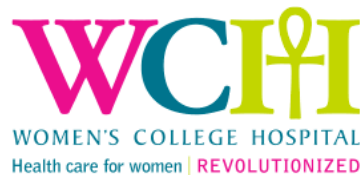


Vasectomy: Does Technique Make A Difference? CUA Vasectomy Guidelines

Ethan D. Grober, MD, MEd, FRCSC

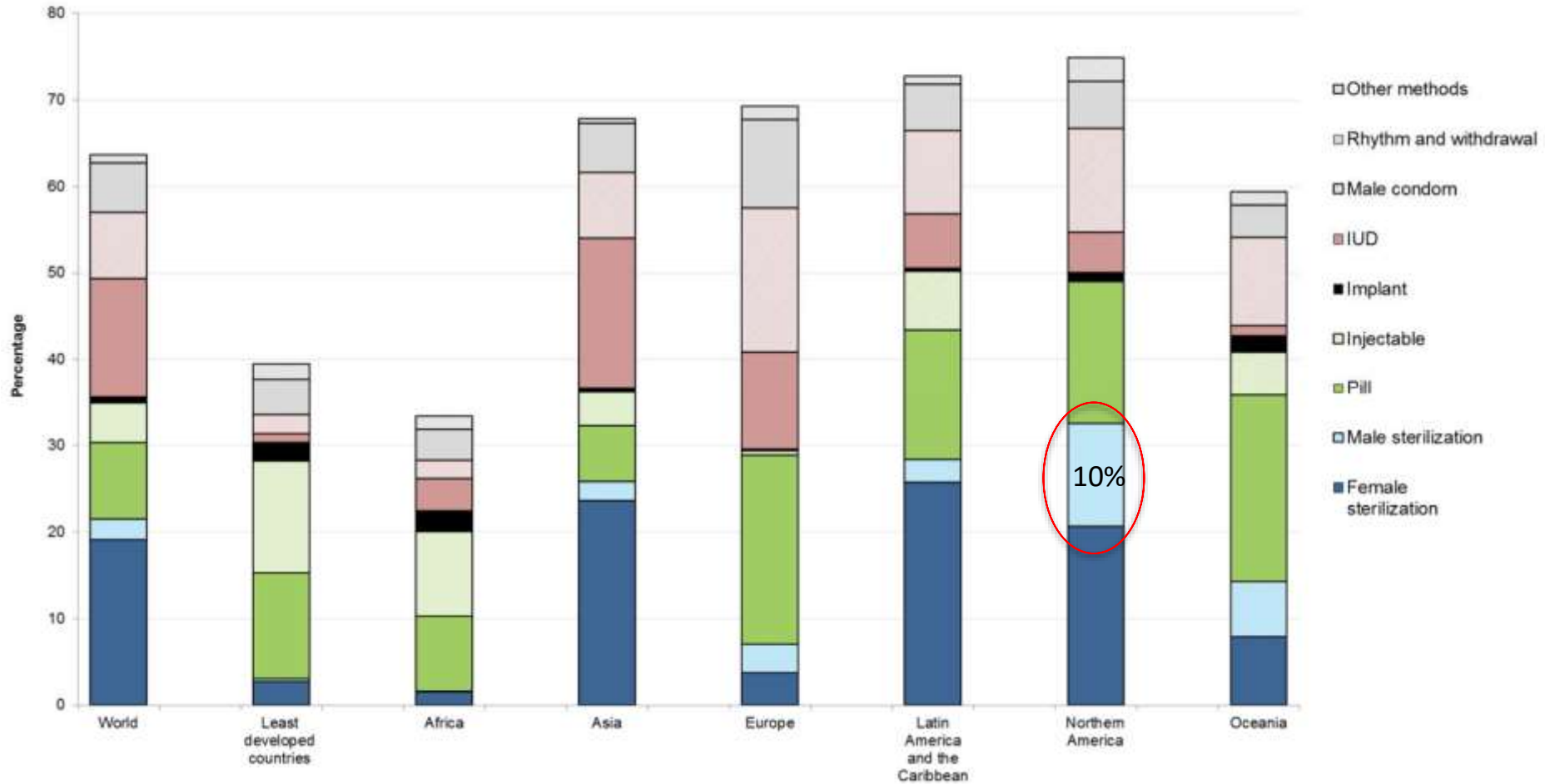
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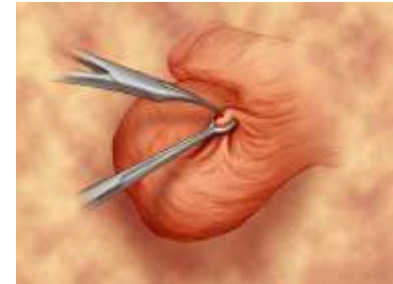
Global Contraceptive Use

Figure 13. Contraceptive prevalence among married or in-union women aged 15 to 49 by method and region, 2015



CUA guideline: Vasectomy

Armand Zini, MD;¹ John Grantmyre, MD;² Peter Chan, MD¹



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CUA guideline: Vasectomy

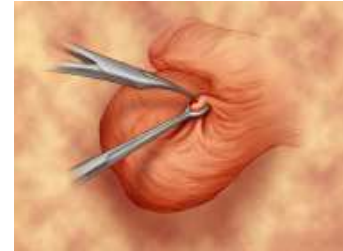
Armand Zini, MD;¹ John Grantmyre, MD;² Peter Chan, MD¹

Outline

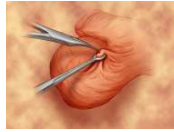
1. Preoperative Counselling
2. Vasectomy Technique
3. Postoperative Counselling
4. Post-vasectomy semen testing

CUA guideline: Vasectomy

Armand Zini, MD;¹ John Grantmyre, MD;² Peter Chan, MD¹



Preoperative Counselling



Preoperative Counselling

- Good practice, to allow for a ***“cool-down”*** period between the initial counselling for a vasectomy & vasectomy itself
- Selected, well-informed patients may elect for the vasectomy immediately following initial counselling

Preoperative Counselling

- Patients should receive both a verbal discussion & written information (pamphlet) that described the nature of the procedure

another form of birth control until ejaculation clears out these remaining sperm. Between 8-12 weeks after the vasectomy you must produce a semen sample by masturbation to be examined in the laboratory to ensure no sperm are present in the ejaculated fluid. Your urologist will inform you if one or two samples is required. Until you have been notified that your sperm is sperm free you must continue to use another form of birth control. Rarely, the persistence of sperm requires that the vasectomy be repeated to ensure sterility.

Most men have no problem after a vasectomy except for some mild discomfort that may last for a few days. There is, however, a small risk of infection requiring treatment with antibiotics.

Often, a small lump will develop in each vas at the site of division. Some men have scrotal pain that persists for a few weeks or months. Over time, this usually resolves completely without specific treatment, although rarely this discomfort may persist.

Rarely, the ends of the vas may find each other and heal, allowing sperm to persist in the semen, and fertility to return. If this occurs, pregnancy is still possible and the vasectomy will have to be repeated.

A vasectomy should not affect your sexual function nor will you notice any change in your semen.

There is no reason to believe that having a vasectomy can cause other health problems.

Your vasectomy appointment has been scheduled for:

Day: _____

Date: _____

Time: _____

Location: _____

Notes: _____

Vasectomy

A vasectomy is a minor surgical procedure performed for permanent birth control.



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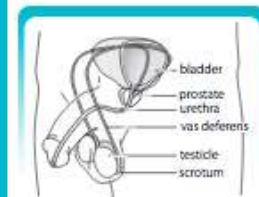
The Voice of Urology in Canada

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You are considering having a vasectomy as a means of permanent contraception (birth control). This is minor surgery in which the **vas deferens** on each side of the scrotum (the "sac") is divided and blocked. The vas is a long tube that runs from each testicle to the urethra (urinary passage). It conducts sperm at the time of ejaculation. When the vas is divided and blocked, the ejaculation fluid (semen) is free of sperm and the egg produced by the woman cannot be fertilized to start a pregnancy.



This procedure should be considered a **permanent** form of birth control. Although the vas can often be reconnected, achieving a pregnancy may be more difficult due to a number of factors affecting the quality of the sperm and the tubes' ability to heal.

The procedure will be performed in your urologist's office or at your local hospital. On the day of your vasectomy, before your appointment, you may be asked to shave the hair from the front part of the scrotum, if advised to do so by your urologist.

Snug underwear or a scrotal support will keep you more comfortable after the procedure. Bring these items with you for your vasectomy.

Area to be shaved:
front and both sides of the scrotum



The procedure

On the day of your vasectomy, you will be taken to a treatment room and asked to lie down on an examination table. Your scrotal skin will be cleaned with an antiseptic solution, after which you will be covered with a sterile sheet to minimize the risk of infection.

Vasectomies are usually performed with local anesthesia. The skin and vas are "frozen" with an anesthetic solution injected through a fine needle. This blocks the sensation of pain, although you may still notice some pressure and pulling.

A small opening is made in the scrotal skin over the vas. Each vas is then divided, and blocked off with clips or sutures. Any bleeding which might occur is controlled. A dissolving stitch may be used to close the skin opening. The procedure is completed usually in about 20 minutes. A small dressing may be applied, which you can remove the next day.

Each vas is exposed through a small incision and divided



After the procedure

You may be required to have someone accompany you home after your vasectomy.

Plan to restrict your activities for the first two or three days after your vasectomy. Avoid strenuous physical activity, heavy lifting, or exercise for about one week. Any strain may cause bleeding or swelling of the scrotum.

Use the pain medications as directed by your physician. You may take acetaminophen (i.e. TylenolTM) or ibuprofen (i.e. AdvilTM) early after the procedure to help with any discomfort.

Some scrotal swelling after the procedure is common. An ice pack applied to the scrotum for no more than 20 minutes at a time, three to four times a day, will help with pain and swelling.

You may bathe or shower after 24 hours.

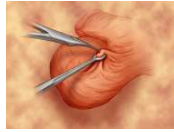
Exercise may be resumed when you are comfortable, usually after one week.

You may resume sexual activity after one week, however, you will remain fertile for several months after your vasectomy due to sperm remaining in the tubes and glands. You **cannot** use

CUA guideline: Vasectomy

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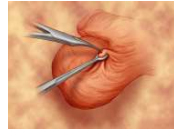


Preoperative Counselling

Patients should view a vasectomy as a permanent form of contraception -

- Reversibility & options for conception following a vasectomy should be addressed
- Pre-vasectomy
 - sperm banking
- Post-vasectomy
 - Sperm retrieval with IVF
 - Vasectomy reversal





Preoperative Counselling

Discuss the Risks & Benefits of Vasectomy

Benefits:

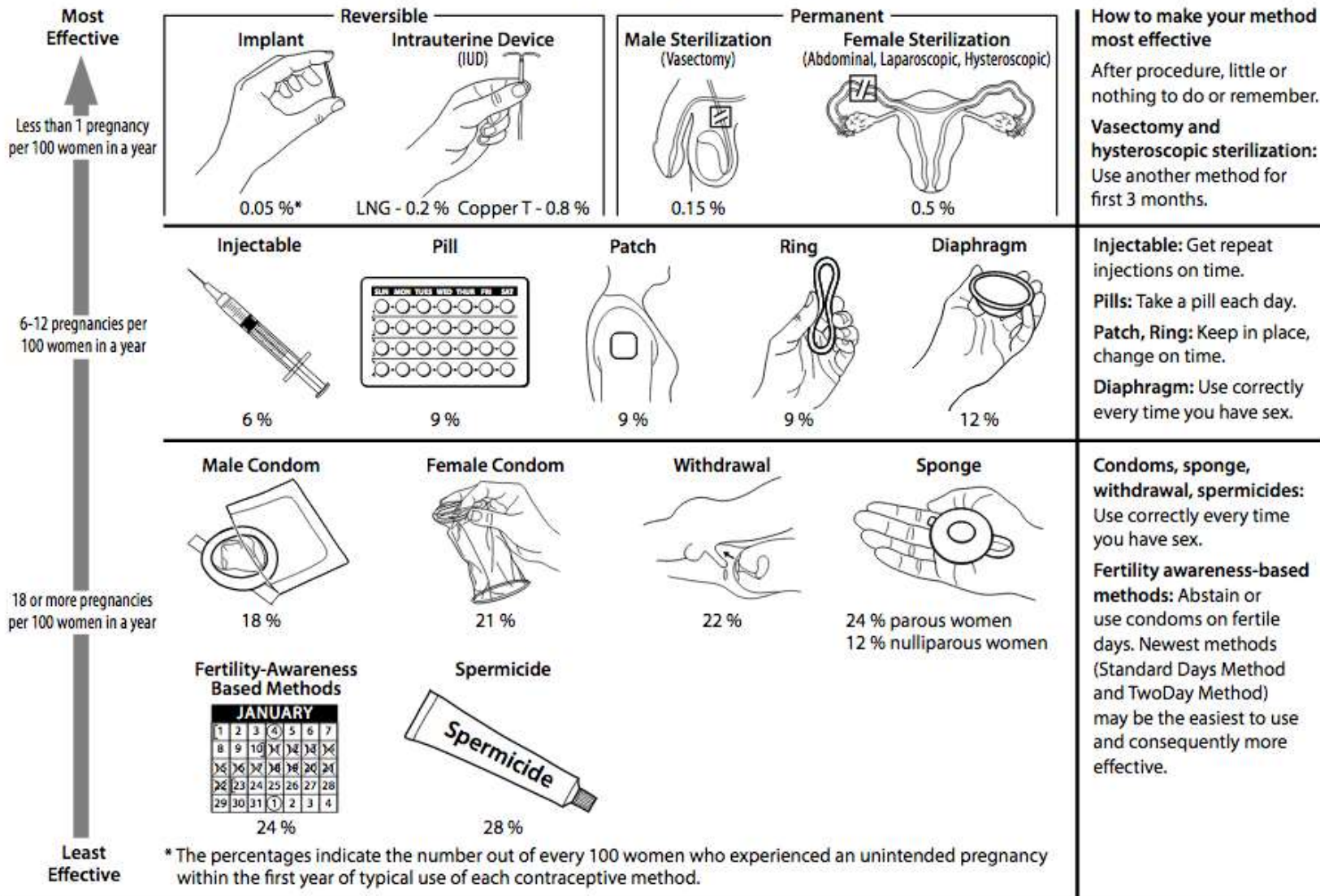
- Highly effective form of contraception
- Minimally invasive
- Minimizes contraceptive burden to female partner – hormones, devices (IUD, sponge, diaphragm), Surgery (tubal ligation)

Risks:

- Infection
- bleeding/hematoma
- Post-vasectomy pain syndrome (1-2%)
- *Early* (0.2-5%) and *Late* (0.05 -1%) vasectomy failure

*offers no protection against STIs

Effectiveness of Family Planning Methods



CS 242797

CONDOMS SHOULD ALWAYS BE USED TO REDUCE THE RISK OF SEXUALLY TRANSMITTED INFECTIONS.

Other Methods of Contraception

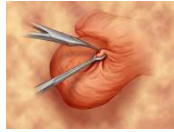
Lactational Amenorrhea Method: LAM is a highly effective, temporary method of contraception.

Emergency Contraception: Emergency contraceptive pills or a copper IUD after unprotected intercourse substantially reduces risk of pregnancy.

Adapted from World Health Organization (WHO) Department of Reproductive Health and Research, Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs (CCP). Knowledge for health project. Family planning: a global handbook for providers (2011 update). Baltimore, MD; Geneva, Switzerland: CCP and WHO; 2011; and Trussell J. Contraceptive failure in the United States. Contraception 2011;83:397-404.



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Control and Prevention



Preoperative Counselling

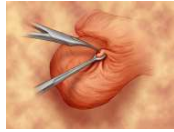
NO requirement to discuss vasectomy & risk of:

- Prostate cancer
- Testicular cancer
- Heart disease

Patients often ask about risk of

- sexual dysfunction or ED
- ejaculation? - testis/epididymis (10% of ejaculate volume)

*Discuss if patient asks!



Preoperative Counselling

Is there an *Age Limit* to have a vasectomy?

- Any man with the legal capacity to provide informed consent may elect to undergo a vasectomy
- Younger men: higher regret & should be offered more time for reflection

Female partner consent is not required

- Encourage patients to inform their female partners

Anesthetic: Local anesthetic is sufficient

27-gauge needle or smaller

Sedation/GA

- Scrotal surgery
- Difficult to feel vas
- Vasectomy failure
- Patient discomfort/anxiety



No Needle Vasectomy – Pneumatic Injector

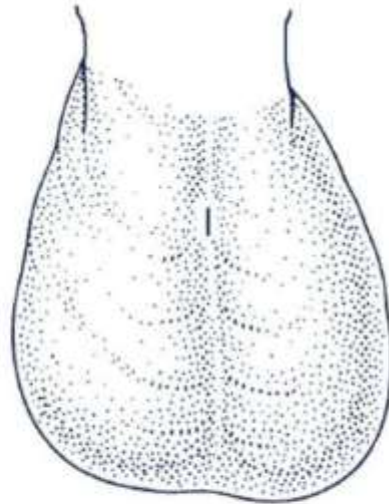
No clear benefit, needle phobia



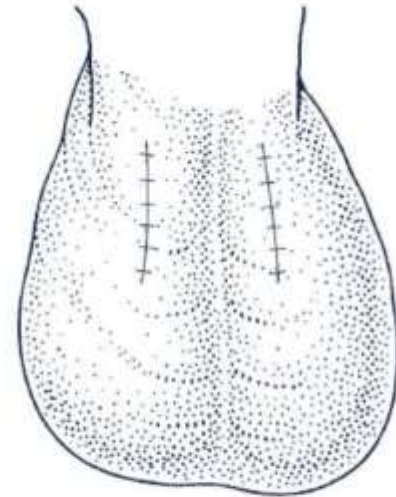
Approach to the Vas Conventional vs. No-Scalpel Vasectomy



No-Scalpel Vasectomy: Exposing one of the two vas tubes



No-Scalpel Vasectomy: No stitches are needed to close the tiny opening



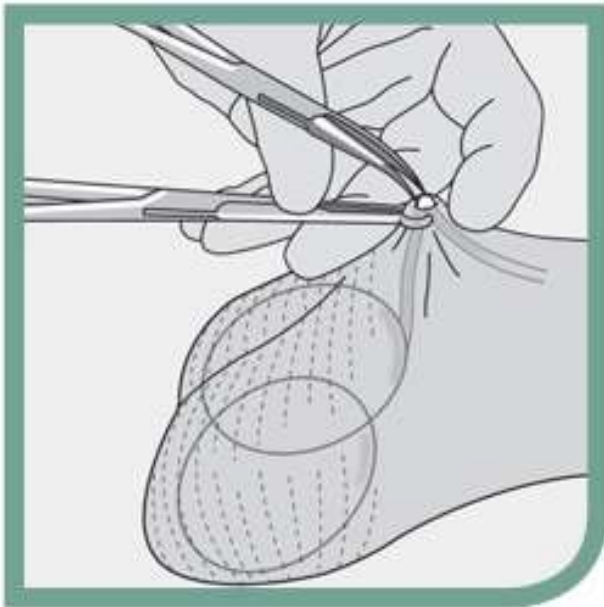
Conventional Vasectomy: Two moderate incisions stitched closed

NSV – Sharp, piercing forceps to puncture the skin midline



Conventional: Scalpel used to make 2 incision to access the vas

Approach to the Vas No-Scalpel Vasectomy



Cochrane Review of Randomized Trials
NSV Significantly less

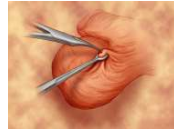
- Hematoma
- Pain during surgery
- Postoperative pain
- Wound infection
- Time to complete the procedure

No difference in *sterilization success* rates vs.
Conventional vasectomy

CUA guideline: Vasectomy

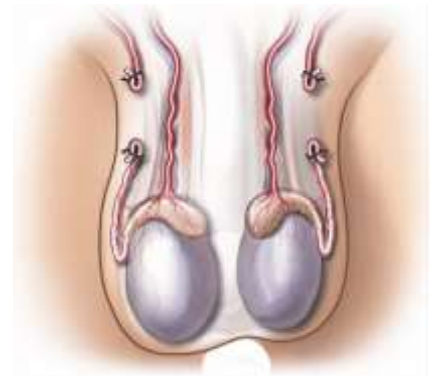
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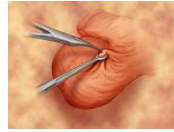
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Vasectomy Technique

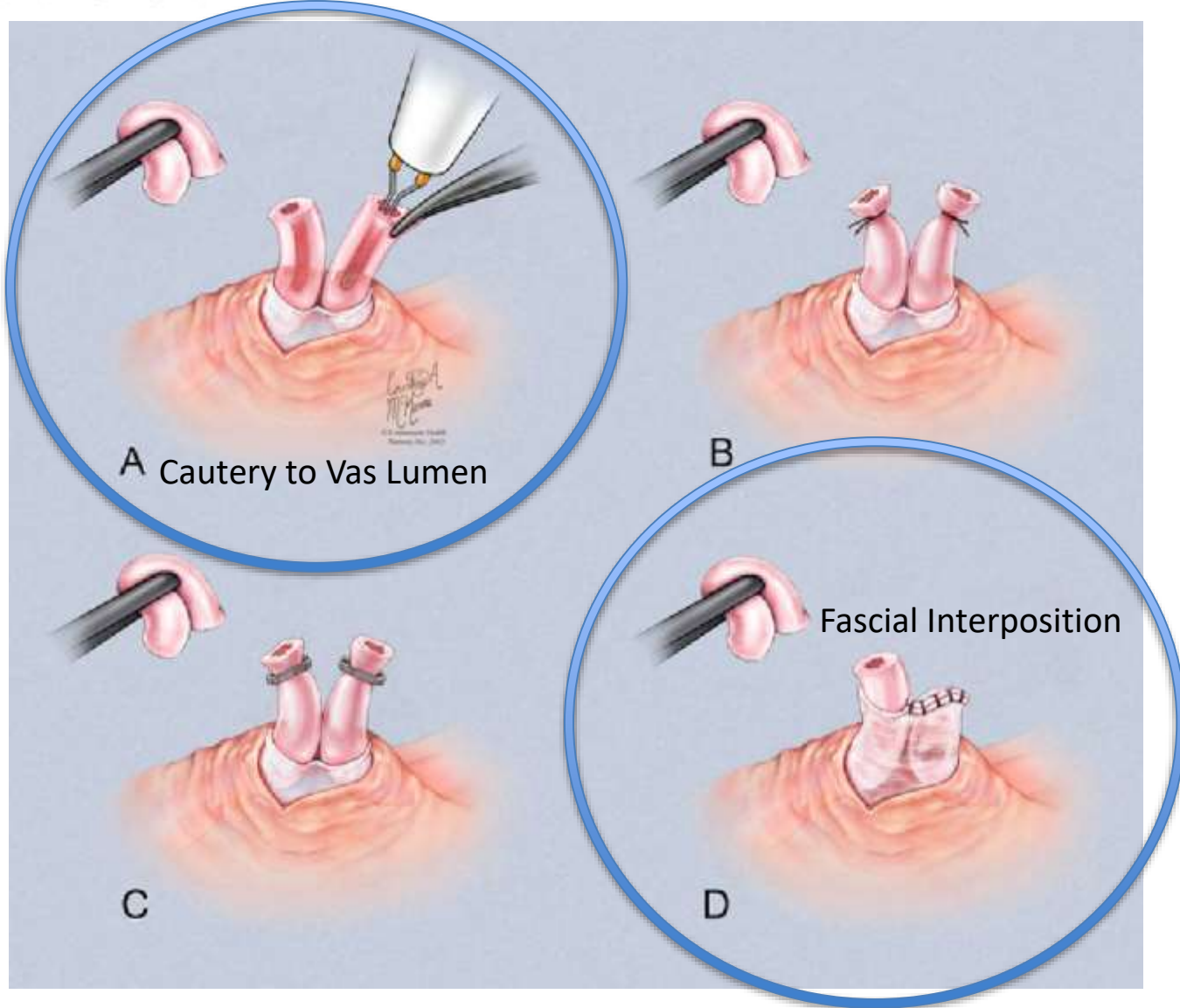
Best Occlusive Method for Contraceptive Success?





Vasectomy Technique

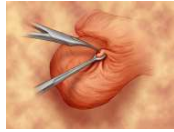
Highest rates of Azoospermia - No Sperm



CUA guideline: Vasectomy

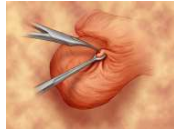
Armand Zin, MD, Justin Grantmyre, MD, Peter Chan, MD

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Postoperative Counselling

- Short period of monitoring (10-15 mins) - bleeding/vaso-vagal reaction
- Basic wound care
- Physical limitations following vasectomy



Postoperative Counselling

Vasectomy is NOT immediately effective –

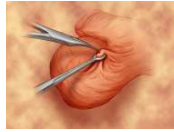
- Instruct patients to use other contraceptive measures until post-vasectomy semen testing confirms the absence of moving sperm
- 30% of men fail to get a sperm count post vasectomy



CUA guideline: Vasectomy

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Post-Vasectomy Semen Testing

The Semen Sample - Collection:

- Complete ejaculate
- 2-7 days of abstinence
- Maintained at body temperature
- Delivered to lab: 30-60 mins

Number of samples required?

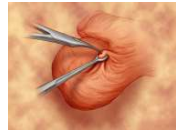
- At least 1, possibly more



How long after the vasectomy?

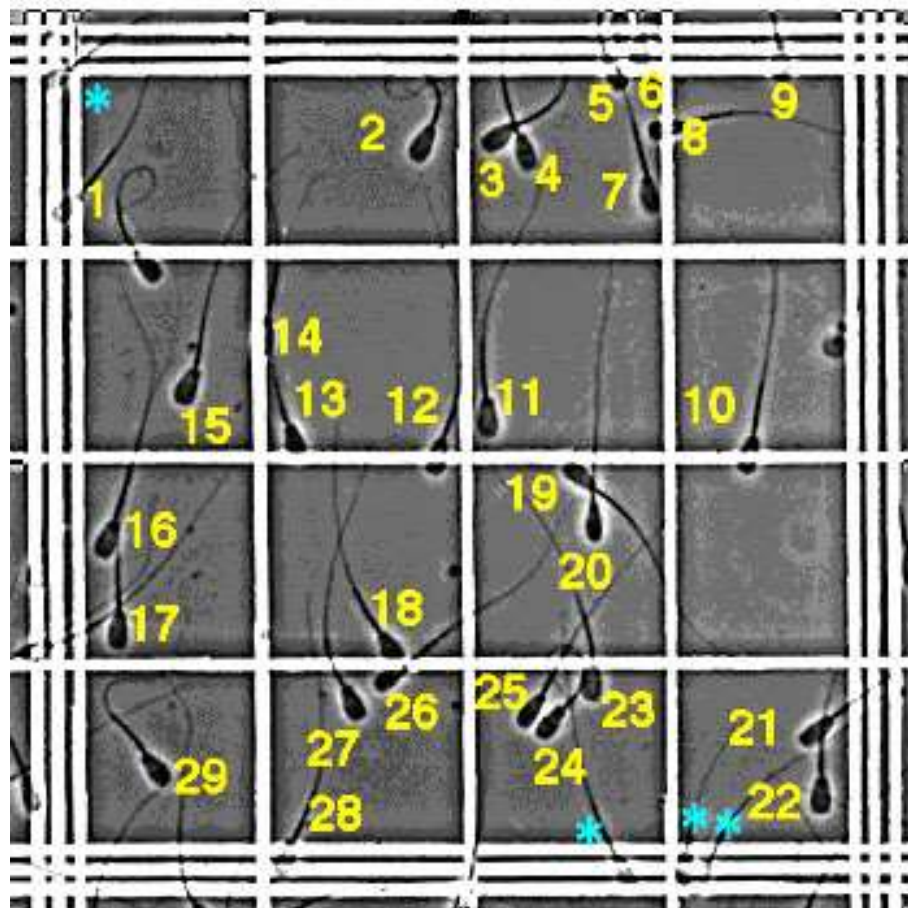
- Can depend – vasectomy technique, # ejaculates
- Limit false positives, limit need for repeat testing
- *Recommendation: Get tested after about 3 months*

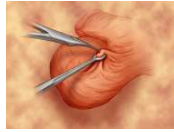
December 2011	January 2012	February 2012
1 2 3 4 5 6 7	1 2 3 4	1
8 9 10 11 12 13 14	5 6 7 8 9 10 11	2 3 4 5 6 7 8
15 16 17 18 19 20 21	12 13 14 15 16 17 18	9 10 11 12 13 14 15
22 23 24 25 26 27 28	19 20 21 22 23 24 25	16 17 18 19 20 21 22
29 30 31	26 27 28 29 30 31	23 24 25 26 27 28 29



Post-Vasectomy Semen Testing

Counting Sperm & Determining Sperm Concentration:





Post-Vasectomy Semen Testing

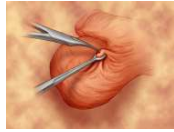
Interpreting the Semen Test Results - **Was the Vasectomy Successful?**

Contraceptive measures can be abandoned after a vasectomy if a man has produced:

- ***single azoospermic sample*** or
- a sample with **rare (<100,000 sperm) non-motile sperm**
 - At 3 months, 20-30% of men will have *rare non-motile sperm*, however the future pregnancy risk is no different vs. azoospermia

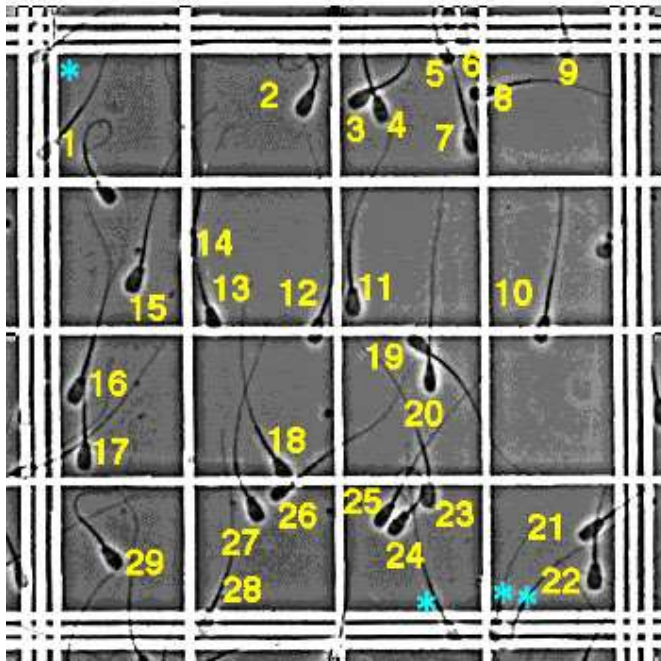
Under these conditions – the future pregnancy risk is 1/2000

- **99.95%** effective preventing pregnancy

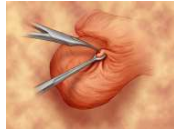


Post-Vasectomy Semen Testing

Defining Azoospermia & Rare non-motile sperm



- Azoospermia = 0 sperm/10 hpf
- Rare non-motile sperm = no more than 1 non-moving sperm in 10/hpf



Post-Vasectomy Semen Testing

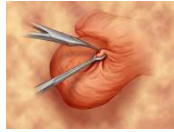
Interpreting the Semen Test Results - **Was the Vasectomy Successful?**

Not Successful:

- Any motile sperm in the ejaculate
- >100,000 non-motile sperm
- It is the physicians responsibility to communicate the results to patient – not the labs!
- Continue other forms of contraception
- Repeat the semen analysis (2-3 months)

If findings are persistent – Repeat the vasectomy





Post-Vasectomy Semen Testing

Counting Sperm:

- A good lab is important! Good techniques & use appropriate terms when reporting their findings (Rare? Occasional?)
- Understanding & reporting *motility* is really important



Post-Vasectomy Semen Testing

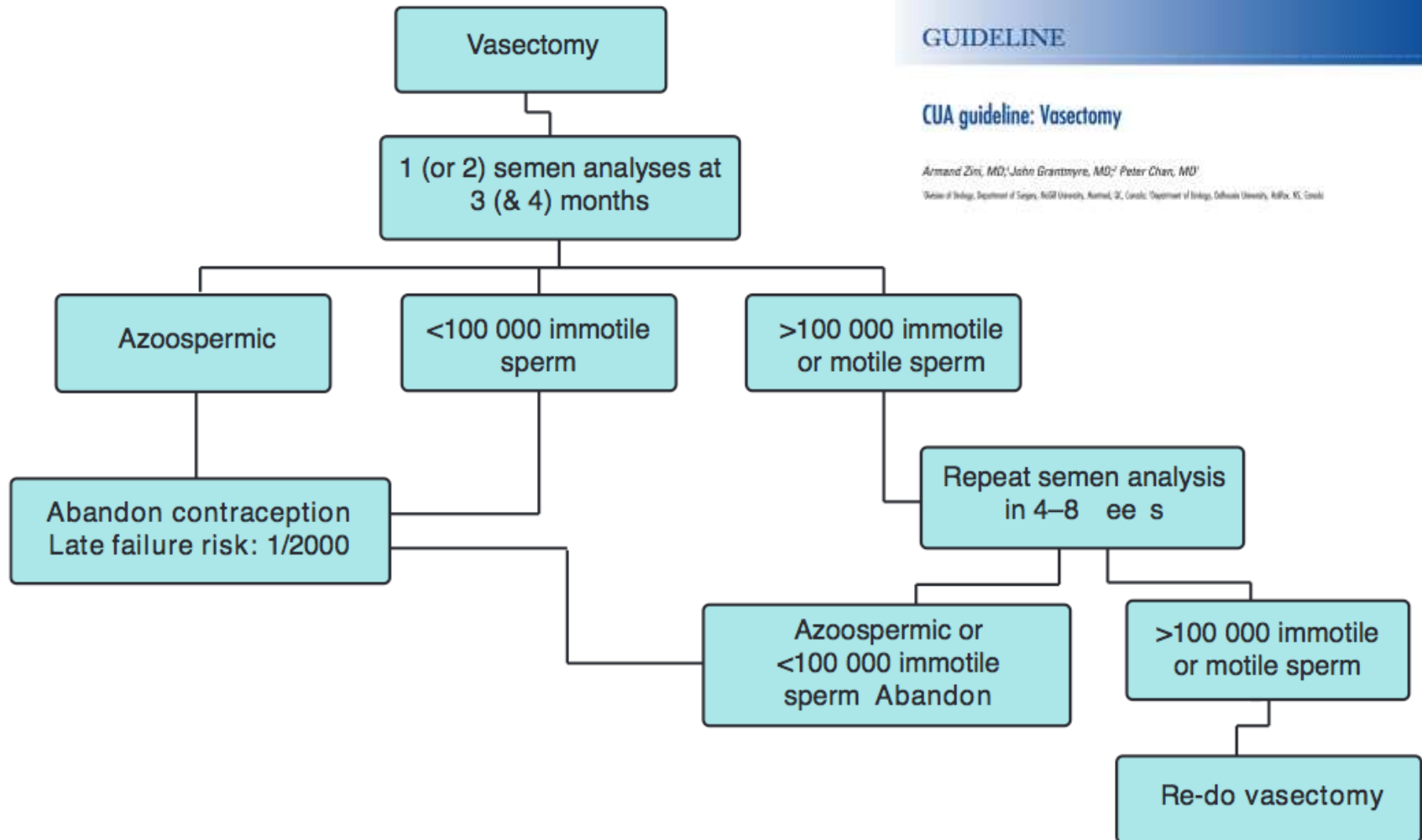



Fig. 1. Proposed algorithm for post-vasectomy testing protocol.

Decidedly done with the business of making babies, this dad explains why getting a vasectomy is one of the manliest moves he's ever made

BY DAVID EDDIE
PHOTOGRAPHY BY CARLO MENDOZA



IT TAKES BALLS

Quick Examination Before We Get Started



A Small Needle Into Your Scrotum



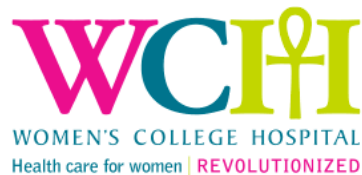
A Few Minutes Later -We Are All Done!
NO SWEAT!



Vasectomy: Does Technique Make A Difference? CUA Vasectomy Guidelines

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Department of Surgery, Division of Urology**



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