

# NASG APPLICATION



Applying the NASG

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## Applying the NASG

This unit is designed so that an individual with or without clinical training can train others to apply the NASG on a haemorrhaging woman in shock. In order to best facilitate this training, make sure that you have all of the materials listed below. You should also review the websites listed to be familiar with additional tools that may help facilitate this unit.

If, as the trainer, you do not have much experience with the NASG, you should practice application and removal until you are proficient. [Watch Saving Mother's Lives: The NASG Training Video](#) and practice with other trainers or on models. You should even try having someone apply it to you, so you can feel how tight it feels when properly applied.

Notice how your confidence and ease of use improve after you've handled it for a while. Your trainees will also gain confidence the more they use it.

Before beginning to use the NASG on patients, it is crucial that your trainees practice NASG application as much as possible. People will only use the NASG in an actual emergency setting if they have used it enough to feel comfortable with it.

There are three different application methods: (1) application on a conscious, average height woman, (2) application on a shorter woman, and (3) application on an unconscious woman. It is important that trainees have the opportunity to practice each application method.

**Lifelike drills:** One way to practice application is to make the situation as lifelike as possible. To do so, it may be helpful to have one person act as an obstetric haemorrhage patient in shock and/or go limp as an unconscious patient would. There are a few ways to make the application scenario more "lifelike":

1. PartoPants: Use an easily made, low cost pair of "Parto-Pants":

<http://prontointernational.org/partopants-birth-simulator-2/>



PartoPants are easy to make, special pants that can be worn by someone to simulate birth or demonstrate a complicated delivery or post-partum haemorrhage.

2. MamaNatalie: Another tool that can help with lifelike drills is the “MamaNatalie”:  
<http://www.laerdal.com/us/mamaNatalie#/Info>

The MamaNatalie is a birthing simulator tool that can be used to imitate a complicated delivery with post-partum haemorrhage. The company has a special program for purchasing for lower resource settings.

**Other practice models:** If you can’t do lifelike drills, use models, volunteers or have trainees practice on each other. You can also make soft cloth dolls or models to use, although the best experience is on a live person. Directions for making a [soft cloth life sized doll/model](#) can be found on our website: [www.safemotherhood.ucsf.edu/nasgtoolkit](http://www.safemotherhood.ucsf.edu/nasgtoolkit).



## OBJECTIVES:

**By the end of this unit, all trainees should be able to:**

1. Know when to apply the NASG on a haemorrhaging woman
2. Have the opportunity to practice NASG application
3. Correctly apply the NASG on a (1) conscious, average height, (2) shorter, and (3) unconscious woman according to the NASG Checklist

Before beginning this training, the trainer should be sure to review local and national guidelines for prevention, identification, and management of obstetric haemorrhage and shock. The trainer must know what the relevant guidelines are for estimated blood loss, blood pressure (BP), and pulse thresholds for referral and/or shock treatment. This will vary from place to place.



At the end of the unit, you will find a section called [Materials for Skills Practice](#), which includes a list of things you will need for the practical session with trainees. You may also want to have:

- At least one NASG for demonstration purposes
- [PowerPoint presentations](#) for this unit
- [NASG Application Job Aid for Facility Level](#)
- Downloaded copy of Saving Mother's Lives: [The NASG Training Video](#)
- Copies of the [Checklists for Trainers and Trainees](#)
- A gurney, bed, large table, or flat surface to practice on

*Note: The following material is written so that it may be given directly to trainees if the trainer wishes to give printed materials as trainee handouts.*

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# Applying the NASG

## When to Apply the NASG:

The NASG should be applied to a woman who is experiencing obstetric haemorrhage and showing signs of shock. If a woman is in shock, she may show one or more of the following symptoms or signs:

1. Increased pulse/heart rate/tachycardia
2. Decreased blood pressure/hypotension
3. Rapid respirations/tachypnea
4. Pallor (pale skin)
5. Sweating/diaphoresis
6. Clamminess
7. Cold extremities
8. State of confusion or agitation
9. Loss of consciousness
10. May or may not have heavy external bleeding



## In this Unit You Will Learn Three Methods of Application

Each method of application has an icon associated with it, so you can easily see which method is being described.



### 1. How to apply to a conscious woman who is average height

*The icons are an average height woman and an open eye.*



### 2. How to apply to a conscious woman who is shorter than average

*The icons are a shorter woman and an open eye.*



### 3. How to apply to an unconscious woman

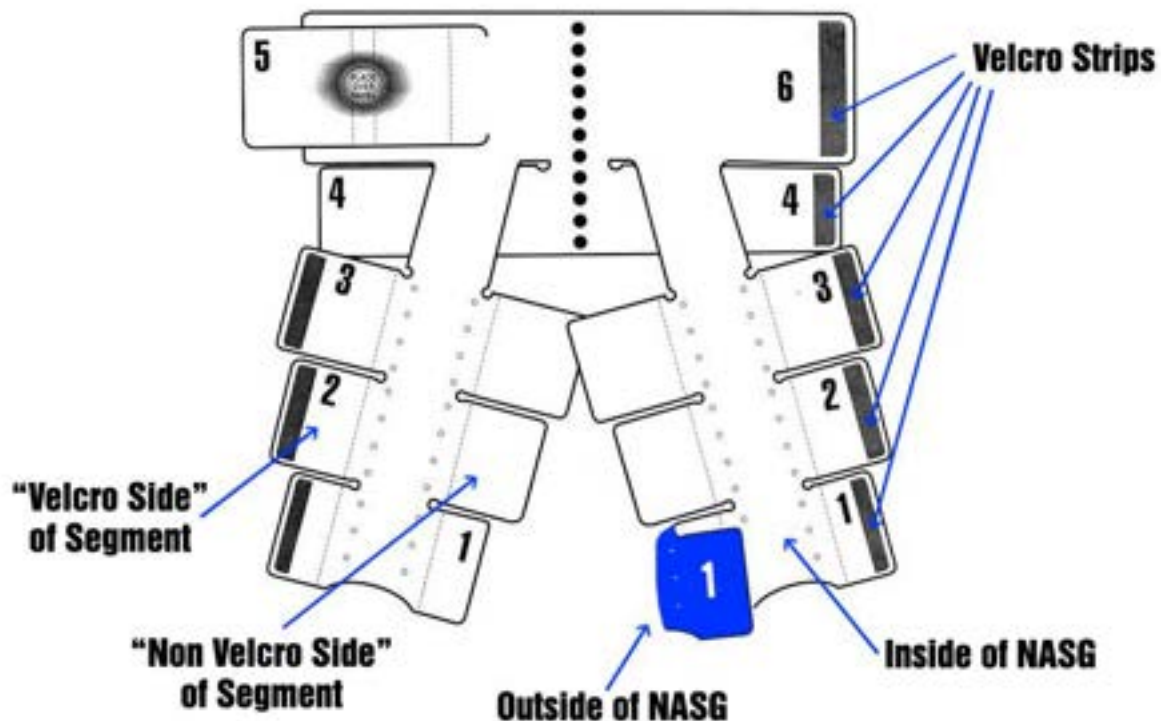
*The icon is a pair of closed eyes.*



## Overview of Application on All Women

The NASG is applied from segment pair #1 up the woman's body to segment #6, starting with the ankles and ending with the abdomen. The leg segments are comprised of segment pairs: segment pair #1 wraps around the ankles, segment pair #2 wraps around the calves, and segment pair #3 wraps around the thighs. Each pair must be closed completely before moving upward to apply the next pair. For example, segments #1 must be applied to both ankles before moving on to apply segments #2 to both calves.

The segments are closed with Velcro. Each segment has a side with a Velcro strip, which we call the "Velcro-side" and a plain side without a Velcro strip, which we call the "non-Velcro side." The NASG has an inside and an outside. The Velcro sticks to the outside surface only.



## Applying Tightly

To apply tightly, apply each segment by first pulling the non-Velcro side, with all your strength, across the leg or body. Hold the segment in place with that hand. Next, using your other hand, pull the Velcro side of the segment, with all your strength, over the leg or body. Move the first hand out and secure the Velcro side to the neoprene.



Use both hands and all your strength to close each segment  
([see below](#) for step by step instructions)

## The “SNAP TEST”



How do you know if the NASG is tight enough? You can check it by performing the “**SNAP TEST.**” Put one or two fingers under the top layer of the NASG segment. Pull the fabric up and then let it go. If the segment is tight enough, the fabric will snap and you will hear a sharp sound, like the sound when you snap your fingers.

If the sound is dull and soft, the segment is too loose. Quickly undo the segment, then reapply using more strength. Check the tightness of each segment using the **SNAP TEST** as you apply the NASG and before moving on to the next segment pair.



**SNAP TEST**  
([see below in Step 4](#) for directions on how to perform SNAP TEST)





## NASG APPLICATION on an Average Height, Conscious Woman



### STEP 1

When a woman is in shock, call for help. Know where your NASGs are stored.



**Know where your  
NASGs are stored**





## STEP 2

If the woman is conscious, lying down, and can move, first ask her to raise her feet and then slide the NASG up to her hips. Next ask her to place her feet flat on the surface and slide the open NASG underneath her.



**Open the NASG and ask the woman to raise her feet**



**Slide the NASG under her legs to her hips**



**Ask the woman to put her feet flat**



**Ask her to raise her hips**



If the woman is sitting up in a wheelchair, chair, or already standing, spread the NASG out on a bed or flat surface, and ask the woman to lie down on the NASG.



**NASG opened on flat surface**



**Woman lying on opened NASG**





## STEP 3

Make sure the NASG is in the proper position on the woman. Place it so that the top of the NASG is at her lowest rib. Place the ball in segment #5 over her umbilicus (navel, belly button), but don't close it.



**Check that the top of the NASG is at the level of the woman's lowest rib**



**Place the ball in segment #5 over the umbilicus, but don't close the #6 segment**





## STEP 4

Starting at her ankles, close segment pair #1 tightly around each ankle. (If segment pair #1 extends past her feet, see instructions below for [Application on a Shorter Woman.](#))



Starting at her ankles, close segment pair #1 tightly around each ankle

### To apply tightly, apply each segment by

- Using one hand, pull the non-Velcro side with all your strength across the leg or body.*
- Hold the segment in place with that hand, while using your other hand to pull the Velcro side of the segment straight up.*
- Next, pull the Velcro side of the segment, with all your strength, over the leg or body.*
- Move the first hand out and secure the Velcro side to the non-Velcro side.*

*The pictures on the following pages show application of segment #2, but the same principle applies to all segments.*





## NASG ▪ APPLICATION



**Hold the non-Velcro side of the segment  
in one hand**



**Using one hand, pull the non-Velcro side,  
with all your strength, across  
the leg or body**



**Hold the segment in place with that hand  
while pulling straight up on the  
Velcro side of the segment**





**Next, pull the Velcro side of the segment, with all your strength, over the leg or body**



**Move the first hand out and secure the Velcro side to the non-Velcro side**



**To make sure the application is tight enough, perform the SNAP TEST**





TRAINER



FACILITY

NASG ▪ APPLICATION

## SNAP The “SNAP TEST”



Once you have placed the NASG segment on the leg, there will be two layers of neoprene



Place one or two fingers between the top layer of the segment and the second layer of the segment



Pull straight up with your finger, then release the top layer



The neoprene will make a sharp snapping sound. This means the segment has been applied tightly enough



## Applying Leg Segments with Two People

If there are two people available, each person can work on one leg, so that segment pair #1 (ankles), segment pair #2 (calves), and segment pair #3 (thighs) are applied at the same time. If only one person is available, then that person should apply both segments #1, then both segments #2, and then both segments #3. If applying the NASG alone, do not complete one leg and then the other. Instead, be sure to apply each segment pair before moving to the next segment pair further up on the body.



**Two people, one on each leg, can rapidly close the leg segments**





## STEP 5



Close segment pair #2 on each calf as tightly as possible. Be sure to close the segments tightly enough so that you hear a sharp sound when you do the **SNAP TEST**.



## STEP 6

Apply segment pair #3, the thigh segments, in the same way as segment pairs #1 and #2. Try to leave room so that the woman's knee can bend between the two segments placed above and below the knee (segment pair #2 and segment pair #3), but note that this is not as important as rapid application. Be sure to close the segments tightly enough so that you hear a sharp sound when you do the **SNAP TEST**.



**Apply segment pair #3, the thigh segments, in the same way as segment pairs #1 & #2**





**Try to leave the knee free so it can bend.  
However, rapid application is more  
important than a bending knee**



## STEP 7

Segment #4, the first single segment, goes around the woman's pelvis. It is very important that only one person apply segments #4, #5 and #6. If two people apply these segments, you may apply too much pressure and cause breathing problems for the woman.



**Segment #4, the first single segment,  
goes around the woman's pelvis**





## STEP 8

Place segment #5 (the segment with the pressure ball) directly over her umbilicus (navel, belly button). Segment #5 is a half segment, it has no Velcro side and it doesn't wrap around the woman. Then cover segment #5 with the non-Velcro side of segment #6 as tightly as possible. Like segment #4, only one person should close segments #5 and #6.



**First place segment #5 with the ball over the woman's umbilicus (navel, belly button)**



**Next, stretch the non-Velcro side of segment #6 over segment #5 and hold it firmly in place with one hand**





**Next, stretch the Velcro side of segment #6 up and over the abdomen, and secure it tightly**

Close the #6 segment by using all your strength to stretch the Velcro part of segment #6 over the non-Velcro part of segment #6.

### **If the Woman is Larger Than Average**



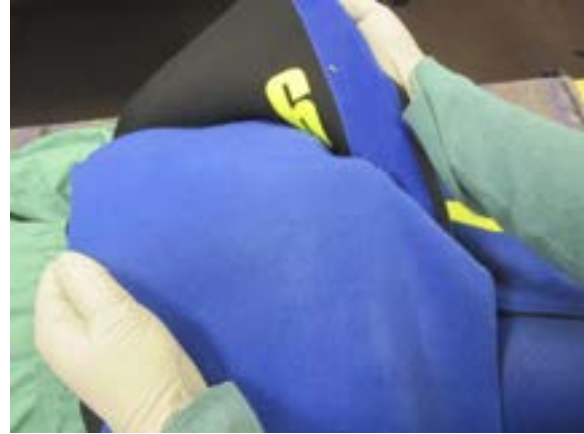
If the woman is large, you may need to get as close to her as possible, even getting up on the bed, and on the same side as the Velcro side, if possible. Use leverage to pull the segment straight up, then pull across her body.



Make sure the patient can breathe normally with the NASG in place by asking her to take a deep breath. Most women will be able to take a deep breath easily. If she cannot take a deep breath, loosen the abdominal segment #6 slightly; **do not remove the abdominal segment, #6.**



Release the Velcro while holding the non-Velcro side in place



Keep holding the non-Velcro side while you move the Velcro side to loosen it



Close the segment a little less tightly, then ask her again if she can take a deep breath

**End of Step-By-Step Application on an Average Height, Conscious Woman**



Once the NASG is completely applied, you can check the uterus to see if it is firm. Place one hand under segment #5 (the segment with the ball) so that your hand is directly on the woman's abdomen and give uterine massage. The NASG will stretch to allow your hand to fit between segment #5 and the woman's abdomen.



Place one hand under segment #5 (the segment with the ball), so that your hand is directly on the woman's abdomen, and give uterine massage



**Follow standard procedures for obstetric haemorrhage and hypovolemic shock, based on haemorrhage etiology.** If your facility cannot provide blood transfusions or surgery or you have placed the NASG outside a facility, the woman must be transferred in the NASG to a higher level facility. (See the unit on [Referring and Transporting Women in the NASG.](#))





## NASG APPLICATION on a Shorter Woman



### STEP 1

First place the woman on the NASG or slide the NASG under the woman. Make sure the top of the NASG is at the woman's lowest rib.



**Make sure the top of the NASG is at the level of the woman's lowest rib**



**Place the ball in segment #5 over her umbilicus (navel, belly button), but do not close it**





## STEP 2

Now go down to her feet. If the woman is shorter, the NASG segment pair #1 will go past her feet.



**If the woman is shorter, the NASG segment pair #1 will go past her feet**



**You can make the NASG shorter**



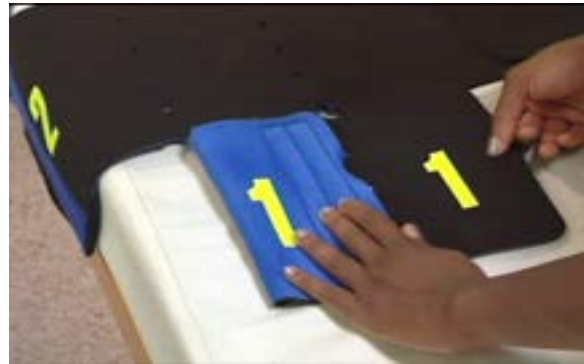


## STEP 3

To make the NASG shorter:



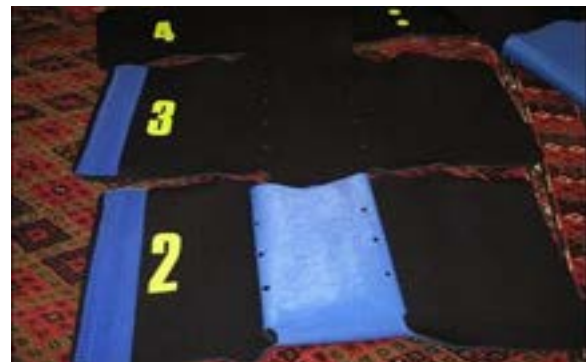
**First, fold the Velcro side in**



**Then fold the plain, non-Velcro side on top of the Velcro side**



**When it is closed correctly you will not be able to see the Velcro**



**Fold closed segment pair #1 up into the inside of #2 segment pair**





## STEP 4



Apply segment pair #2 on the patient's ankles.

**Apply segment pair #2  
on the patient's ankles**



## STEP 5



Apply segment pair #3 to the thighs, as on an average height woman.



## STEP 6

Continue to apply the rest of the segments as you would to any woman.

See [Step 7](#) of Application on an Average Height, Conscious Woman





## NASG APPLICATION on an Unconscious Woman



### STEP 1



Turn the woman on her left side. Lay an NASG on the bed or floor next to her and open only segments #4, #5 and #6. Keep segment pairs #1, #2 and #3 closed, but not fastened with Velcro. (See **Cleaning and Folding Unit** for the correct way to keep NASG from sticking).

Lay an NASG on the bed or floor next to her and open only segments #4, #5 and #6





## STEP 2

Fold the Velcro strips on segments #4 and #6 (on the side without the ball) once towards the yellow midline dots (towards the black side of the NASG).



**Segments #4 and #6  
with Velcro strips on the edge**



**Velcro strips rolled toward the inside**



## STEP 3

*Roll* segments #4 and #6 toward the yellow dotted midline again so that the rolled edge is lined up along the yellow dotted midline.



**Roll the Velcro sides of  
segments #4 and #6 all the way to the  
midline yellow dots**



**The NASG will now  
be folded in half**





## STEP 4

With the woman still on her left side, place the rolled NASG on the bed with the dotted line along the woman's spine and the top edge of the NASG at the level of her lowest rib. Place the rolled segments #4 and #6 under her body.



**Place the rolled segments #4 and #6 under her body**



## STEP 5

Next turn the woman over the rolled portions of the NASG. She should now be on her right side. The person on her left (behind her) now pulls the rolled segments #4 and #6 out from under the woman.



**Pull the rolled segments #4 and #6 out from under the woman**





## STEP 6

Turn the woman on her back. She is now lying with the top edge of the NASG at her lowest rib. Although you can't see them without looking under her, the yellow dots should be centered along her spine. Check the position of the NASG by placing, but not closing, segment #5 with the ball over her umbilicus. Adjust the NASG if it is NOT over her umbilicus.



The woman should now be lying on an opened NASG



## STEP 7

Begin with segment pair #1 and apply the NASG on the woman in the same order as you would a conscious woman (See [Application on a Conscious Woman](#), if she is shorter, see [Application on a Shorter Woman](#)). Keep in mind that you must close the segments tightly enough that you can hear a snapping sound when you do the **SNAP TEST**.



Make sure to check all segments using the "SNAP TEST"



## ***Materials for Skills Practice***

1. NASGs
2. Gloves
3. NASG Application Checklist
4. A model, doll or a volunteer
5. A partner for application on an unconscious woman and/or for more rapid application of leg segments
6. NASG Video (application training is at 1 minute 20 seconds (1:20) in the NASG training video)

## **Checklists for Learning and Practice**

It is important for the trainees to practice the skills learned in each unit so that they become comfortable enough to use these skills in real life settings. To ensure that trainees have learned the key steps to NASG application, they should practice using the following Trainee Checklist as a learning tool. After practicing application at least 3 times, they should apply the NASG without looking the Trainee Checklist, while you or a peer observes and reviews their NASG application recording your observations on the Trainer Checklist.



## Trainee: Learning & Skills Self-Assessment

*To the Trainee:* You can use this checklist while first learning, practicing, or doing drills by following each step. Practice on another health care worker or on a volunteer, but not on a pregnant woman. Once you feel you know how to apply the NASG, you can assess your skills by application on a volunteer or model without using the checklist, and then reviewing the application by using the checklist to be sure you completed all the steps correctly and in the right order.





## Trainee Checklist: NASG Application on an Average Height, Conscious Woman

NASG Application on an Average Height, Conscious Woman [Trainee]	
STEPS TO NASG APPLICATION	✓ If Done
1. Place the NASG under the woman with the top edge of the NASG at the level of the woman's lowest rib and the pressure ball over her umbilicus. Do not close segments #5 and #6.	
2. Turn to the woman's feet; if the #1 segment extends past her feet, go to the checklist for applying the NASG to a shorter woman.	
3. If you are practicing and learning with another health care worker, two people can apply the leg segment pairs (#1, #2, #3) at the same time.  Close segment pair #1 tightly around each ankle. Pull back the fabric and snap it to make a sharp sound. If the sound is dull, tighten the segment ( <b>SNAP TEST</b> ).	
4. Close segment pair #2 on each calf as tightly as possible. If possible, leave room so that the woman's knee can bend between the two segments placed above and below the knee. Do the <b>SNAP TEST</b> .	
5. Apply segment pair #3, the thigh segments. Do the <b>SNAP TEST</b> .	
6. Apply segment #4 around the woman's pelvis; only one person should apply segment #4.	
7. Place segment #5 with the pressure ball over her umbilicus; only one person should apply segment #5.	
8. Close segment #6; only one person should apply segment #6.	
9. Make sure the patient can breathe normally with the NASG in place by asking her to take a deep breath. If she cannot, loosen the NASG and then ask her again to take a deep breath.	

*Review the checklist. If you left out two or more steps, or did them out of order, practice the NASG application again as often as you need to feel competent. Then repeat the application with an observer watching you with the checklist. Do the same thing with the checklists for **SHORTER WOMAN** and **UNCONCIOUS WOMAN**.*





## Trainee Checklist: NASG Application on a Shorter, Conscious Woman

NASG Application on a Shorter, Conscious Woman: [Trainee]	
STEPS TO NASG APPLICATION	✓ If Done
1. Place the NASG under the woman with the top edge of the NASG at the level of the woman's lowest rib and the pressure ball over her umbilicus. Do not close segments #5 and #6.	
2. Turn to the woman's feet; if the #1 segment extends past her feet, pull the #1 segment to the side.	
3. Close the Velcro side of segment #1 onto the inside of the segment.	
4. Fold the non-Velcro side of segment #1 over the Velcro side, so the Velcro side will not be visible.	
5. Fold the closed segment #1 up into the inside of segment #2, do this on both legs of the NASG.	
6. Begin application with segment pair #2 at the ankles.	
<i>The remaining steps are the same as steps 3-9 on an average height, conscious woman.</i>	
7. If you are practicing and learning with another health care worker, two people can apply the leg segment pairs (#2, #3) at the same time.  Close segment pair #2 on each ankle as tightly as possible. If possible, leave room so that the woman's knee can bend between the two segments placed above and below the knee. Pull back the fabric and snap it to make a sharp sound (SNAP TEST).	
8. Apply segment pair #3, the thigh segments. Do the SNAP TEST.	
9. Apply segment #4 around the woman's pelvis; only one person should apply segment #4.	
10. Place segment #5 with the pressure ball over her umbilicus; only one person should apply segment #5.	
11. Close segment #6; only one person should apply segment #6.	
12. Make sure the patient can breathe normally with the NASG in place by asking her to take a deep breath. If she cannot, loosen the NASG and then ask her again to take a deep breath.	

Review the checklist. If you left out two or more steps, or did them out of order, practice the NASG application again as often as you need to and then repeat the application with an observer or your trainer.





## Trainee Checklist: NASG Application Unconscious Woman

NASG Application on an Unconscious Woman [Trainee]	
STEPS TO NASG APPLICATION	✓ If Done
1. Call for help.	
2. Turn woman to her left side.	
3. Lay NASG on floor or bed next to woman with segments #4, #5, and #6 open, and with leg segment pairs #1, #2, and #3 closed. The ball in segment #5 should be behind the woman.	
4. Fold Velcro strips in segments #4 and #6 once to the inside towards the painted yellow dots.	
5. Roll segments #4 and #6 towards the yellow midline dots until the folded edge is lying along the yellow dots.	
6. Place rolled NASG so that yellow dots are along the woman's spine, and the top edge of the NASG is at her lowest rib.	
7. Push the rolled segments #4 and #6 under the woman's body.	
8. Turn the woman over the rolled segments so that she is now lying on her right side.	
9. The second person should pull out the rolled Velcro parts of segments #4 and #6.	
10. Turn the woman onto her back.	
11. Check position of the NASG by placing ball in segment #5 over her umbilicus, <i>but do not close segments #5 or #6.</i>	
12. Turn to the woman's feet; if the #1 segment extends past her feet, go to the checklist for applying the NASG to a shorter woman (or begin folding the #1 segment into the # 2 segment).	
<i>The remaining steps are the same as on an average height, conscious woman. If the woman is shorter add in the adjustment described in the checklist for application on a shorter woman.</i>	
13. If you are practicing and learning with another health care worker, two people can apply the leg segment pairs (#1, #2, and #3) at the same time.  Close segment pair #1 tightly around each ankle. Pull back the fabric and snap it to make a sharp sound. If the sound is dull, tighten the segment (SNAP TEST).	





## NASG ▪ APPLICATION

<b>14. Close segment pair #2 on each calf as tightly as possible. If possible, leave room so that the woman's knee can bend between the two segments placed above and below the knee. Do the SNAP TEST.</b>	
<b>15. Apply segment pair #3, the thigh segments. Do the SNAP TEST.</b>	
<b>16. Apply segment #4 around the woman's pelvis; only one person should apply segment #4.</b>	
<b>17. Place segment #5 with the pressure ball over her umbilicus; only one person should apply segment #5.</b>	
<b>18. Close segment #6; only one person should apply segment #6.</b>	
<b>19. Make sure the patient can breathe normally with the NASG in place by asking her to take a deep breath when she becomes conscious. If she cannot, loosen the NASG and then ask her again to take a deep breath.</b>	

*Review the checklist. If you left out two or more steps, or did them out of order, practice the NASG application again as often as you need to and then repeat the application with an observer or your trainer.*





## Trainer Checklists

**Trainers:** Use this checklist to assess the skill acquisition of the person you have trained. Tick “Yes” if the person did the step completely and in the right order. If there was anything incorrect, tick “No” and write what was incorrect in the comments box. Review with the trainee after completing the observations.





## Trainer Checklist: NASG Application on an Average Height, Conscious Woman



NASG Application - Conscious, Average Height Woman [TRAINER]			
STEPS TO NASG APPLICATION	Yes	No	Comments
1. Places the NASG under the woman with the top edge of the NASG at the level of the woman's lowest rib and the pressure ball over her umbilicus. Does not close segments #5 or #6.			
2. Turns to the woman's feet; if the #1 segment extends past her feet, goes to the checklist for applying the NASG to a shorter woman (or begins folding the #1 segment into the #2 segment).			
3. If there are two trainees, they can apply the leg segment pairs (#1, #2, #3) at the same time.  Closes segment pair #1 tightly around each ankle. Pulls back the fabric and snap it and makes a sharp sound. If the sound is dull, tightens it ( <i>SNAP TEST</i> ).			
4. Closes segment pair #2 on each calf as tightly as possible. If possible, leaves room so that the woman's knee can bend between the two segments placed above and below the knee. Does the <i>SNAP TEST</i> .			
5. Applies segment pair #3, the thigh segments. Does the <i>SNAP TEST</i> .			
6. Applies segment #4 around the woman's pelvis; only one person should apply segment #4.			
7. Places segment #5 with the pressure ball over her umbilicus; only one person should apply segment #5.			
8. Closes segment #6; only one person should apply segment #6.			
9. Makes sure the patient can breathe normally with the NASG in place by asking her to take a deep breath. If she cannot, loosens the NASG and then asks her again to take a deep breath.			





## Trainer Checklist: Application on a Shorter Woman



NASG Application on a Shorter Woman [Trainer]			
STEPS TO NASG APPLICATION	Yes	No	Comments
1. Places the NASG under the woman with the top edge of the NASG at the level of the woman's lowest rib and the pressure ball over her umbilicus. Does not close segments #5 and #6.			
2. Turns to the woman's feet; if the #1 segment extends past her feet, pull the #1 segment to the side.			
3. Closes the Velcro side of segment #1 onto the inside of the segment.			
4. Folds the non-Velcro side of segment #1 over the Velcro side, so the Velcro side will not be visible.			
5. Folds the closed segment #1 up into the inside of segment #2, does this on both legs of the NASG.			
6. Begins application with segment pair # 2 at the ankles.			
7. If there are two trainees, they can apply the leg segment pairs (#1, #2, #3) at the same time.  Closes segment pair #2 tightly around each ankle. If possible, leaves room so that the woman's knee can bend between the two segments placed above and below the knee. Pulls back the fabric and snaps it to makes a sharp sound. If the sound is dull, tightens it (SNAP TEST).			
8. Applies segment pair #3, the thigh segments. Does the SNAP TEST.			
9. Applies segment #4 around the woman's pelvis; only one person should apply segment #4.			
10. Places segment #5 with the pressure ball over her umbilicus; only one person should apply segment #5.			
11. Closes segment #6; only one person should apply segment #6.			
12. Makes sure the patient can breathe normally with the NASG in place by asking her to take a deep breath. If she cannot, loosens the NASG and then asks her again to take a deep breath.			





## Trainer Checklist: NASG Application on an Unconscious Woman



NASG Application on an Unconscious Woman [TRAINER]			
Steps to NASG Application	Yes	No	Comments
1. Calls for help.			
2. Turns woman to her left side.			
3. Lays NASG on floor or bed next to woman with segments #4, #5, #6 open, and with leg segment pairs #1, #2, and #3 closed. The ball in segment #5 should be behind the woman.			
4. Folds Velcro strips in segments #4 and #6 once to the inside towards the painted yellow dots.			
5. Rolls segments #4 and #6 towards the yellow midline dots until the folded edge is lying along the yellow dots.			
6. Places rolled NASG so that yellow dots are along the woman's spine, and the top edge of the NASG is at her lowest rib.			
7. Pushes the rolled segments #4 and #6 under the woman's body.			
8. Turns the woman over the rolled segments so that she is now lying on her right side.			
9. The second person pulls out the rolled Velcro parts of segments #4 and #6.			
10. Turns the woman to her back.			
11. Checks position of NASG by placing ball in segment #5 over her umbilicus, <i>but does not close segments #5 or #6.</i>			
12. Turns to the woman's feet; if segment #1 extends past her feet, goes to the checklist for applying the NASG to a shorter woman (or begins folding segment #1 into segment #2).			
13. If there are two trainees, they can apply the leg segment pairs (#1, #2, and #3) at the same time.  Closes segment pair #1 tightly around each ankle. Pulls back the fabric and snap it to makes a sharp sound. If the sound is dull, tightens it ( <i>SNAP TEST</i> ).			





## NASG ▪ APPLICATION

<b>14. Closes segment pair #2 on each calf as tightly as possible. If possible, leaves room so that the woman's knee can bend between the two segments placed above and below the knee. Does the SNAP TEST.</b>			
<b>15. Applies segment pair #3, the thigh segments. Does the SNAP TEST.</b>			
<b>16. Applies segment #4 around the woman's pelvis; only one person should apply segment #4.</b>			
<b>17. Places segment #5 with the pressure ball over her umbilicus; only one person should apply segment #5.</b>			
<b>18. Closes segment #6; only one person should apply segment #6.</b>			
<b>19. Makes sure the patient can breathe normally with the NASG in place by asking her to take a deep breath when she becomes conscious. If she cannot, loosens the NASG and then asks her again to take a deep breath.</b>			



## Knowledge Assessment

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*Trainees should be able to answer the following questions. See below for correct answers. Review any incorrect responses with trainees to ensure they have understood the material.*

1. Always start application by closing the abdominal segments (#5 and #6). **(True/False)**
2. What should you do to ensure that the leg segment pairs (#1, #2, and #3) are applied tightly enough?
  - a. Ask the patient if they feel tight enough.
  - b. Pull up on the top layer of each closed leg segment with one or two fingers and then let go; if it is tight enough, the segment should make a sharp “snap” sound.
  - c. Don’t worry about how tight the leg segments are.
  - d. If the Velcro is completely fastened, the leg segment is tight enough.
3. When placing the NASG under the woman, the top edge of the NASG should be level with the patient’s
  - a. Umbilicus (navel, belly button)
  - b. Lowest rib
  - c. Shoulder
  - d. Elbow
4. When placing the leg segments, you should cover the knee with the segments, so that the woman cannot bend her knee. **(True/False)**
5. The ball in segment #5 should be placed directly over the woman’s umbilicus (navel, belly button). **(True/False)**



## Knowledge Answers

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1. Always start application by closing abdominal segments (#5 and #6). **(True/False)**

**Answer: False. Application always starts at the ankles with segment pair #1 (or segment pair #2 for short women).**

2. What should you do to ensure that the leg segment pairs (#1, #2, #3) are applied tightly enough?
- Ask the patient if they feel tight enough.
  - Pull up on the top layer of each closed leg segment and then let go; if it is tight enough, the segment should make a sharp “snap” sound.
  - Don’t worry about how tight the leg segments are.
  - If the Velcro is completely fastened, the leg segment is tight enough.

**Answer: b. Pull up on the top layer of each closed leg segment with one or two fingers and then let go; if it is tight enough, the segment should make a sharp “snap” sound (SNAP TEST).**

3. When placing the NASG under the woman, the top edge of the NASG should be level with the patient’s
- Umbilicus
  - Lowest rib
  - Shoulder
  - Elbow

**Answer: b. Lowest rib**

4. When placing the leg segments, you should cover the knee with the segments, so that the woman cannot bend her knee. **(True/False)**

**Answer: False. When placing leg segments, you should try not to cover the knee so that the woman can bend it while wearing the NASG.**

5. The ball in segment #5 should be placed directly over the woman’s umbilicus (navel, belly button). **(True/False)**

**Answer: True**

