

Background

Research with Latino immigrants typically use surveys to measure stress rather than biomarkers to avoid discomfort, gain trust and maximize participation. While survey measures of stress are valuable, they may not accurately capture chronic stress that is culturally bound or indicative of the impact of physiological stress on health outcomes (Córdova & Cervantes, 2010). Instead, a biological marker of stress, such as cortisol (i.e. stress hormone), is a more accurate way to measure chronic stress. Chronic stress, such as stress related to discrimination or immigration, can lead to either hypo- or hyper-arousal, which alters the “set point” for stress regulation (Zeiders et al., 2012). Further, parents and children jointly influence each other’s physiological responses (Papp et al., 2009), and dyadic synchrony of cortisol patterns offer insight into family-level stressors that may contribute to depression, anxiety, and substance use (Adam et al., 2010; Obasi et al., 2015; Schiefelbein & Susman, 2006).

Measuring the synchrony of parent’s and child’s cortisol production through saliva samples (i.e. cortisol synchrony; LeMoult et al., 2015; Papp et al., 2009) will advance the scientific knowledge of the impact of stress within the family environment. This comprehensive view of family functioning can be used to target families into psychosocial prevention and intervention programs (Adam et al., 2008; Slopen et al., 2014). However, studies of US-born adolescent-immigrant parent dyads in mixed- and documented-status families have not been done. Prior to measuring cortisol among adolescent-parent dyads an instructional video on how to collect saliva first needs to be created.

Purpose

With the assistance from the University of Houston’s Instructional Design team, a video was created to explain to study participants how to collect saliva. In order to meet the needs of the study population, the video was created in Spanish and English.

Methods

Three HOUSTON Academy students assisted with the creation of the video. One student served as the actor. Another student’s role was to clearly speak the instructions in English. The final student clearly spoke the instructions in Spanish. The University of Houston’s Instructional Design film and edited the video.



Instructional video for collecting saliva samples
Video instructivo para recolectar muestras de saliva

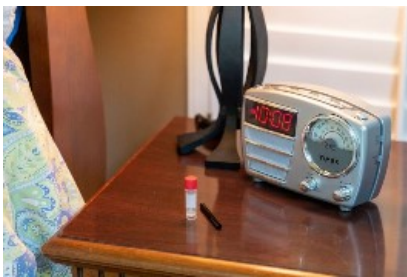
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Overview

Please take 4 saliva samples at the following times:
Sample 1: RIGHT WHEN YOU WAKE UP – before getting out of bed
Sample 2: 30 minutes after waking up – before brushing teeth
Sample 3: 90 minutes after waking up (e.g., 1 hour after Sample 2)
Sample 4: Right before bedtime

Step 1
Get kit ready for first sample. Before going to bed, place the Saliva Collection Kit by your bed. This would make it easier to collect your first sample since we would like for you to provide this sample prior to getting out of the bed in the morning.



Note: Skip this step for Samples 2, 3, and 4.
Step 2
Pool saliva in your mouth. If your mouth is dry, briefly chew on the end of the straw. This should make your mouth water a little bit. DO NOT swallow the saliva that has accumulated in your mouth.



Step 3
Unscrew the cap. Take the plastic vial from the Supplies Ziploc bag and unscrew the cap to open it. Each vial is numbered. Use the vial with the number that goes with the saliva samples mentioned above. In other words, please use the vials in order from Sample 1 to Sample 4.



Step 4
Get straw and spit the saliva into the straw. Get the straw that was included in the Supplies Ziploc bag. Slip one end of the straw into the opened plastic vial. Place the other end of the straw into your mouth and release the saliva from your mouth into the straw. Let the saliva collect at the bottom of the vial. Please try to fill the vial with saliva up to the line marked 1.8 mL. Bubbles or foam don’t count (tap the vial if needed). *Stop after 15 minutes* regardless of how much saliva you collected.



Note: If your mouth is too dry to provide a sample, rinse your mouth with water, wait 5 minutes, and try again. Another way to make more saliva is to imagine chewing on your favorite food, candy, or gum while making a chewing motion with your mouth.



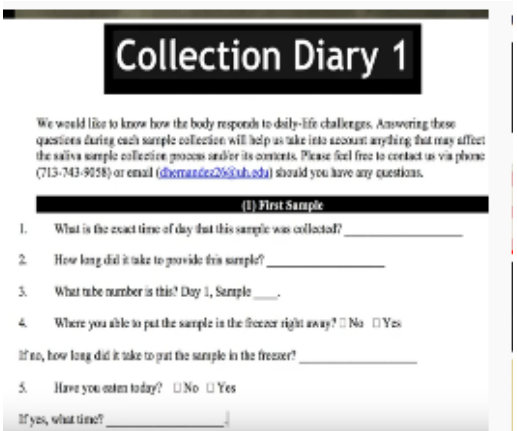
Step 5
Secure the saliva sample. Screw the cap back onto the vial. Make sure the cap is screwed on tightly in order to prevent leakage.

Step 6
Freeze the saliva sample. Place the saliva sample you just collected in the Completed Samples Ziploc freezer bag that was included in the Saliva Collection Kit. Next, place the Completed Samples Ziploc freezer bag into your freezer.



Note: The Completed Samples Ziploc freezer bag should already be in the freezer for Samples 2 – 4. Please keep these samples frozen until we visit your home.

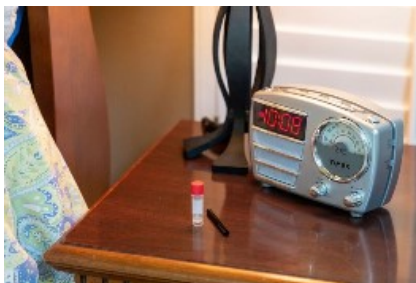
Step 7
Complete the Collection Diary. Get the **Collection Diary** that was included in the **Saliva Collection Kit**. Please write down the time the saliva sample was collected. Also, answer any questions that are associated with the collection of each sample. Try to be as accurate as possible.



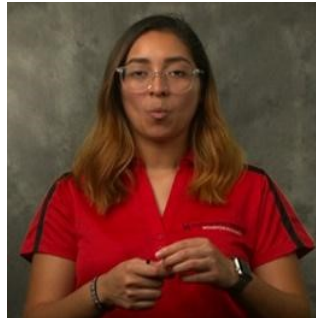
Visión General

Por favor tome 4 muestras de saliva en los siguientes horarios:
Muestra 1: JUSTO CUANDO DESPIERTAS – antes de levantarse de la cama
Muestra 2: 30 minutos después de despertarse – antes de cepillarse los dientes
Muestra 3: 90 minutos después de despertarse (e.g., 1 hora después de la muestra 2)
Muestra 4: Justo antes de acostarse

Paso 1
Prepare el kit para la primera muestra. Antes de acostarse, coloque el kit de Colección de Saliva junto a su cama. Esto facilitaría la recolección de su primera muestra, ya que nos gustaría que proporcione esta muestra antes de levantarse de la cama por la mañana. **Nota:** Omite este paso para las muestras 2, 3 y 4



Paso 2
Saliva acumulado en su boca. Si su boca está seca, mastique el fin del popote. Esto debería hacer tu boca un poco de agua. NO trague la saliva que se ha acumulado en su boca.



Paso 3
Desenrosque la tapa. Saque el frasco de plástico de la bolsa Ziploc de Suministros y desenrosque la tapa para abrirla. Cada vial está numerado. Use el frasco con el número que acompaña a las muestras de saliva mencionadas anteriormente. En otras palabras, utilice los vials en orden de la Muestra 1 a la Muestra 4.



Paso 4
Obtener el popote y escupir la saliva en el popote. Consigue el popote que se incluyó en la bolsa de Ziploc Suministros. Deslice un lado del popote en el frasco de plástico abierto. Coloque el otro lado del popote en su boca y suelte la saliva de la boca hacia el popote. Deje que la saliva se acumule en el fondo del vial. Intente llenar el vial con saliva hasta la línea marcada con 1.8 ml. Las burbujas o la espuma no cuentan (toque el vial si es necesario). *Detente después de 15 minutos*, independientemente de la cantidad de saliva que recolectaste.



Nota: Si su boca está demasiado seca para proporcionar una muestra, enjuáguela con agua, espere 5 minutos e intente nuevamente. Otra forma de obtener más saliva es imaginarse masticando su comida, dulces o chicle favoritos mientras hace un movimiento de masticación con la boca.

Paso 5
Asegurar la muestra de saliva. Atornille la tapa de nuevo en el vial. Asegúrese de que la tapa esté bien enroscada para evitar fugas.

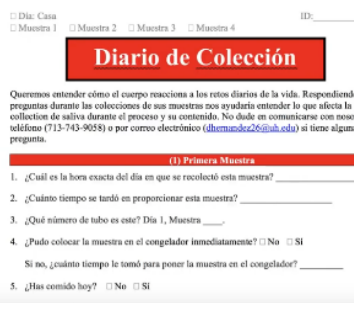


Paso 6
Congelar la muestra de saliva. Coloque la muestra de saliva que acaba de recoger en la bolsa de congelación Ziploc de Muestras Completadas que se incluyó en el kit de Recolección de Saliva. Luego, coloque la bolsa de congelador Ziploc de Muestras Completadas en su congelador.



Nota: La bolsa de congelador Ziploc de Muestras Completadas ya debe estar en el congelador para las muestras 2 a 4. Mantenga estas muestras congeladas hasta que visitemos su hogar.

Paso 7
Completa el diario de la colección. Obtenga el **Diario de Colección** que se incluyó en el **kit de Colección de Saliva**. Por favor escriba la hora en que se recolectó la muestra de saliva. Además, responda cualquier pregunta que esté asociada con la recolección de cada muestra. Trate de ser lo más preciso posible.



YouTube Links

English:
https://www.youtube.com/watch?v=_29IC1eQkkM

Spanish:
<https://youtu.be/iQEC3zCWuBg>

Next Steps

Research assistants will schedule a day and time to retrieve the saliva samples and collection diaries from participants’ homes within 48-hours of completion. Samples will be transported to Dr. Obasi’s lab at UH in sealed coolers filled with freezer bricks to prevent a freeze-thaw cycle. All samples will be logged into the secured database using individual and family ID #s. Finally, they will be stored in an ultra-cold laboratory freezer (-30°C) prior to being assayed for cortisol (Obasi et al., 2015).

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