TytoPro

Tyto Exam Camera

User Guide

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General Safety Messages/Product Overview

General Safety Messages

⚠**Warning**: A warning indicates precautions to avoid the possibility of personal injury or death.

⚠ **Caution**: A caution indicates a condition that may lead to damage to equipment, or a lower quality of treatment.

Note: A note provides other important information.

Disclaimer

Information provided by TytoCare is believed to be accurate and reliable. However, TytoCare assumes no responsibility for the use of such information, nor for any infringements of patents or other rights of third parties, that may result from its use.

Intended Use

The Tyto Exam Camera is an electronic camera that enables capturing and transmission of video and still images of throat (w / w/o tongue depressor) and skin, whereby a clinician at one location on an IP network can view images and videos of a patient on site or at a different location on the IP network with the signal carried on an IP connection between the two locations.

Product Overview

The **Tyto Exam Camera™** is a user-friendly, digital camera with built-in illumination, that records high resolution videos and pictures, for imaging of the throat, skin or any other external body area.

The Tyto Exam Camera connects to the Tyto App to facilitate the process of communicating data and video with other clinicians or medical professionals. Recorded data may be forwarded for diagnosis by another clinician in a different location.

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The Tyto Exam Camera is designed for use in a clinical or home environment, in a number of scenarios:

- By an individual clinician/healthcare professional.
- By a clinician/healthcare professional, who forwards exam data to another clinician/healthcare professional for later diagnosis.
- By a clinician/healthcare professional, collaborating online with another clinician during or after examinations.

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Before the Exam

User Role Performing Guided and Unguided Exams

Two methods can be used for examinations conducted with the TytoPro™ system.

Guided exams are intended for any person who is not a healthcare professional, and who requires a more detailed, step-by-step approach to the exam. Guided exams lead the user through the process of performing and viewing exams.

Unguided exams are intended for healthcare professionals, who have medical knowledge, and are proficient in performing throat and skin examinations. Unguided exams provide a streamlined approach allowing more flexible recording and faster operation, with minimal instructions for use.

The type of user role, Guided or Unguided, is defined by the System Administrator when your user was created.

Contact the System Administrator of your TytoCare system to determine whether your user is defined as Guided or Unguided, or in case you wish to change your user role.

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Guided Exams

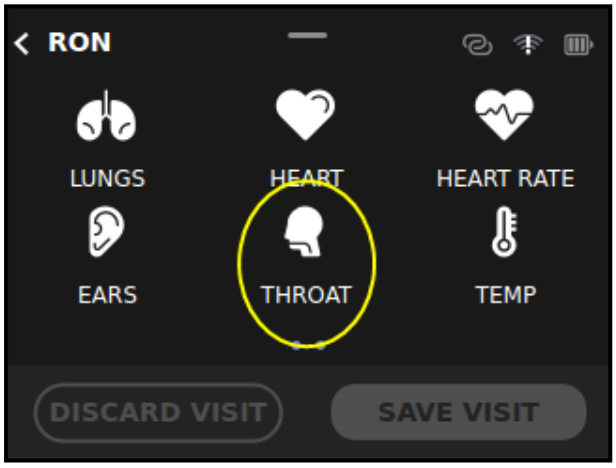
Note: Refer to the TytoPro™ General Operation User Guide for preliminary instructions on logging in to the system and viewing the Exam menu.

Prepare for Throat or Skin Exam

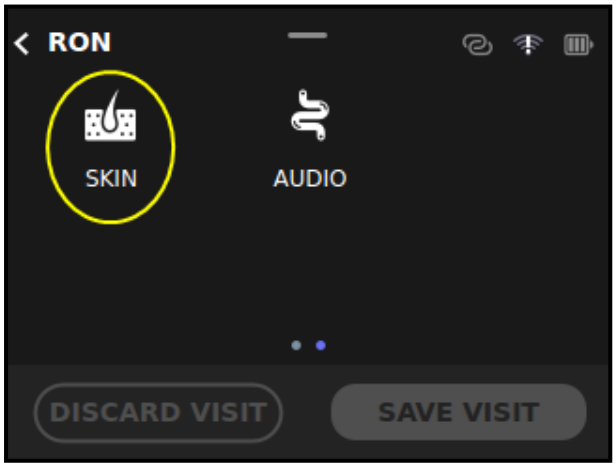
This section discusses the preparatory steps that are common for both exams – throat and skin.

Select Which Exam

Choose the **THROAT** or **SKIN** exam from the Device:



THROAT



SKIN

Note: The Skin icon is located on the second screen of the device, accessible by swiping the screen to the left.

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Video Tutorial and Animation

The first time you do either exam, a **video tutorial** is played on the Tyto App. This tutorial is essential to instruct you how to perform the exam successfully. Please watch the complete tutorial before starting the exam. The tutorial is always available by pressing the ? **(question mark)** on the top-right of the TytoCare App screen.

Every time you perform an exam, a **short animation** displays, reminding you of the essential instructions for performing the exam.

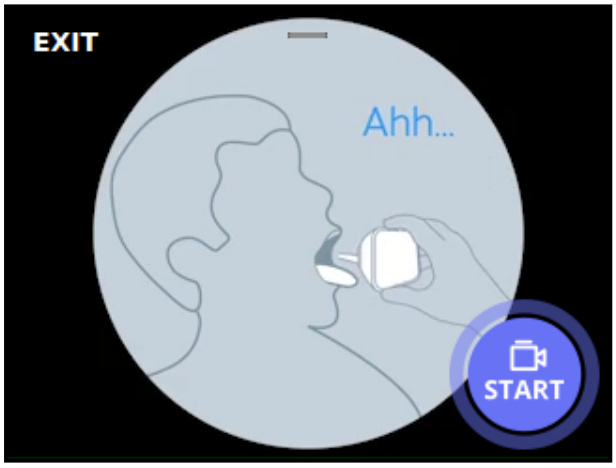
Please read the appropriate section below before starting the exam:

- Throat exam: See Section - Throat Exam below.
- Skin exam: See Section - Skin Exam below.

Throat Exam

Review Throat Exam Procedure

Please take a few moments to review the basic procedure for performing the throat exam.



1. Instruct the patient to open mouth as wide as possible, stick out tongue and say “ahhh”.

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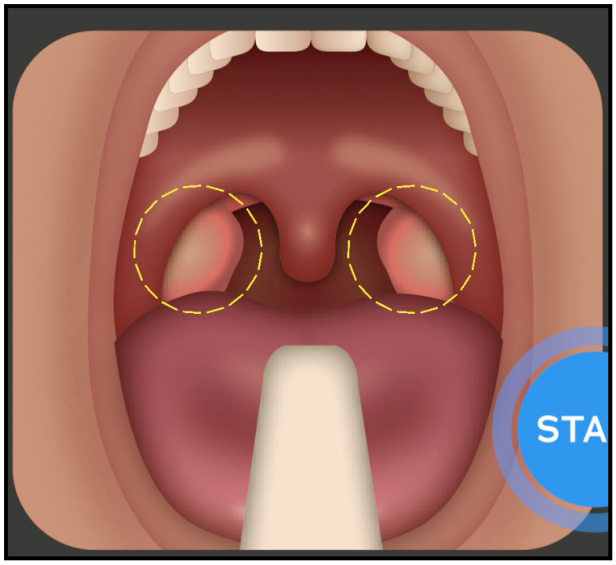

2. Tap **START** to start recording video. Point camera towards tonsils. The tonsils are located at the back of the mouth, at the sides of the uvula.

Please note:

- Use the “Desired Image” picture, shown in the Tyto App, to see what the tonsils look like.
- Make sure the tonsils are well lit and visible.

Using the Tongue Depressor

If you cannot get a clear view of the tonsils, probably due to the tongue obstructing the view, use the provided tongue depressor tip to lower the tongue. The adult’s tongue depressor blade is marked with “L8”. For small children, who have a smaller mouth, use the shorter tongue depressor blade, marked with “L6” on the blade.

> ⚠**Warning**: Make sure the tongue depressor holder and blade are clean before each use, using wipes or cloth moistened with 70% Isopropyl alcohol.

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How to connect the tongue depressor:

1. Attach the holder connector part to the device socket, following the blue dots.

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2. Insert the tongue depressor blade into the holder until you hear a locking click.

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3. To detach the blade from the holder, press the locking latch at the bottom of the tongue depressor.

⚠**Warning**: If the tongue depressor disconnects from the tongue depressor holder, for example by the patient biting the tongue – gently pull the tongue depressor out of mouth, or wait until the patient releases the tongue depressor.

⚠**Warning**: Do not use a tongue depressor blade that is cracked or has sharp corners.

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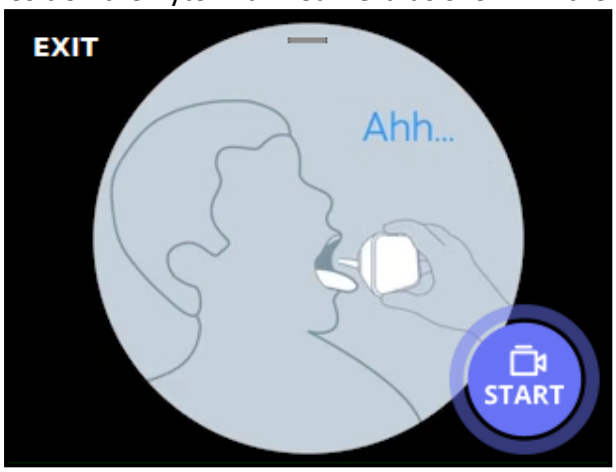
Start Recording

1. Position the Tyto Exam Camera as shown in the animation.



2. When you tap **Start** on the device, the device will immediately begin recording video for the throat exam.
3. Tap **START** to begin recording video.

Note: You may touch the device's screen during the video recording in order to focus the camera on the tonsils. Make sure the image you see is clear, well-lit and sharp.

Stop Recording

Tap **STOP** after the device is removed from the mouth and the desired video of the tonsils has been captured.

Note: If you use the tongue depressor, when the exam is complete, release it from the holder by pressing the latch, and then push the tongue depressor holder out.

Note: **There is a maximum length of 60 seconds allowed for a Throat video**, after which the video stops recording automatically. If you haven't completed the exam, tap **ADD** to retake the exam.

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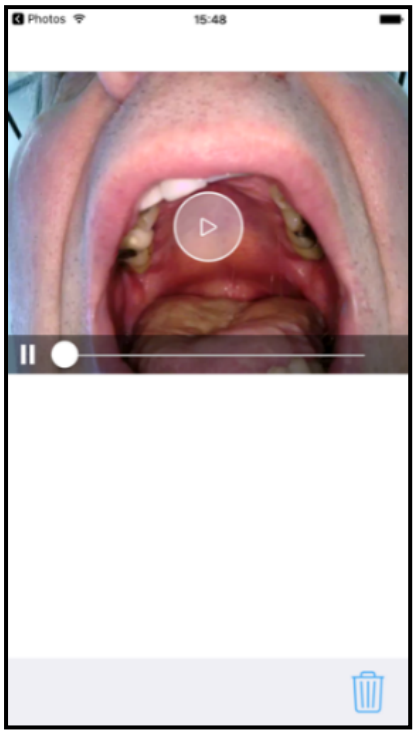
Review or Delete the Recording

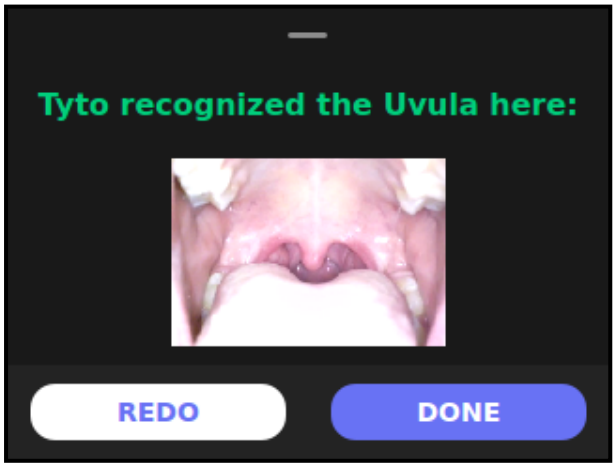
From the Tyto App, you can view or delete the recording:



Tap **Play** to start exam video, or (**Delete**) to delete.

Take Another Recording

If the recorded video was not successful, or the tonsils were not visible, you can retake the exam. From the Tyto Exam Camera, you can take an additional video of the throat. You may decide later which videos to send to the clinician.



- Tap **Repeat** (in picture here **ADD**) to record another video.

  OR

- Tap (**DONE**) to return to the Exam selection screen.

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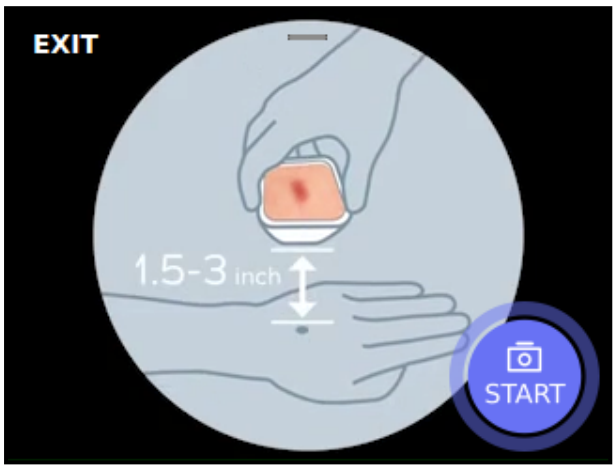
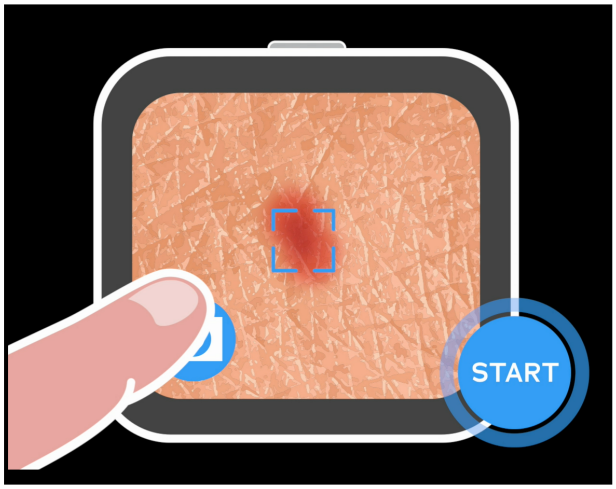
Skin Exam

Review Skin Exam Procedure

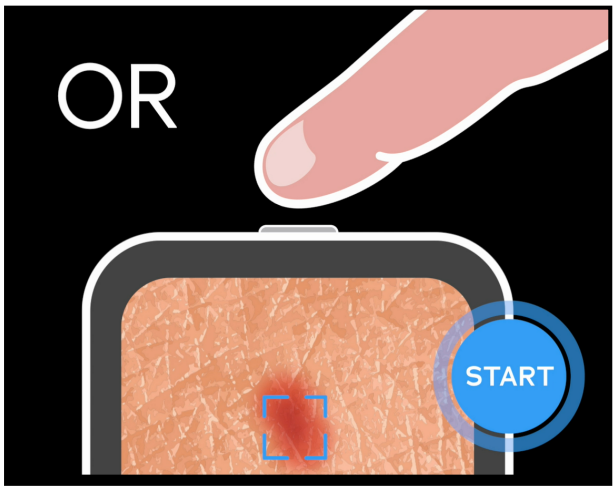
Please take a few moments to review the basic procedure for performing the skin exam.



1. Place the device about 1.5-2 inches from skin to allow the camera to focus.



2. To focus the camera, tap the screen where the skin lesion, rash or other area you wish to share with the clinician is visible.
3. Tap the Camera button to take a picture. Please hold the camera steady while taking pictures.



4. You can also press the physical button on top of the device to take a picture.

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Take a Picture

Position the device as shown in the animation and focus the camera. Tap the Camera icon or press the physical button on top of the device to take a picture.

The Tyto Exam Camera has an auto-focus mechanism, activated when you take the picture. In addition, you may tap the part of the image that contains the skin area of interest, to focus the camera specifically on that area.

To allow the camera to focus, do not place the camera too close to the skin. Allow a distance of about 1.5-2 inches (3.5-5 cm) away from the skin to achieve focus.

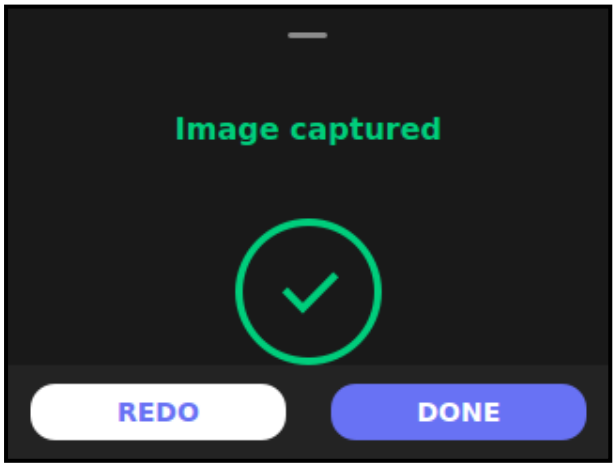
> **Note**: After a picture is captured, it will be displayed in high quality in the App. Please review the picture in the App, and verify that the image is clear and sharp.

> **Note**: In case the skin area you wish to capture is not easily accessible, ask another person to assist you in imaging this area.

> **Note**: If you cannot obtain a sharp image, try moving the camera a small distance away from the skin. If you still cannot get a sharp image, contact TytoCare Support.

Take More Pictures or End the Exam

After taking a picture, the Device indicates that the picture was captured, and allows you to take another picture, or end the skin exam:



- Tap **Repeat** (in picture here **ADD**) to return to the Camera screen, where you can take another picture

  OR

- Tap (**DONE**) to end the exam and return to the Exam selection screen.

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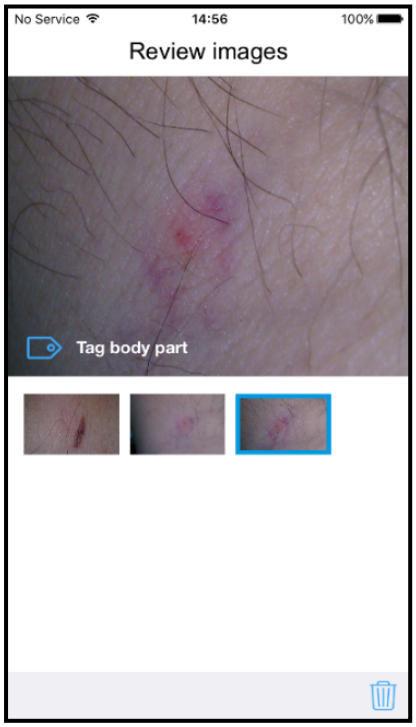
Reviewing Pictures in the Gallery

Picture Gallery allows you to view the skin images you have taken, and optionally to delete or tag the relevant body part of each image. Picture Gallery is available on the Tyto App screen.

1. View list of exams.
2. Tap on **SKIN** exam.



3. Tap the image you wish to view

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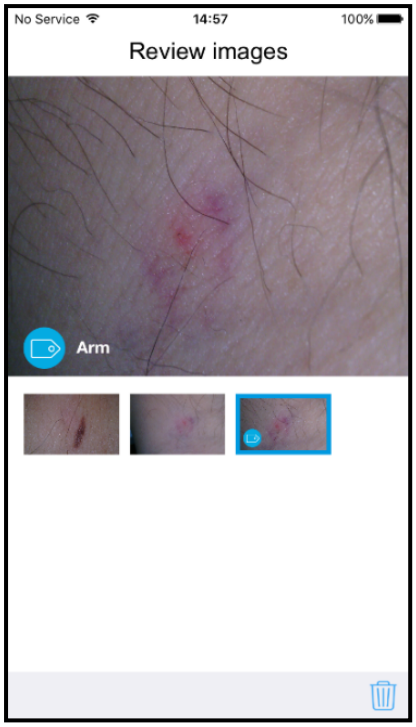

4. View image and tag body part (see below).

Please review each captured image and make sure the image is clear and sharp.

If you wish to delete the picture, tap (**Delete**). A confirmation message will appear, asking you to confirm the delete.

Note: After deleting the picture, the Device will continue to show the “Repeat” or “Done” buttons with “Image captured” indication. This is standard behavior for the Device.

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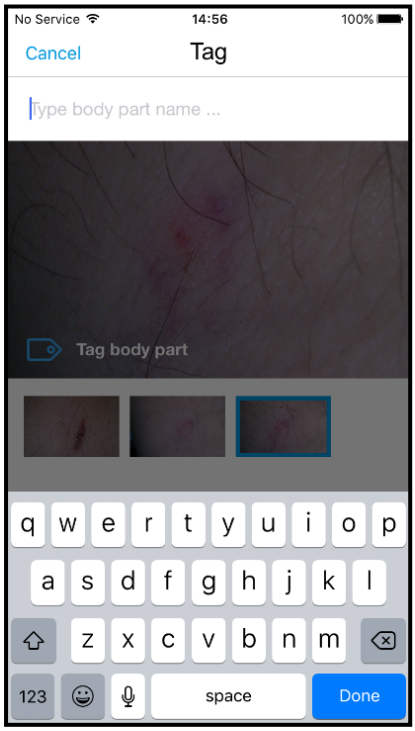
Tagging Body Part

It's recommended to tag the body part of the skin images to allow the clinician to know which body area the image was taken from.

1. Tap Tag body part.



2. Type the relevant body part

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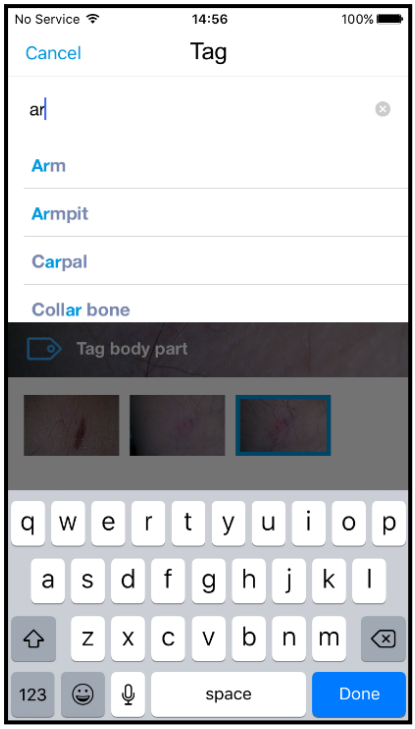

3. Finish typing or tap the body part from the opened list.

Please refer to Section - After the Exam in the Tyto Device General User Guide for further instructions.

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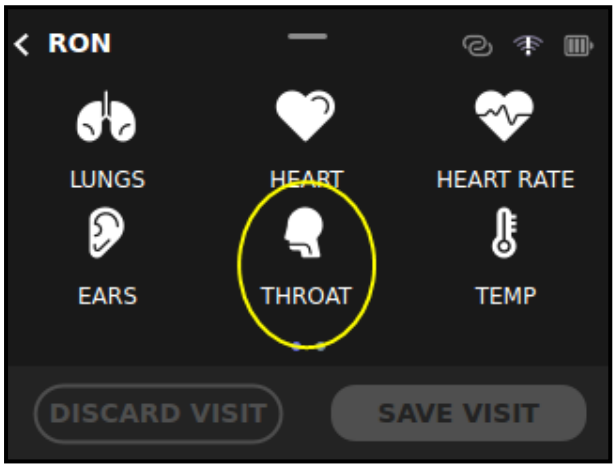
Unguided Exams

> **Note**: Refer to the TytoPro™ General Operation User Guide for preliminary instructions on logging in to the system and viewing the Exam menu.

Throat Exam



To start a throat exam, tap **THROAT** from the examination selection screen in the device:

Recording the Video

When you tap **THROAT** on the exam menu, the device will **immediately** begin to record video. The red blinking dot, located at the upper-right corner of the device, as well as in the app, indicates video recording is activated. If the video image is not sharp during the recording, tap the screen to focus the camera.

Changing the Illumination Strength

The device includes a built-in LED for illuminating the throat. You can adjust the strength of the illumination by swiping down on the device screen during the video recording, and moving the bottom slider to increase or decrease the illumination strength.

Using the Tongue Depressor

If you cannot get a clear view of the tonsils, probably due to the tongue obstructing the view, use the provided tongue depressor tip to lower the tongue. For details, see Section - Using the Tongue Depressor

> ⚠**Warning**: Clean the tongue depressor holder and blade before and after each use, using wipes or Tyto cloth moistened with 70% Isopropyl alcohol.

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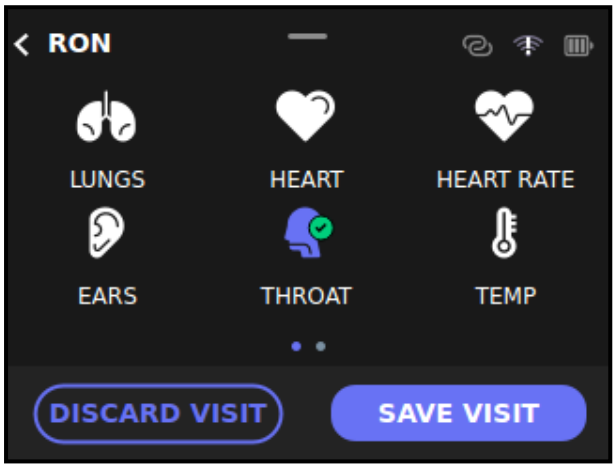
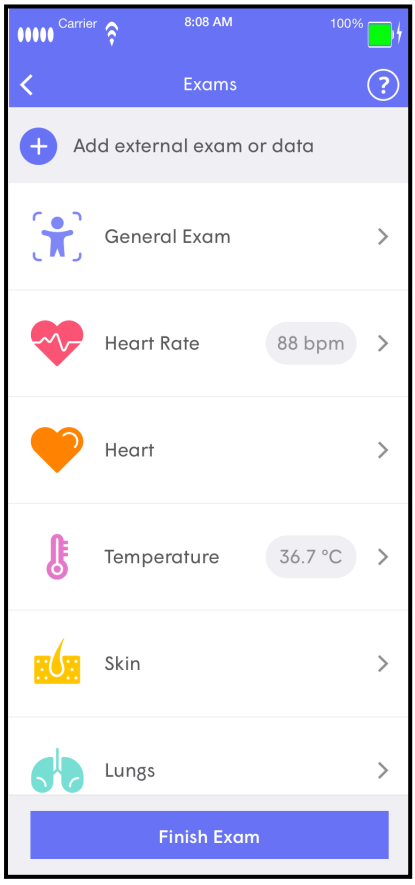
Finishing the Throat Exam

When you have completed the necessary video recordings, and the tonsils are clearly recorded, tap (**DONE**) on the device. This will stop the video recording and exit the throat exam.

The device indicates with a green check mark that the throat exam was recorded. The App displays the recorded throat exam, and enables viewing the exam or deleting the recorded video, if the exam is not successful:



Tyto Device



Tyto App

It is recommended to review recorded videos using the Tyto App.

Please refer to Section - After the Exam in the Tyto Device General User Guide for further instructions on reviewing recorded exams in the User App.

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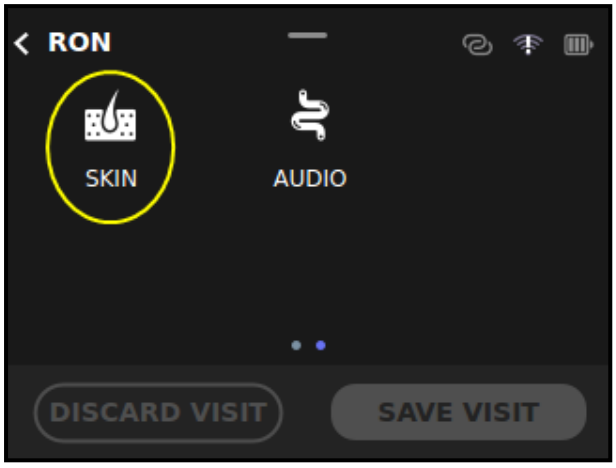
Skin Exam



To start a skin exam, tap **SKIN** from the examination selection screen.

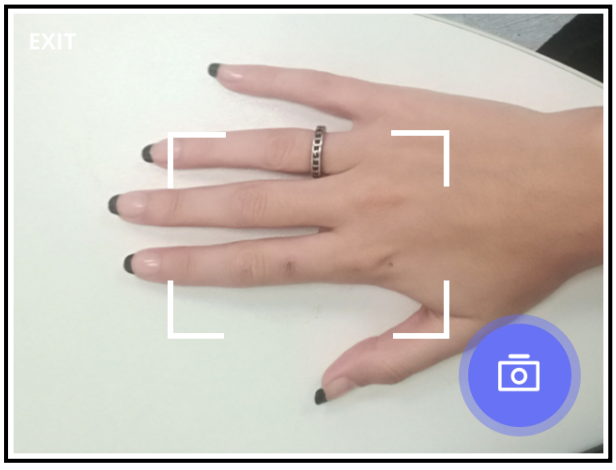
Note: The Skin icon is located on the second screen of the device, by swiping the screen to the left.

Changing the Illumination Brightness

The device includes a built-in LED for illuminating the skin. You can adjust the strength of the illumination by swiping down on the device screen during the video recording, and moving the bottom slider to increase or decrease the illumination strength.

Take Pictures

The device and App will then show live feed of the camera as follows:



1. Tap on the camera icon located at the right-bottom corner, to take a picture.
2. The picture will be saved. You may continue to take as many pictures as you require.
3. You can also press the physical button on top of the device to take a picture.

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The camera has an auto-focus mechanism, activated when you take the picture. In addition, you may tap the part of the image that contains the skin area of interest, to focus the camera specifically on that area.

In order to allow the camera to focus, do not place the camera too close to the skin. Allow a distance of about 1.5-2 inches (3.5-5 cm) away from the skin to achieve focus.

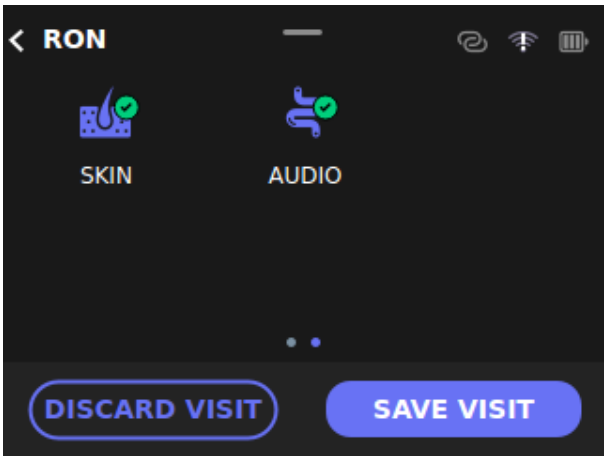
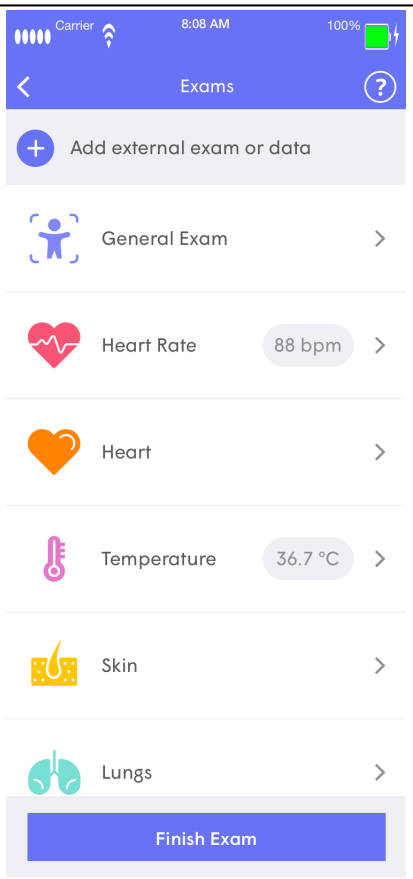
> **Note**: If you cannot obtain a sharp image, try moving the camera a small distance away from the skin. If you still cannot get a sharp image, contact TytoCare Support.

Finishing the Skin Exam

When you have finished taking the necessary skin pictures, tap (DONE) (**DONE**), located at the bottom-right corner of the device screen. This will exit the skin exam.

The Tyto Exam Camera will indicate with a green check mark that the skin exam was completed. In addition, the App will display the captured skin images, and enable viewing or deleting them, if necessary.

It is recommended to review the captured skin images using the Tyto app.

	
Tyto Device.	Tyto App

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Tagging Body Part

For each picture that you have taken, it is recommended to tag or identify which part of the body the picture represents. This is done using the Picture Gallery feature in the App. For details, see Section - Tagging Body Part.

After the Exam

Please refer to Section - After the Exam in the General Operation User Guide for further instructions.

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