



# myFace

## Transforming Lives: Preparing Teenagers for Orthognathic (Jaw) Surgery

Generous funding of this program provided by the Louis J. and June E. Kay Foundation

Tuesday, July 12, 2022

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## Welcome and Introductions



**Stephanie Paul**  
*Executive Director*  
myFace



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# Presentation



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*Peter Randall Endowed Chair and Chief*  
Division of Plastic, Reconstructive and Oral Surgery  
*Co-Director of Cleft and Craniofacial Program*  
*Director of the University of Pennsylvania/CHOP*  
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The Children's Hospital of Philadelphia (CHOP)  
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# Disclosures

- **Leanne Magee, PhD** – no disclosures
- **Jesse A. Taylor, MD** – Co-Founder, Ostiio LLC



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## Jaw Surgery



**Jesse A. Taylor, MD, FAAP, FACS**  
Peter Randall Endowed Chair and Chief  
Plastic, Reconstructive, and Oral Surgery  
The Children's Hospital of Philadelphia

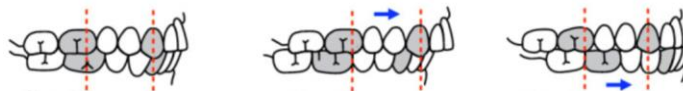


*A tradition of excellence, innovation, and leadership*

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### Jaw Surgery—Why???

- Correct position of teeth beyond orthodontics
- Improve chewing, biting, speech
- Improve health of Jaws, teeth, and Jaw joints



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## Jaw Surgery—Why???

- Change in Appearance
- You may see yourself differently
- Others may view you differently



Orthognathic surgery has a  
significant effect on perceived  
personality traits and emotions





# Crowd Sourcing

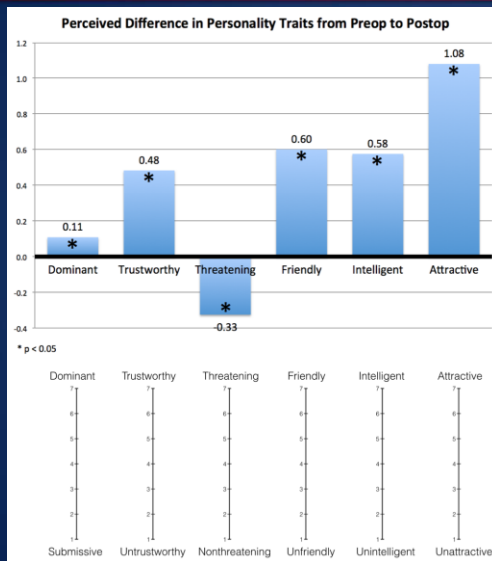


- M Turk (Amazon.com)
  - 95% confidence in work
  - Only U.S.
  - 500 respondents
  - Paid \$1
- 10 pre-op, 10 post-op
- Likert Scale—personality traits and emotions



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# Personality Traits – Perceived Difference

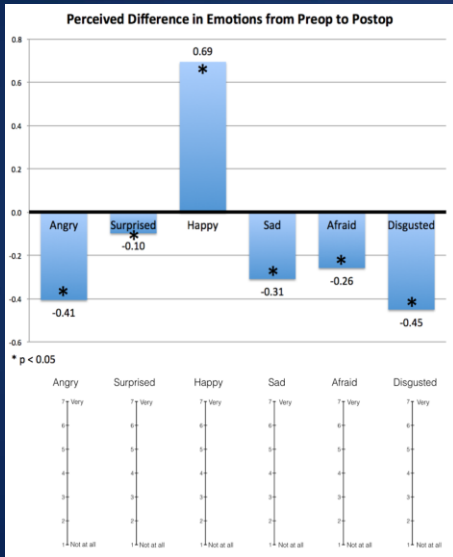


Personality Traits (1 to 7)	Preop	Postop	Difference	p-value	Postoperatively, subject appears:
Submissive to Dominant	3.7±1.6	3.8±1.5	0.1	<0.0001	More dominant
Untrustworthy to Trustworthy	3.8±1.4	4.3±1.4	0.5	<0.0001	More trustworthy
Nonthreatening to Threatening	3.3±1.6	2.9±1.6	-0.3	<0.0001	Less threatening
Unfriendly to Friendly	3.8±1.4	4.4±1.5	0.6	<0.0001	Friendlier
Unintelligent to Intelligent	4.0±1.3	4.5±1.3	0.6	<0.0001	More intelligent
Unattractive to Attractive	3.3±1.5	4.4±1.7	1.1	<0.0001	More attractive

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## Emotions – Perceived Difference



Emotions (1= not at all, to, 7=very)	Preop	Postop	Difference	p-value	Postoperatively, subject appears:
Angry	3.3±2.4	2.9±2.4	-0.4	<0.0001	Less angry
Surprised	2.7±2.3	2.6±2.3	-0.1	0.0115	Less surprised
Happy	2.8±2.3	3.5±2.4	0.7	<0.0001	Happier
Sad	3.3±2.4	3.0±2.4	-0.3	<0.0001	Less sad
Afraid	2.8±2.3	2.5±2.3	-0.3	<0.0001	Less afraid
Disgusted	3.1±2.4	2.7±2.4	-0.5	<0.0001	Less disgusted

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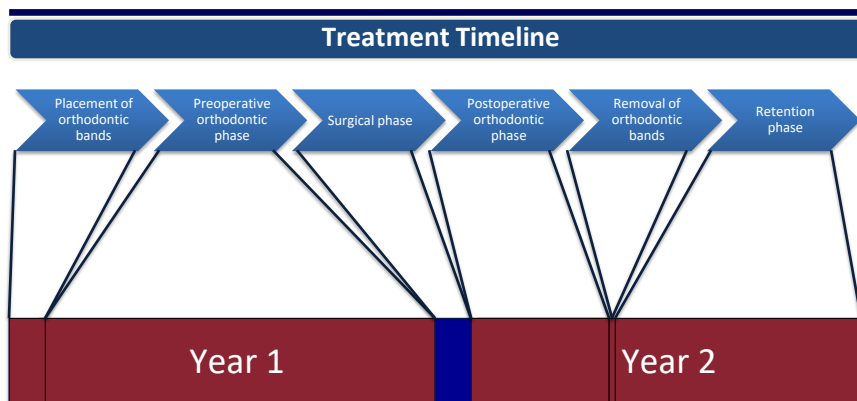
## Perceived Difference in Personality Traits Between Subgroup Demographics



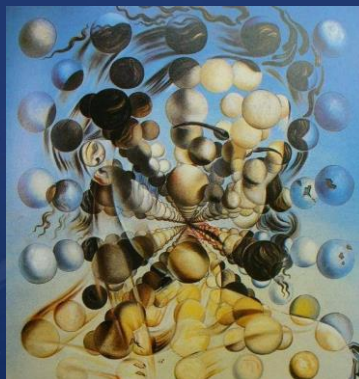
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## Treatment Sequencing



## Unilateral Cleft Lip and Palate





## 18 Year Old Male with Right Unilateral Cleft Lip and Palate



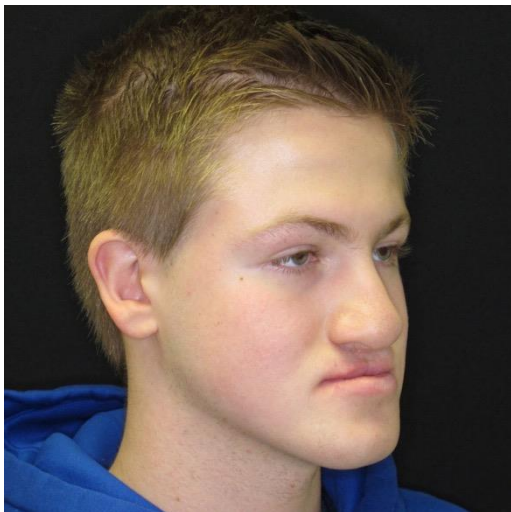
## 18 Year Old Male with Right Unilateral Cleft Lip and Palate







## 18 Year Old Male with Right Unilateral Cleft Lip and Palate



## 18 Year Old Male with Right Unilateral Cleft Lip and Palate





## 18 Year Old Male with Right Unilateral Cleft Lip and Palate

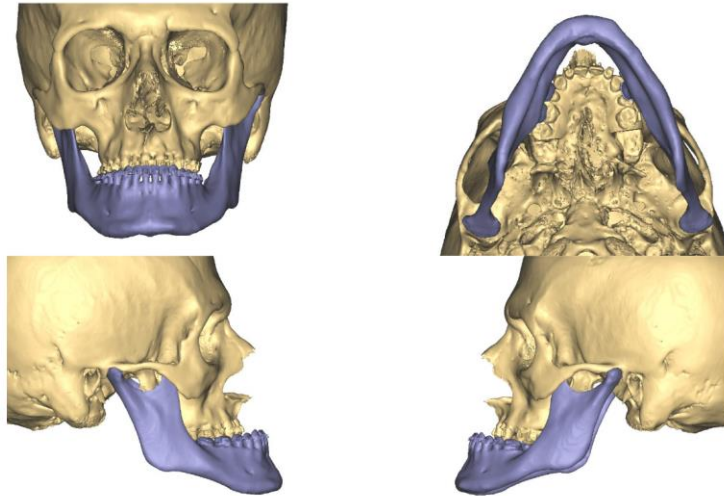


## 18 Year Old Male with Right Unilateral Cleft Lip and Palate



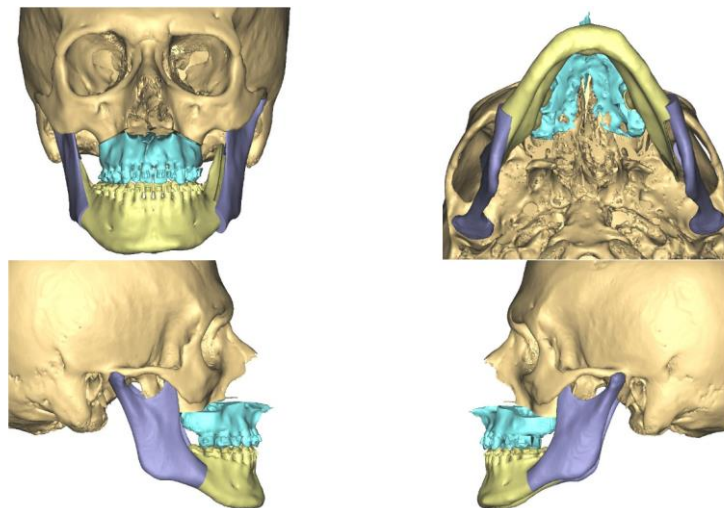


## 18 Year Old Male with Right Unilateral Cleft Lip and Palate



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## 18 Year Old Male with Right Unilateral Cleft Lip and Palate



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## Le Fort 1, Bilateral Sagittal Split Osteotomy (BSSO), Genioplasty, Fat Grafting on Upper Lip

- 8cc total, forked tip
- Inserted via modiolar incisions
- Feathered to pyriform apertures
- Interval Rhinoplasty



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## 18 Year Old Male with Right Unilateral Cleft Lip and Palate



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## 18 Year Old Male with Right Unilateral Cleft Lip and Palate



## 18 Year Old Male with Right Unilateral Cleft Lip and Palate





## 18 Year Old Male with Right Unilateral Cleft Lip and Palate



## 18 Year Old Male with Right Unilateral Cleft Lip and Palate





## 18 Year Old Male with Right Unilateral Cleft Lip and Palate

Pre



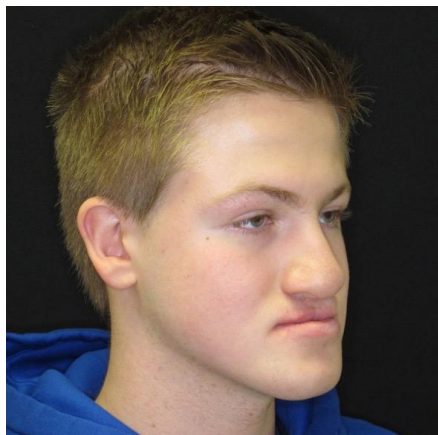
Post



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## 18 Year Old Male with Right Unilateral Cleft Lip and Palate

Pre



Post



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## 18 Year Old Male with Right Unilateral Cleft Lip and Palate

Pre



Post



## CF Asymmetry







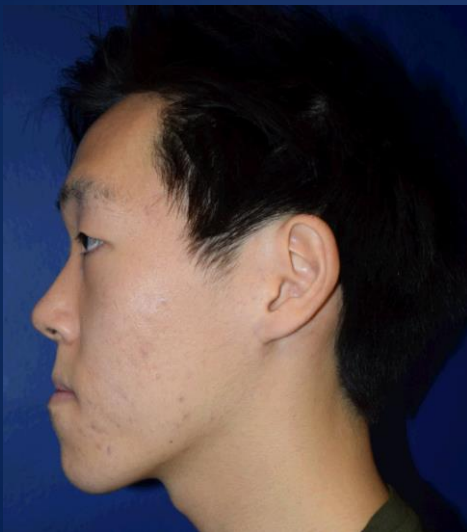
## 19 Year Old Male with Left Condylar Hypertrophy



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Pre (Left)

Pre (Right)



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## Smiling



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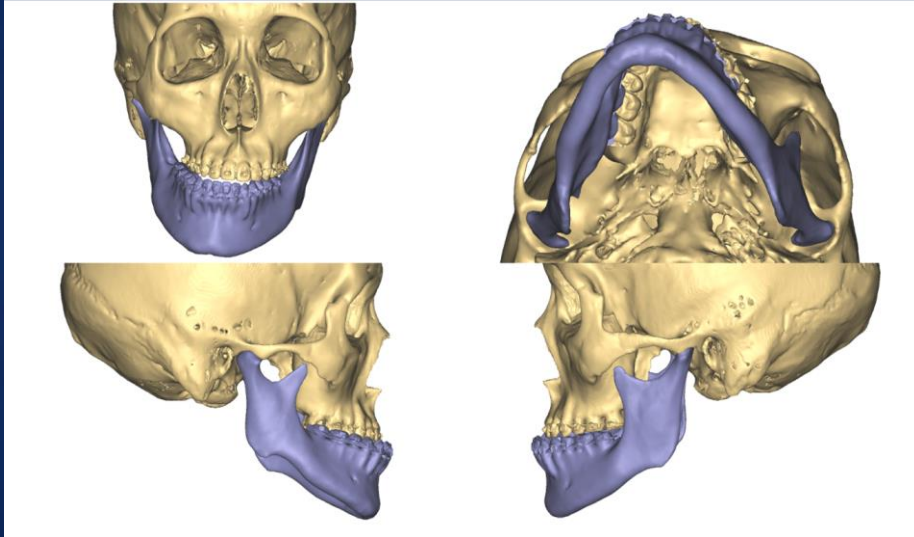
## 19 Year Old Male with Left Condylar Hypertrophy



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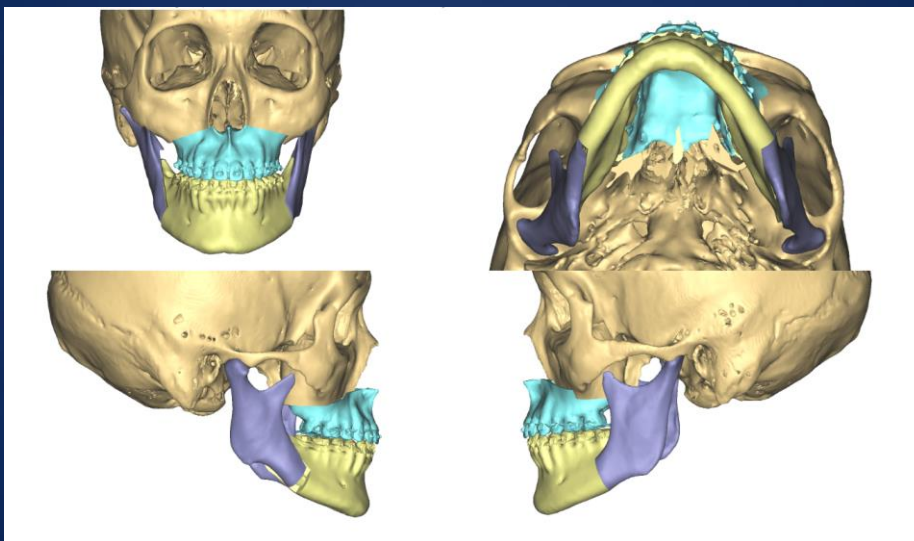


## 19 Year Old Male with Left Condylar Hypertrophy



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## 19 Year Old Male with Left Condylar Hypertrophy



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## 19 Year Old Male with Left Condylar Hypertrophy

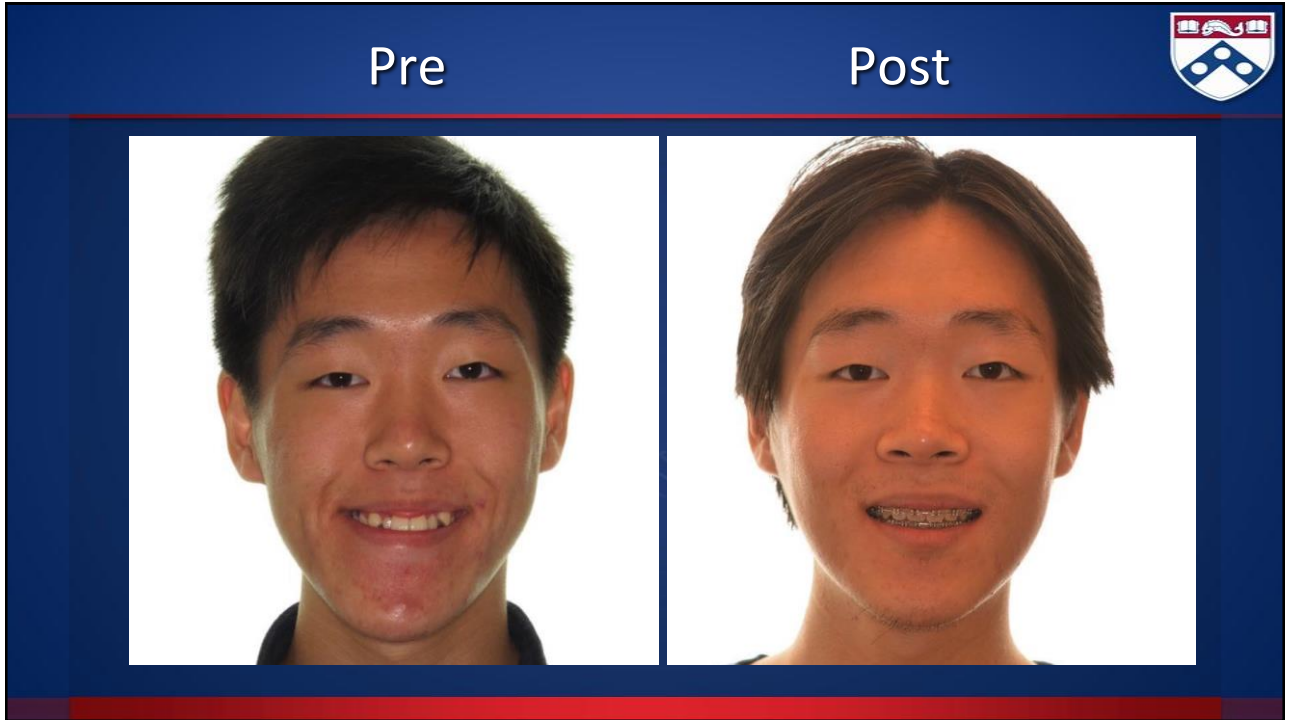


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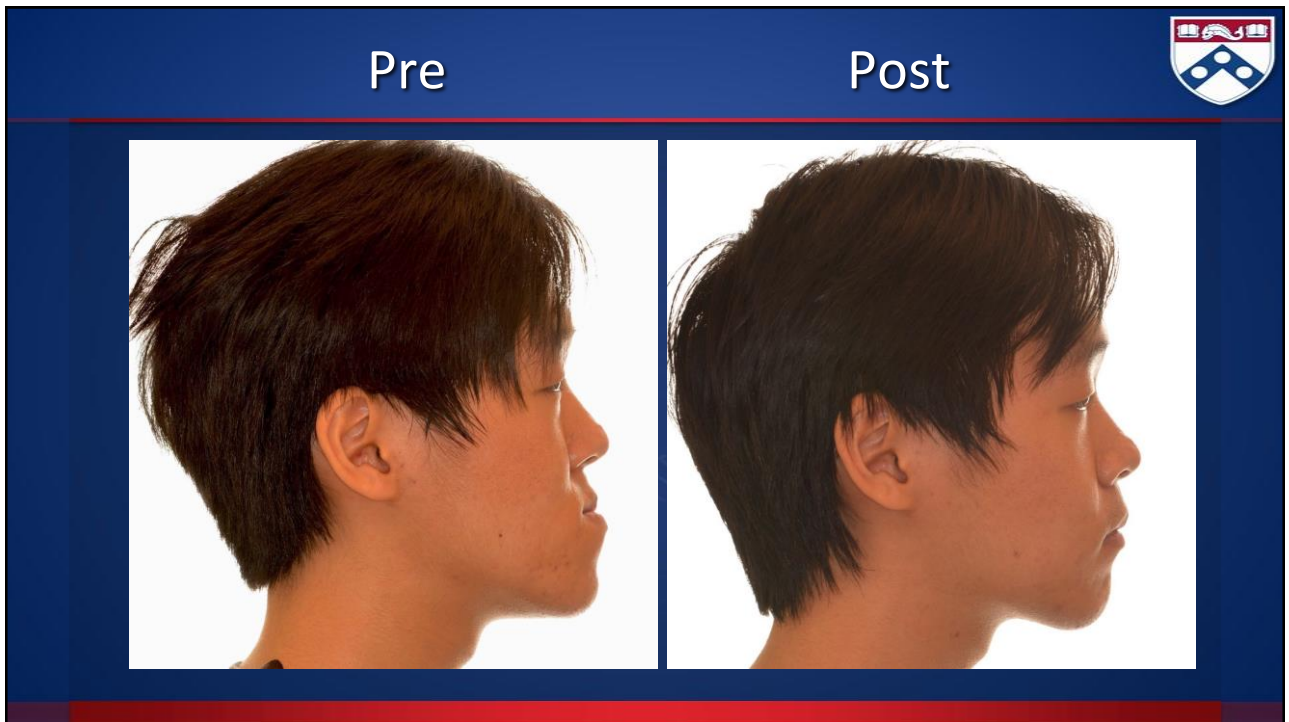
## 19 Year Old Male with Left Condylar Hypertrophy



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## 19 Year Old Male with Left Condylar Hypertrophy



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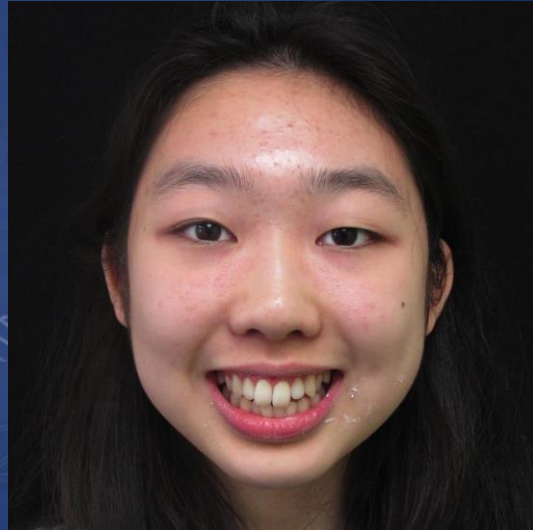
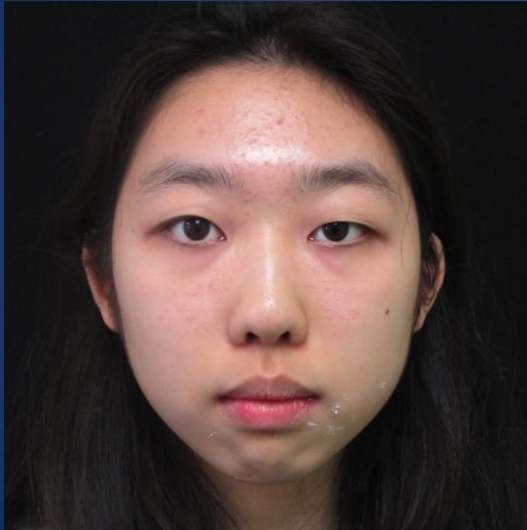
## Syndromic



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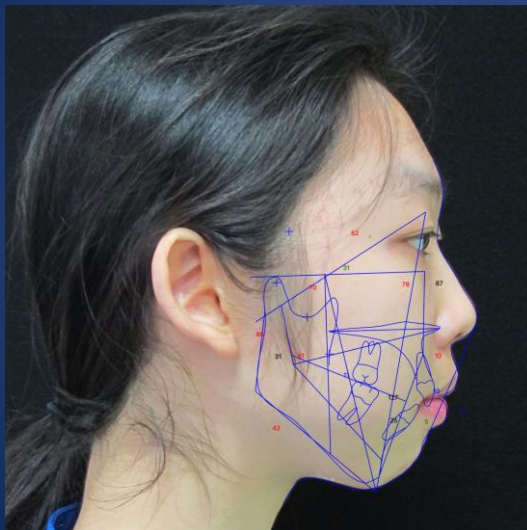


## 18 Year Old Female with Pierre Robin Sequence



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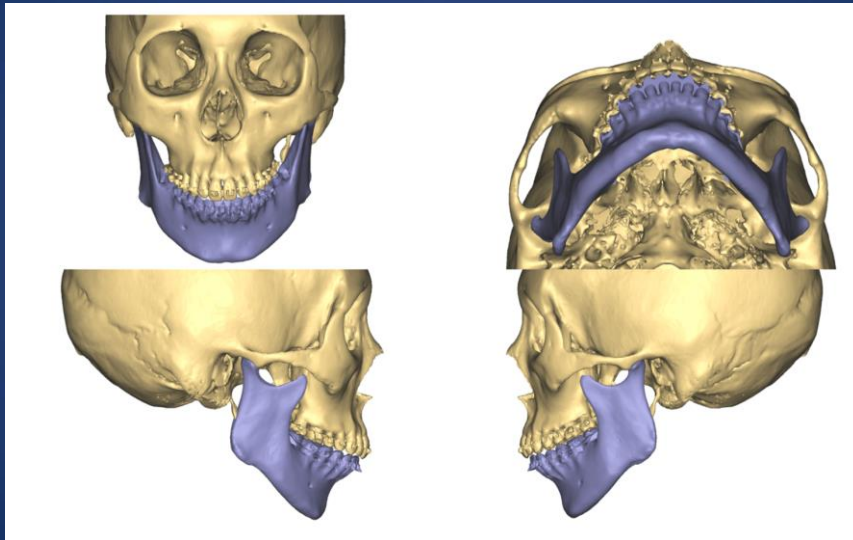
## Skeletal Class II with Open Bite



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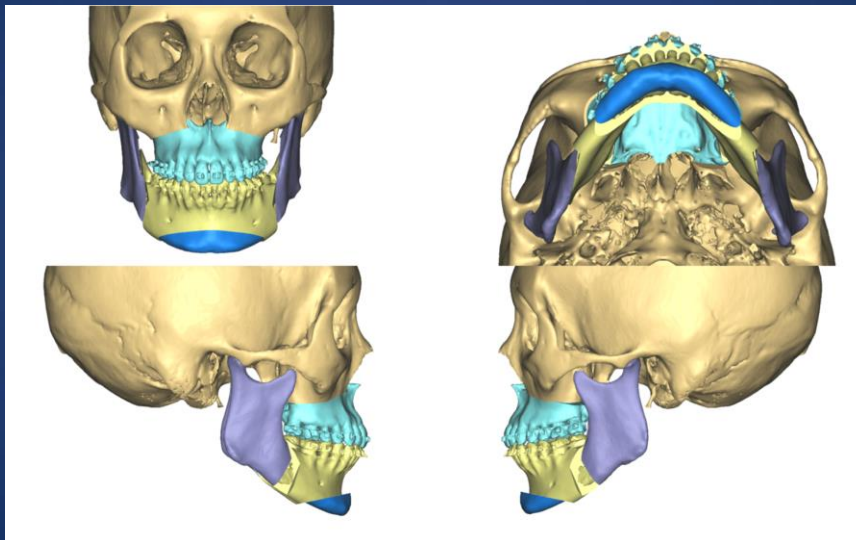


## 18 Year Old Female with Pierre Robin Sequence



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## 18 Year Old Female with Pierre Robin Sequence

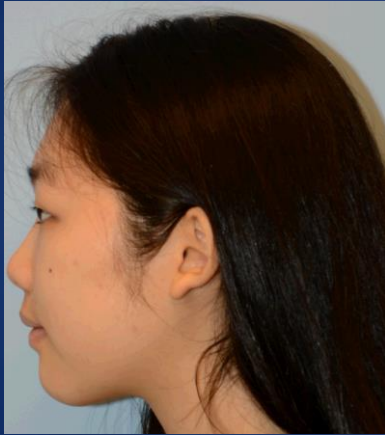


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## 18 Year Old Female with Pierre Robin Sequence



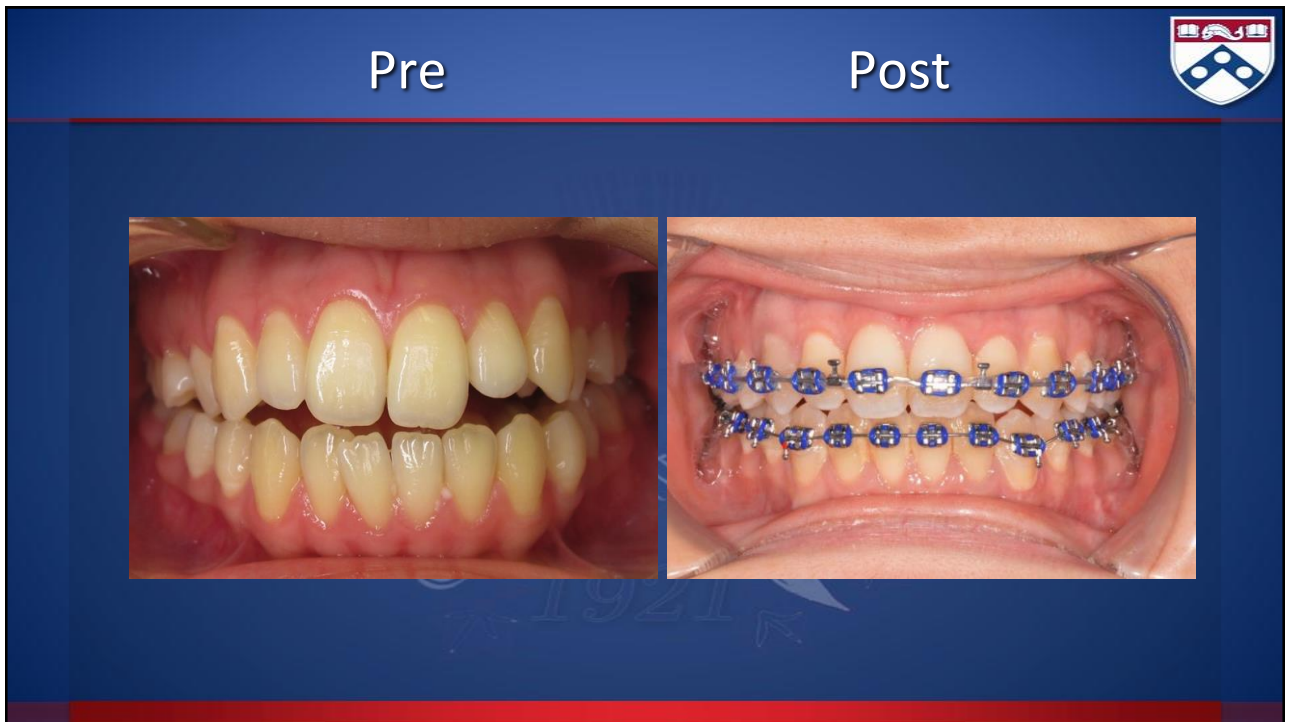
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Pre

Post



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## 16 Year Old Female with Treacher Collins Syndrome



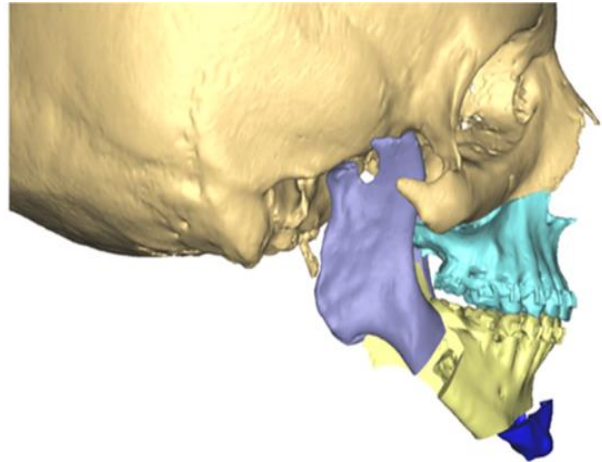
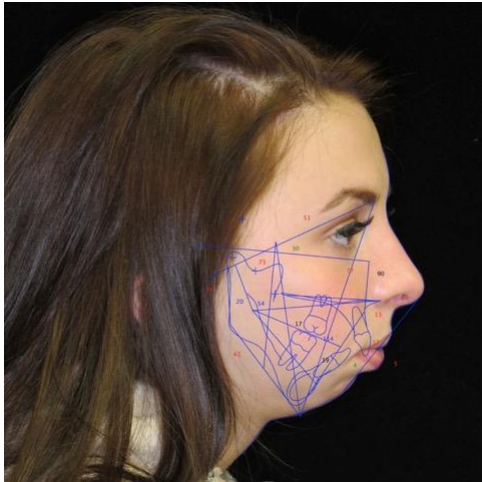
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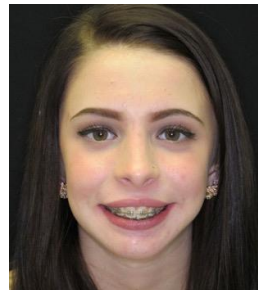


## Treatment Planning – Long Face Syndrome, Micrognathia, Zygomaticomaxillary (ZMC) Hypoplasia



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## Jaw Surgery



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## Fat Grafting Bilateral Cheeks

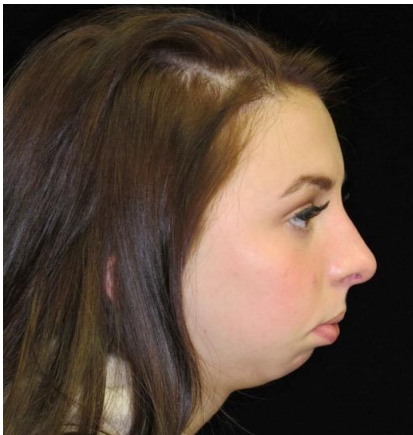
- 8cc per side, blunt tip
- Inserted via intra-oral and sideburn incisions
- Aim for subcutaneous and sub-muscular planes



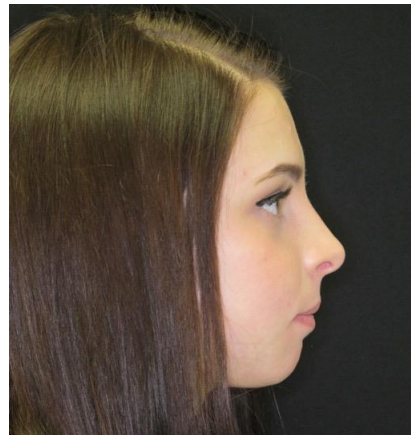
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## 16 Year Old Female with Treacher Collins Syndrome

Pre



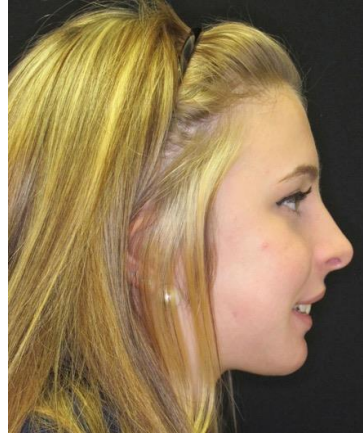
Post



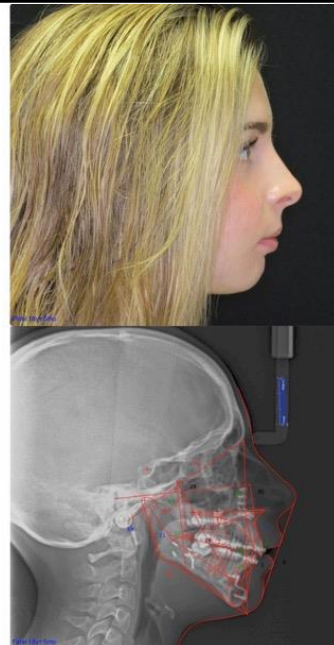
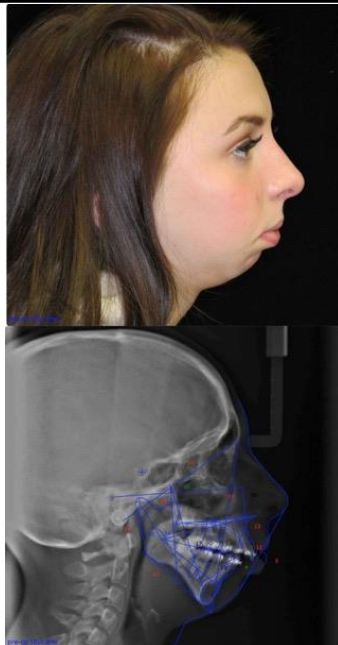
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## 16 Year Old Female with Treacher Collins Syndrome 2 Years Post-Operation



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## Risks and Potential Complications of Jaw Surgery

- Surgical—bleeding, infection, scarring, malalignment of bone, cutting of facial nerves, injury to teeth
- Temporary or lasting impact on speech
- Potential short-term postoperative impacts
  - Nausea, vomiting
  - Swelling, bruising
  - Facial numbness
  - Adaptation of facial musculature to new bone position

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## myFace Surgical Simulator: Craniofacial Interactive Virtual Assistant (CIVA)

- CIVA is a FREE tool that provides in-depth information about 9 of the most common craniofacial surgeries
- Includes detailed 3D simulations, expert medical advice, and firsthand accounts from patients and families
- Available at: [www.myface.org/civa](http://www.myface.org/civa)



### Le Fort I

#### Le Fort I Surgery

During this surgery, the upper jaw (or maxilla) is separated from the rest of the face and repositioned. This repositioning is also called orthognathic surgery.



### BSSO

#### Bilateral Sagittal Split Osteotomy

A Bilateral Sagittal Split Osteotomy (or BSSO) is a type of jaw surgery where the lower jaw is separated from the face and repositioned.



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## Conclusion



- Jaw surgery is a powerful tool to affect function and appearance of the face
- It is a process—takes approximately 2 years
- Each patient is different, and it is important to discuss with your surgeon

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## Psychosocial Aspects of Orthognathic Surgery



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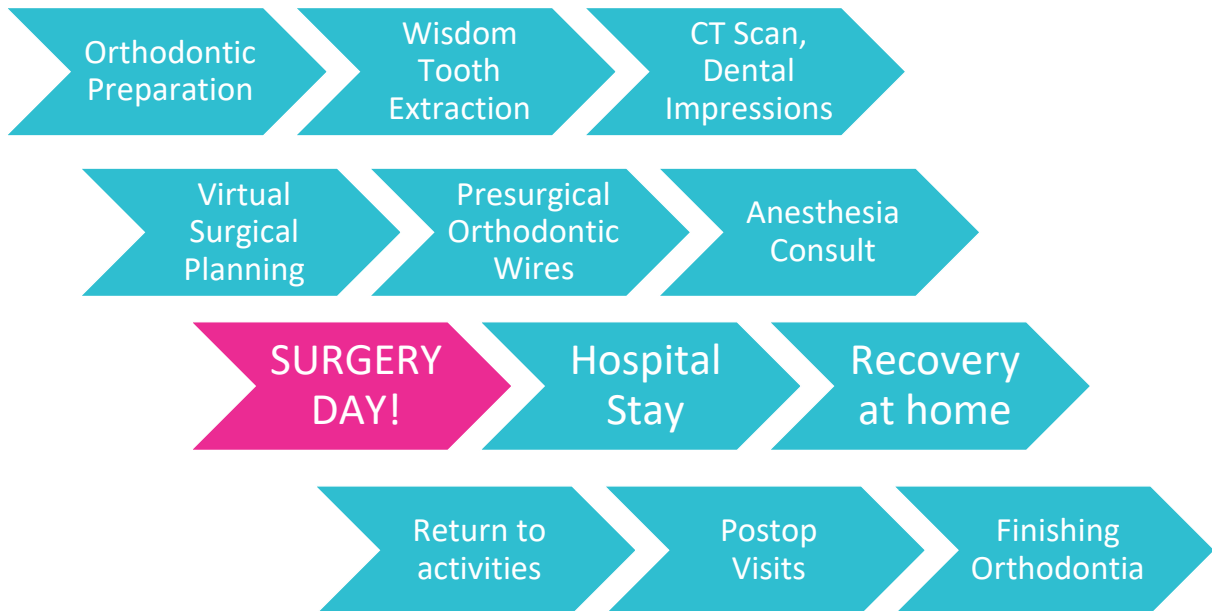


## Surgical Decision Making

	+	-	?
Surgery Now			
Surgery Later			
Surgery Never			



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## Understanding Treatment & Recovery

- “This was the hardest and best surgery I ever had!”
- Things to learn from your team include:
  - What benefits could this surgery have for me?
  - What needs to be done before surgery? After?
  - What does recovery in the hospital look like?
  - What does recovery at home look like?
  - How will my pain be managed?
  - What will my diet be like, and for how long?
  - When can I get back to school / work / sports?
  - What are some potential complications or risks?



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## Planning for Recovery

- Important Postoperative Timepoints:
  - 3-5 days in the hospital
  - 1-2 weeks restful recovery at home (out of school)
  - 4-6 weeks soft diet
  - 4-6 weeks until returning to intense exercise and contact sports
- Where are you going to recover?
- What supplies or comfort items do you want/need?
- What nutrition items do you want on hand?
- Which family and friends will support you?



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## Recovery Routine (Weeks 1-2)

### Morning

- Work
- Rest
- Play

### Afternoon

- Work
- Rest
- Play

### Evening

- Work
- Rest
- Play



## Coping with Diet

- Advance diet as recommended
  - Liquid > puree > soft foods for 4-6 weeks
- Plan to eat small servings every 2-3 hours to stay nourished
  - Consider squeeze bottles over syringes once comfortable for larger amounts
- Prioritize high-nutrition food
- Aim for variety in flavors
- Try to maintain regular mealtimes and social meals





## Coping with Pain

- No surgery is pain free
  - Aim to have enough comfort to take a nap or watch a show
- Take medications as prescribed
  - Narcotic pain meds for 4-5 days, then Tylenol/ibuprofen
- Non-medication pain management
  - Distraction
  - Relaxation
  - Sensory Strategies
  - Rest
  - Light Activity

Wong-Baker FACES® Pain Rating Scale



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## Coping with Anxiety & Mood

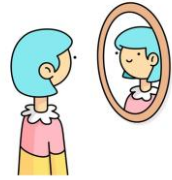
- Anticipate anxiety
  - Worry is normal for patients and parents
  - Try to remember all the careful thought and planning that got you to this point
- **Ride the Wave!**
- Maintain typical sleep and activity routine as able
- Engage in distracting or relaxing activities
  - Walks, movie marathons, audio books, podcasts, puzzles, games, crafts
- Seek support – don't suffer alone!



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## Coping with Appearance Changes



- Body Image is subjective
  - How you feel about how you look doesn't always match how you look or how others perceive you
- Body Image changes over time and situations
  - Preoperative appearance
  - Immediate postoperative appearance (swelling, bruising, numbness)
  - Later postoperative appearance
- Consult with your team about the degree of change to anticipate
  - Explore pre- and post-operative photos to see the range of results
- Allow time to heal and adapt



## Meet the Featherstone Family





## Dan's Surgery Story



CH Children's Hospital  
of Philadelphia  
Division of Plastic,  
Reconstructive & Oral Surgery



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## Dan's Orthognathic Surgery Experience



- When and Why did you decide to have jaw surgery?
- What were your goals for surgery?
- What was your recovery like?

CH Children's Hospital  
of Philadelphia  
Division of Plastic,  
Reconstructive & Oral Surgery



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## Dan's Orthognathic Surgery Experience

- Low Point
- High Point
- How have you been changed through your surgery experience?
- What do you think other patients should know if they are making a decision or preparing for surgery?



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## Postop Tips from a Parent

- Recliner chair helps with comfort, swelling, breathing
- Keep on top of pain meds, be proactive
- Lots and lots of ice
- Communicate via text
- Favorite soft foods
  - Fast food shakes (no straws), mac and cheese, mashed potatoes, water ice
  - Have a friend or family member bring it and stay to share a meal
- Take a walk outside after day 1-2; it's good and healthy for all!
- Prep the whole family
- Teens need their parents' support more than we realize, and for longer than we think!



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## Questions & Answers



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# Closing Remarks

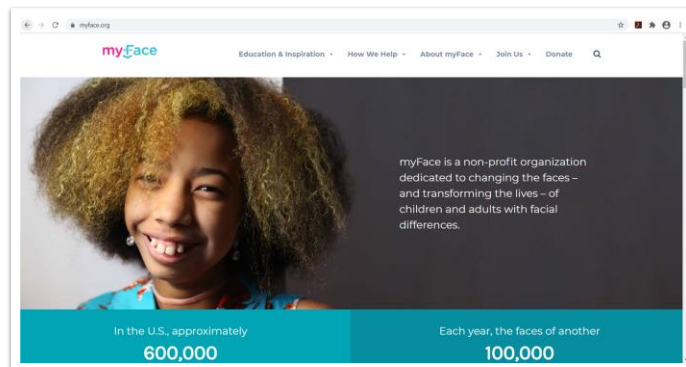


**Stephanie Paul**  
*Executive Director*  
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For additional information and resources  
visit [myFace.org](https://myface.org)



Or email us at  
[info@myface.org](mailto:info@myface.org)



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## Upcoming Events at myFace

Join us for the next webinar in our **Transforming Lives Webinar Series**:

### Management of Hearing Loss Associated with Cleft Lip/Palate and Other Craniofacial Conditions

Fall 2022

Further information will be available on the myFace website soon



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## Upcoming Events at myFace

Join us on  
**Wednesday, July 20th at 6 PM ET**  
for a discussion on **Advocating For Your Child:  
A Parent's Perspective!**

**Register at:**  
[www.myface.org/mystory/](http://www.myface.org/mystory/)

**S2 E2: Advocating For Your Child: A Parent's Perspective**

Dina Zuckerberg  
Lenica Bruce  
Amy Schefer  
Max Singer

**July 20 at 6:00 pm (ET) / 3:00 pm (PT)**

myStory



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## Upcoming Events at myFace

Join us on  
**Sunday, September 18th**  
for our 10<sup>th</sup> annual Races for Faces event!

Further information/registration available at:  
[www.RacesForFaces.org](http://www.RacesForFaces.org)



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## Thank You

Please complete the evaluation at [myface.org/jawsurgery](http://myface.org/jawsurgery)

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