Anorectal Malformation (ARM)

Imperforate Anus

Worldwide, more than a million children are born each year with anorectal malformation or imperforate anus. The Colorectal Center for Children at Children's Hospital of Pittsburgh of UPMC offers a comprehensive approach to treatment for children born with this anomaly.

What is anorectal malformation (ARM) and imperforate anus?

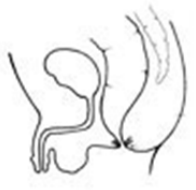
When a baby is born without an anus, the rectum may end in various abnormal forms, a generic name for these alterations is ARM or imperforate anus. Both names refer to the same condition.

Is anorecal malformation the same in all patients?

No. Anorectal malformation is a group of anorectal anomalies with different anatomical characteristics. For a better understanding, please view the anatomical illustrations of the pelvic anatomy of a boy and a girl provided below. These represent the most common anorectal malformations that are present in children.

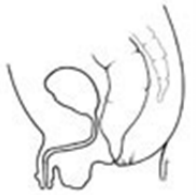
PELVIC ANATOMY OF A BOY

Observe that the rectum ends in the center of the anal sphincter forming the anus.



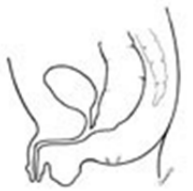
ARM with recto-perineal fistula

Perineum is the limited area between the anal sphincter and the scrotum. When a baby does not have an anus and the rectum ends in the perineum, this is called an ARM with recto-perineal fistula.



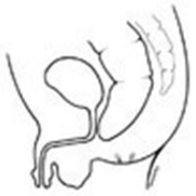
ARM with recto-urinary fistula

Urethra and bladder form the lower urinary tract. When a baby does not have an anus and the rectum ends in any part of the lower urinary tract is an ARM with Recto-Urinary Fistula. A Recto-Urethral fistula is shown in this illustration.



ARM without fistula

In some boys the rectum ends in a blind pouch and it does not have any communication. This ARM is named ARM without fistula.



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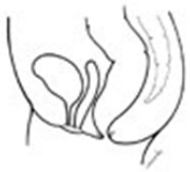
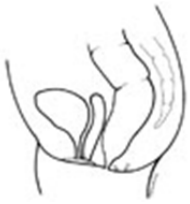
PELVIC ANATOMY OF A GIRL
Observe that the rectum ends in the center of the sphincter forming the anus. Also note that the vagina is in front (anterior) of the rectum.

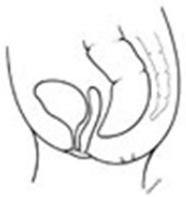


ARM with recto-perineal fistula
Perineum is the area limited between the anal sphincter and the vulva. When a baby does not have anus and the rectum ends in the perineum, this girl has an ARM with recto-perineal fistula.

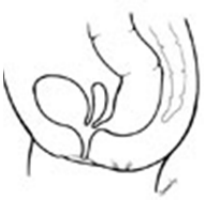


ARM with recto-vestibular fistula
Fossa Vestibular is a small area limited between the posterior commissure of the vulva and the vagina. When a girl does not have an anus and the recto ends in a small orifice in the vestibule, she has an ARM with recto-vestibular fistula. This anomaly is frequently misdiagnosed as recto-vaginal fistula.

ARM without fistula
In some girls the rectum ends in a blind pouch and it does not have any communication. This ARM is named ARM without fistula.



Cloaca anomaly
When the rectum ends joined to the vagina and urethra creating a common channel, this complex anomaly is called Cloaca. These girls do not have an anus, vaginal orifice, neither urethra instead there is only one orifice in the vulva.



How is ARM diagnosed?
An ARM is typically diagnosed during the newborn's initial physical exam. A thorough physical exam allows a timely identification of the most frequent forms of ARM.

Could my baby have other associated congenital defects?
Yes, the most frequent associated defects are found in the sacrum (lower segment of the spine) and kidneys. When an ARM is dected in a baby, an ultrasound of the spine and kidneys and x-rays of the spine are mandatory. These studies help to establish initial treatment and prognosis.

How is ARM treated?
All children with an ARM need at least one operation called an anorectoplasty or "pull-through". Many children in the first days of life require a colostomy prior to pull-through surgery. The colostomy is a surgical procedure that brings a segment of the large intestine out through an opening called a stoma that is made

in the abdominal wall; this is a temporary situation and the colostomy is closed a few weeks after pull-through surgery.

What care is needed after pull-through surgery?
The pull-through wound should be kept clean and dry. Two weeks after pull-through surgery, your child will start anorectal dilatations to open the anus to a normal size and to prevent stenosis or closure. Your pediatric surgeon and nurse will teach you this easy procedure.

What is the prognosis for intestinal function and fecal continence after pull-through surgery?
Intestinal function and fecal continence vary according to the type of ARM and if your child has an associated defect mainly in the sacrum. Your child will need long-term follow up to detect and treat any of the following problems in a timely manner:

- constipation
- fecal incontinence
- pseudo fecal incontinence

How can I help my child if he/she suffers fecal incontinence or constipation after the pull-through?
The Bowel Management Program at the Colorectal Center for Children is a comprehensive program to help your child to control his/her bowel movements. Our goal is to improve quality of life, social integration, and self-esteem.

Contact Us

For more information about anorectal malformations or to request an appointment with the Colorectal Center for Children at Children's Hospital of Pittsburgh of UPMC contact us at **412-692-7280** or by email at colorectalcenter@chp.edu.