
- Have the parent, a nurse, or an assistant lean over the child to restrain the child's body and extend the extremity to be used for access or injection.

RESTRAINING A CHILD FOR LUMBAR PUNCTURE

NURSING ALERT

Lumbar puncture requires that the child be held still. It is advisable to have an experienced staff member hold the child in position for the procedure.

Procedure—*Gown, Goggles, Mask, Sterile Gloves*

- Place the child on his or her side with knees pulled to the abdomen and the neck flexed to the chin.
- The *infant* can be held in this position easily by holding the neck and thighs in your hands (Fig. 1).
- The *older child* can be quite strong, and someone with enough strength will be needed to hold him or her in this position. Lean over the child with your entire body, using your forearms against the thighs and around the shoulders and head.

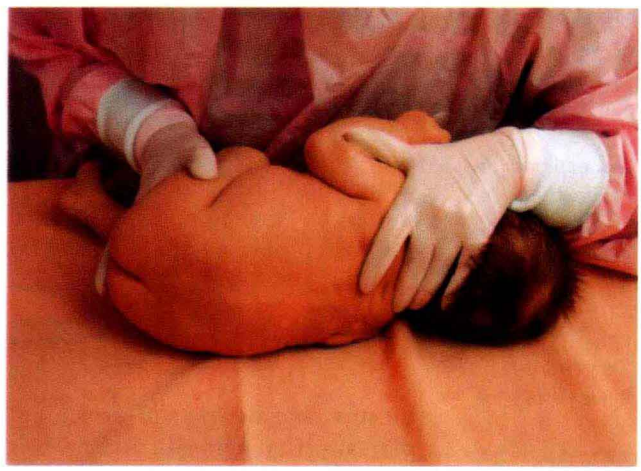


FIGURE 1. Infant positioned for lumbar puncture.

► MECHANICAL RESTRAINT

USE OF A RESTRAINT BOARD

The restraint board consists of a board and cloth wrappings with Velcro fasteners (Fig. 2). Two sizes are available—one for infants and toddlers and one for larger children. Some restraint boards come with openings for arms. If the child is positioned for a venipuncture, the arm can fit through the opening in the vest and then the remaining fabric pieces can be secured.

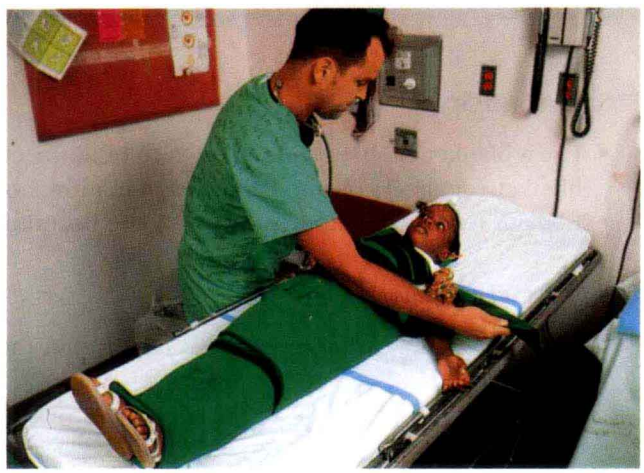


FIGURE 2. Child on a restraint board.

PROCEDURAL STEPS

1. Identify yourself to the child and parents.
2. Check the medical orders.
3. Identify the child.
4. Give instructions and explanation to the child and parent.
5. Wash your hands.
6. Gather the necessary equipment.
7. Use protective barriers as needed.
8. Begin the procedure.
9. Document findings.

APPLYING A RESTRAINT BOARD

Preparation

Explain to the child and parents why the restraint is being used. Compare the feeling of the board to a hug.

Selected Equipment

Board with fasteners
Soft towel or sheet

Procedure

- Place a towel or sheet over the board.
- Have the child lie supine on the board, with the head at the top.
- Place the fabric wrappings around the child, and secure the Velcro fasteners.
- An assistant may be needed to provide restraint for the child's head and exposed extremity.

GENERAL GUIDELINES

- Explain the procedure to the child and family.
- Ask if they have any questions about the procedure.
- If the parents decide to be present, demonstrate where they can stand and what they can do. Make sure that the parents feel comfortable about assisting with the procedure.
- Be familiar with the equipment.
- If the parents will not be present, reassure the child about when the parent will return.

USE OF A MUMMY RESTRAINT

Mummy restraint consists of wrapping the child securely in a blanket or sheet to decrease movement and allow the health care provider to carry out a procedure. It is effective when procedures are being performed either on the head or on an extremity (one limb can be left out for the procedure).

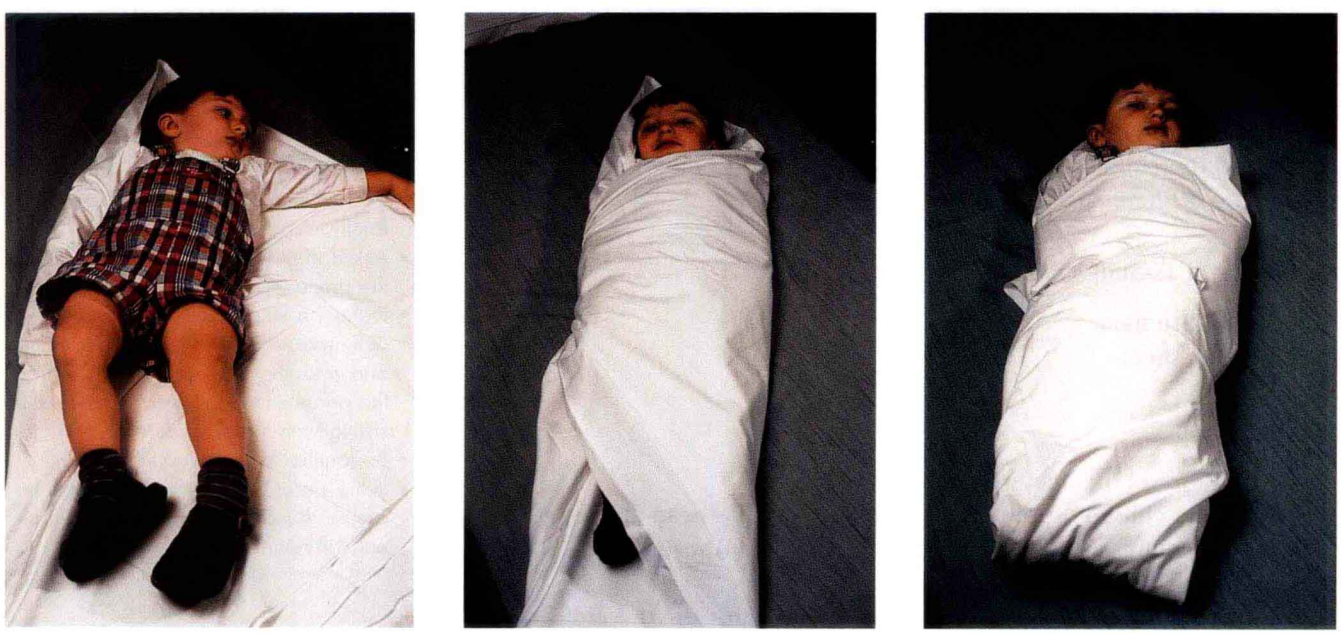
APPLYING A MUMMY RESTRAINT

Preparation

- Use a blanket or sheet large enough to hold the child in place. Put the blanket (or sheet) on the bed or examination table.
- Explain to the child and parents why the restraint is being used.

Selected Equipment

Soft blanket or sheet two to three times larger than the child



A B C

FIGURE 3. Steps in applying a mummy restraint.

Procedure

Infant, Toddler, and Older Child

- Place the child on the blanket, positioning so that there is sufficient material to wrap the knees and lower legs. If necessary, fold down the top edges of the blanket to the shoulders.
- Bring one side of the blanket up and tuck it under the arm on the same side, and place it under the child's back (Fig. 3A).
- Bring the other side of the blanket up and around the body, and tuck underneath the back and legs. (Fig. 3B).
- Bring the bottom corner of the blanket up and over the abdomen (Fig. 3C).

USE OF ELBOW RESTRAINTS

Elbow restraints (Fig. 4) are used to prevent the infant or child from reaching his or her face or head. Although the ready-made type is available commercially, an elbow restraint can be devised easily from a piece of muslin that has vertical pockets sewn into it, as follows:

- Place tongue depressors in the vertical pockets of the muslin wrap so that the arm cannot be bent.
- Wrap the muslin around the arm from axilla to wrist.
- Secure the restraint with pins or tape.

Remove the elbow restraints at least every 2 hours to assess the child's skin and circulation.

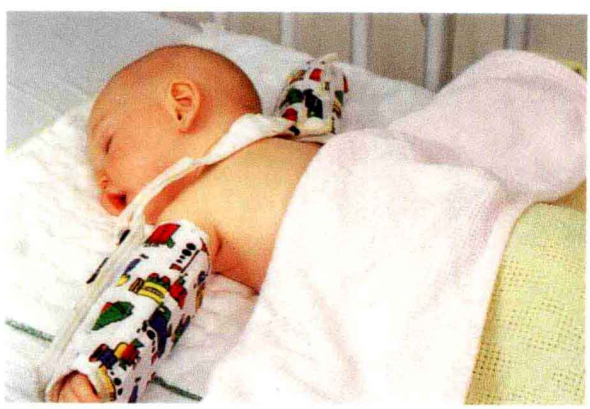


FIGURE 4. Infant with elbow restraints.