
Circles in Human Evolution: Genetics of Areola Diversity

Thank you for your interest in our study!

The following survey should take less than one hour to complete.

Part 1: QUESTIONS

You will be asked a series of questions about yourself. Please answer as accurately as possible.

Part 2: MEASUREMENTS and PHOTOS

You will perform an areola self-characterization. This part of the survey will require the kit that you received in the mail as well as a digital camera (not included in the kit). You should perform Part 2 of the survey in a private setting.

Please check that you are using a supported device to take this survey.

Supported platforms:

- personal computer
- iPhone
- iPad

NOT SUPPORTED:

- Android
- BlackBerry
- Windows
- Symbian
- non-iOS smart phones or tablets

Which supported device are you using to take this survey?

iPad or iPhone

computer

CONSENT TO PARTICIPATE IN RESEARCH

Before we get started we want you to understand what we will do with the data you provide.

Please use the link below to read the study consent form.

[Circles Consent for Review](#)

PARTICIPANT STATEMENT

I certify that I am the intended recipient of this informed consent document.

I have read (or had read to me) this consent form. I have been given the opportunity to ask questions and my questions were answered to my satisfaction.

I understand that I may refuse to participate in this study and that if I refuse to participate, this will not result in the loss of any benefits or services to which I am otherwise entitled. I agree to participate in this study. I also understand that if, for any reason, I wish to stop participating, I will be free to do so, and this will have no effect on my future care or services. I may print a copy of this consent form for my records.

I have read the consent form and I agree to participate in the study.

I do not consent to participate in the study.

Great! Let's get started!

Please enter the unique 5-digit identification number printed on the photo labels in your kit.

Please enter your PGP identification number. It starts with the letters "hu", for example: hu43860C. If you do not know your PGP ID number please log in to your PGP account to retrieve it.

How old are you?

How do you categorize your ancestry?
(you may check multiple options)

- Middle Eastern
- North African
- Sub-Saharan African
- Northern European
(includes British, Irish, Scandinavian, French, German, *etc.*)
- Southern European
- Eastern European
- Ashkenazi
- Native American or American Indian
- Oceanian
- East Asian
- Central/South Asian
- Afro-Caribbean
- Other (please specify)
- I don't know

Are you left or right handed?

- Left-handed
- Right-handed
- Other (please specify)

Where do you live?

What is your gender?

- Female
- Male

Are any of your blood relatives currently enrolled in this study? (Please only count *genetically*-related individuals)

- Yes
- No
- I don't know

Are you currently pregnant?

- Yes
 No

How many times have you been pregnant? (Please include all confirmed pregnancies)

How many children have you given birth to?

- 0
 1
 2
 3
 4
 5 or more (please specify)

How long did you breastfeed your child?
(Please include both nursing and extracting milk for bottle feeding)

	Did not breastfeed	Less than 6 months	7-12 months	1-2 years	more than 2 years
Child 1	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are you currently breastfeeding?

- Yes
 No

What is the age of your youngest child?

Have you ever taken any of the following medications?

	Never	Taking now	Taken previously	I don't know
Hormonal birth control	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Any other drug affecting: - estrogen - progesterone - testosterone	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How old were you when you got your period?

12 years old

When did your last menstrual cycle begin?

- Currently menstruating
- 1 week ago
- 2 weeks ago
- 3 weeks ago
- 4 weeks ago
- More than 4 weeks ago
- I do not currently get my period (pregnant, menopausal, etc.)

What is your menopausal status?

- I have regular periods without menopausal symptoms.
- Menopausal - I have irregular periods and hot flashes or other menopausal symptoms.
- Post-menopausal - I have completed menopause and have not had a period for more than 12 months.
- I don't know.

What is your bra size?

- | | | | | | | | | |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|--------------------------------------|-----------------------------|-----------------------------|-----------------------------|--|
| <input type="radio"/> 30AA | <input type="radio"/> 32AA | <input type="radio"/> 34AA | <input type="radio"/> 36AA | <input type="radio"/> 38AA | <input type="radio"/> 40AA | <input type="radio"/> 42AA | <input type="radio"/> 44AA | <input type="radio"/> 46AA |
| <input type="radio"/> 30A | <input type="radio"/> 32A | <input type="radio"/> 34A | <input type="radio"/> 36A | <input type="radio"/> 38A | <input type="radio"/> 40A | <input type="radio"/> 42A | <input type="radio"/> 44A | <input type="radio"/> 46A |
| <input type="radio"/> 30B | <input type="radio"/> 32B | <input type="radio"/> 34B | <input type="radio"/> 36B | <input checked="" type="radio"/> 38B | <input type="radio"/> 40B | <input type="radio"/> 42B | <input type="radio"/> 44B | <input type="radio"/> 46B |
| <input type="radio"/> 30C | <input type="radio"/> 32C | <input type="radio"/> 34C | <input type="radio"/> 36C | <input type="radio"/> 38C | <input type="radio"/> 40C | <input type="radio"/> 42C | <input type="radio"/> 44C | <input type="radio"/> 46C |
| <input type="radio"/> 30D | <input type="radio"/> 32D | <input type="radio"/> 34D | <input type="radio"/> 36D | <input type="radio"/> 38D | <input type="radio"/> 40D | <input type="radio"/> 42D | <input type="radio"/> 44D | <input type="radio"/> 46D |
| <input type="radio"/> 30DD | <input type="radio"/> 32DD | <input type="radio"/> 34DD | <input type="radio"/> 36DD | <input type="radio"/> 38DD | <input type="radio"/> 40DD | <input type="radio"/> 42DD | <input type="radio"/> 44DD | <input type="radio"/> 46DD |
| <input type="radio"/> 30DDD | <input type="radio"/> 32DDD | <input type="radio"/> 34DDD | <input type="radio"/> 36DDD | <input type="radio"/> 38DDD | <input type="radio"/> 40DDD | <input type="radio"/> 42DDD | <input type="radio"/> 44DDD | <input type="radio"/> Other (please specify) |

How often do you wear a bra during the day?

- Never
- Sometimes
- Every day

Do you wear a bra *while you are sleeping*?

- No
- Yes, sometimes
- Yes, always

Is your chest currently tanned?

(Tanning could result from tanning lotion, sunbathing, salon tanning, or other exposure to significant UV light.)

- Yes, my chest is tanned.
- No, my chest is not tanned.
- I do not know

Do you ever apply medications or topical products directly to your breasts, areolas, or nipples?
(Do not include sunscreen or ordinary body lotion)

- Yes
- No

Accessory breast tissue:

Some people have accessory breast-like tissue that occurs outside of the breast itself. Sometimes called a "third nipple," this tissue can actually include an extra nipple, extra areola, extra breast-like swelling, or a combination of these features. Typically, these accessory tissues occur somewhere between the arm pit, above or below the breast or toward the groin, although they have also been reported as far away as the feet.

Are you aware of having any accessory breast tissue on your body?

- No, I am not aware of having any accessory breast tissue on my body.
- Yes, I think that I have accessory breast tissue on my body.

Is there anything else you think we should know about your breast or areola appearance?

My areolas are extremely light in color, a very pale pinkish, barely distinguishable from the surrounding skin. It's difficult to determine their exact delineation.

Have you ever been diagnosed with any of the following conditions?

- Breast cancer
- Turner syndrome
- Ectodermal dysplasia
- Fibroadenoma
- Gynecomastia
- Poland syndrome
- Paget's disease
- Pseudomastia
- McCune-Albright syndrome
- Mammary duct ectasia
- Klinefelter syndrome
- Hyperthyroidism
- Hypothyroidism
- Other condition affecting breast biology or hormonal status
- None of the above

Have you ever had breast surgery?

- No
- Yes - Mastectomy
- Yes - Cyst removal
- Yes - Breast augmentation
- Yes - Breast reduction
- Yes - Breast lift
- Yes - Other (please specify)

Please enter your weight (in pounds)

▾

Please enter your height

▾

Have you ever been diagnosed as obese?

Yes

No

Have you ever lost more than 75 pounds?

Yes

No

How often do you engage in moderate to strenuous exercise?
(Please give an average for the past six months)

1-4 hours/week



You have completed Part 1 of this survey.

PART 2: Breast and Areola Characterization

For the rest of the survey, you will be guided through a breast and areola self-characterization. Using the materials from your kit, you will make measurements of your own body. You will also use a digital camera (not included in the kit) to take photographs.

Please perform Part 2 of the survey in a private setting, as **you will need to remove your shirt**. It is recommended that you have someone whom you trust help you take the measurements and photographs, if possible.

First you will measure your **CHEST CIRCUMFERENCE**.

Step 1. Remove your shirt and bra.

Step 2. Measure the distance around your rib cage just below your breasts using the measuring tape provided. Keep the tape measure parallel to the floor. When taking this measurement, use shallow breaths and keep your arms in a relaxed position down at your sides. The tape measure should be firm to your skin but not digging in.

Step 3. Record this measurement (in centimeters) in the space below the image.



Chest Circumference (CENTIMETERS)

Now you will measure your **BREAST CIRCUMFERENCE**.

Step 1: Shift the tape measure up to the fullest part of your breasts (for most people, this will be over the nipples). Keep the tape measure parallel to the floor. When taking this measurement, use shallow breaths and try to stay in a relaxed position with arms down at sides. Tape measure should be firm to skin but not digging in.

Step 2: Record this measurement (in centimeters) in the space below the image.



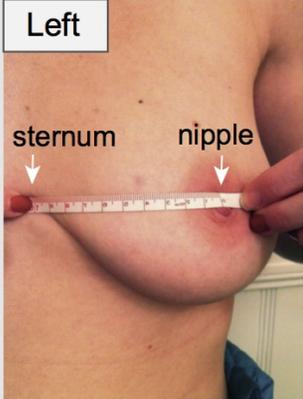
Breast Circumference (CENTIMETERS)

Now you will make 4 anatomical measurements of your **LEFT BREAST**.

Step 1: Follow guide to take each measurement in **CENTIMETERS**. (*example: 10.8*)

Step 2: Record each measurement in the space provided ***TO THE RIGHT*** of each illustration.

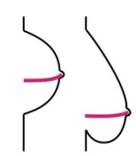
Left



sternum nipple

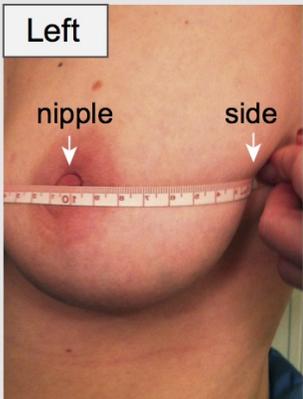
MEDIAL DISTANCE

Measure from the sternum (between breasts) to the nipple.



Shift tape up or down sternum to keep tape horizontal.

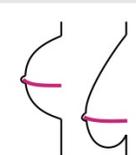
Left



nipple side

LATERAL DISTANCE

Measure from your side (where the breast meets the chest) across to the nipple horizontally.



Shift tape up or down sternum to keep tape horizontal.

Left

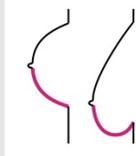


nipple

inframammary fold

INFERIOR DISTANCE

Measure from inframammary fold (where breast connects to chest) to the nipple.



For soft breasts measure from fold under the breast. Keep tape vertical.

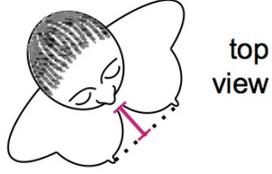
Left

sternum

projection
distance

BREAST PROJECTION

Measure from the sternum out between your breasts to the dotted line. Keep tape parallel to floor.



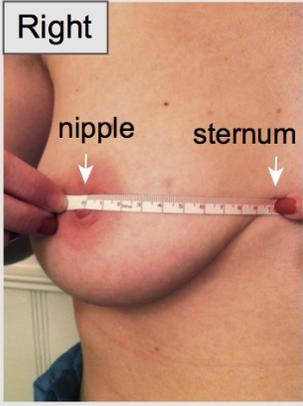
5.0

Now you will make 4 anatomical measurements of your **RIGHT BREAST**.

Step 1: Follow guide to take each measurement in **CENTIMETERS**. (example: 10.8)

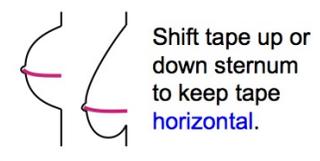
Step 2: Record each measurement in the space provided **TO THE RIGHT** of each illustration.

Right



MEDIAL DISTANCE

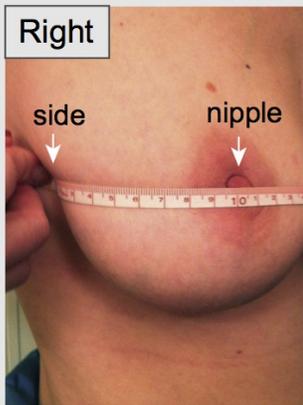
Measure from the sternum (between breasts) to the nipple.



Shift tape up or down sternum to keep tape horizontal.

13.3

Right



LATERAL DISTANCE

Measure from your side (where the breast meets the chest) across to the nipple horizontally.



Shift tape up or down sternum to keep tape horizontal.

14.2

Right



INFERIOR DISTANCE

Measure from inframammary fold (where breast connects to chest) to the nipple.



For soft breasts measure from fold under the breast. Keep tape vertical.

9.7

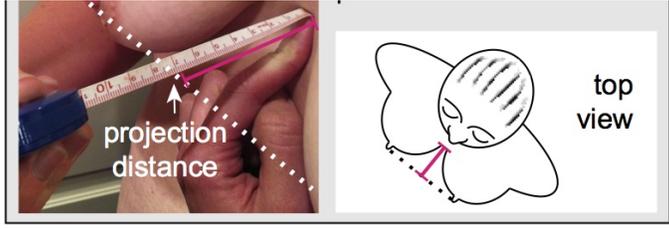
Right



BREAST PROJECTION

Measure from the sternum out between your breasts to the dotted line. Keep tape parallel to floor.

5.0



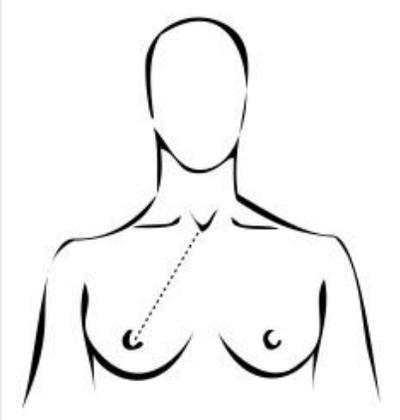
Next you will measure the distance from each of your nipples to the indentation above your breast bone (your "suprasternal notch").

Step 1. Stand up straight.

Step 2. Locate the soft indentation where the base of your neck meets your breast bone.

Step 3. Measure from this point to each of your nipples (example shown for the *right* nipple).

Step 4. Enter each measurement in CENTIMETERS below.



Notch to RIGHT nipple
(centimeters)

22.3

Notch to LEFT nipple
(centimeters)

22.5

Now you will measure your **NIPPLE SIZE.**

On the circle template tool in your kit, you will find a "NIPPLE" guide next to the "AREOLA" guide you just used. Place the NIPPLE template directly against your skin, centered at your nipple. Try aligning each template size (1-7) until you find the best size match. Record the best fit for each nipple below.

	smaller than 1	1	2	3	4	5	6	7	larger than 7
LEFT nipple size	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RIGHT nipple size	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Now you will count your **AREOLA GLANDS**.

What are areola glands? The areola contains "Montgomery" glands that appear as small bumps on the pigmented skin of the areola. These glands protect the skin during nursing and provide an olfactory cue to help newborn infants nurse. Women generally have between 0 and 30 glands on each areola, though some may have more.

Step 1: Examine skin of the areola looking for glandular bumps. **Tip:** In order to see these glands more clearly, you may need to induce the skin to contract slightly. To do this, try blowing on the skin or gently massaging the nipple. Once the areola begins to contract, gently spread the skin taut between your fingers to see the glands.

Step 2: Count the number of glands on each areola. Only include glands within the pigmented skin of the areola (any bumps seen at the outer border of the areola are probably hair follicles).

Be thorough! Make sure to count glands on all surfaces of the areola, including the section under the nipple.

The examples shown here may help you recognize the appearance of the glands.

Few glands



Many glands



Below, arrowheads point to each gland



Please count the number of glands on your Left and Right areolas and type the number for each side in the space provided below.

LEFT areola gland number

15

Which of these statements describes how the gland counting went?

- I am confident that I counted the glands correctly.
- This is a close estimate, but I might be off by a few glands.
- I am not at all confident about these counts.

PHOTOGRAPHS

You are almost done! This is the last part of the study.

Please follow the instructions below to take and then upload the designated photographs of your breasts and areolas. Submitting photographs is not required, but is very helpful to our study. If you prefer you may skip the photo upload step.

Set-up Instructions:

Camera: To take these photos, you will need to use a digital camera, such as a handheld digital camera, a cell phone camera, or a webcam (computer-associated camera).

Setting: Please take the photos in a private setting with **bright lighting**.

Help: It is recommended that you enlist someone whom you trust to help you so that you can keep your arms in a relaxed position at your sides. If no one can help you, consider using your computer's webcam (if it has one) or using your camera's timer and placing the camera on a shelf at the same height as your nipples.

Directions for taking and uploading photos

Step 1. Place one ID sticker from your kit just above each of your areolas. Stickers should not touch the areola.

Note: If you have any accessory breast tissue, place the third sticker next to this trait (not touching).

Step 2. Take each of the five pictures shown below (labeled A-E).

Tips for getting great photos:

- Use bright lighting
- Try to mimic the exact framing of the example photo.
- Position the camera at the same height as your nipples (neither looking up, nor looking down)
- Move closer to the camera for the close-up areola shots (D and E).
- Keep your arms in a relaxed position at your sides
- Check that the photo is in focus



A: Frontal view,
both breasts



B: Left profile



C: Right profile



D: Left areola



E: Right areola

Helpful tips for close-ups (D&E):

If you cannot see the complete circle of the areola in the close-up images (for example, if your nipples point downward), please lift the breast upward so the complete areola can be viewed in the close-up photograph.

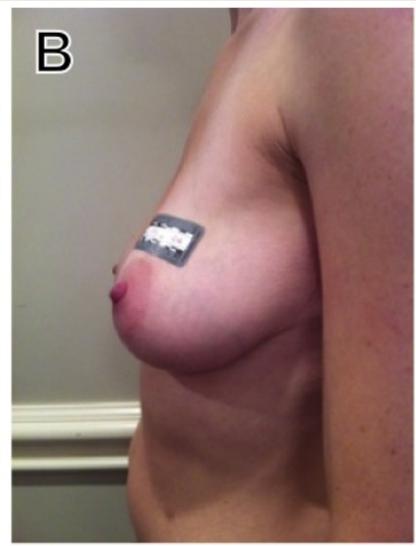
FILE UPLOAD INFORMATION:

Use High Resolution: Please upload your photographs at ORIGINAL or MAXIMUM resolution or in "raw" format. Do not compress the photos, as long as no single image exceeds 16MB.

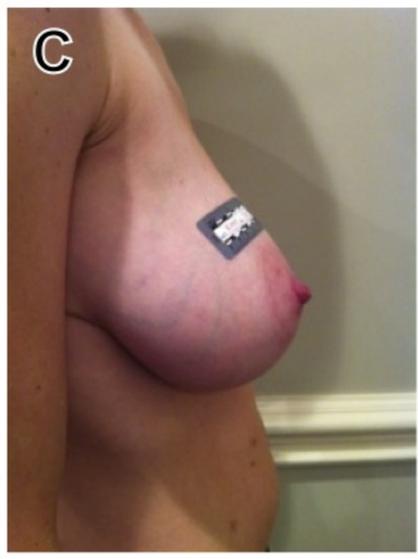
Frontal view: Please take or upload photo A



LEFT profile: Please take or upload photo B



RIGHT profile: Please take or upload photo C



LEFT Areola: Please upload photo D (close-up)

Helpful tip for close-ups: If you cannot see the complete circle of the areola in the close-up images (for example, if your nipples point downward), please lift the breast upward so the complete areola can be viewed in the close-up photograph.



RIGHT areola: Please upload photo E (close-up)

Helpful tip for close-ups: If you cannot see the complete circle of the areola in the close-up images (for example, if your nipples point downward), please lift the breast upward so the complete areola can be viewed in the close-up photograph.



How did the photo session go?

- I uploaded all of my photos
- I tried to upload photos, but I could not get it to work
- I chose not to upload photos

We apologize that the photo upload session did not go well. Please move forward to the end of the survey to complete your data submission and then contact the Project Director for help submitting your photos via an alternative method: **awark@genetics.med.harvard.edu**

Thank you for understanding as we work around these issues!

Please contact support@surveyz.com if you have any questions regarding this survey.