

President's Message

Laurel Daniels Abbruzzese, PT, EdD

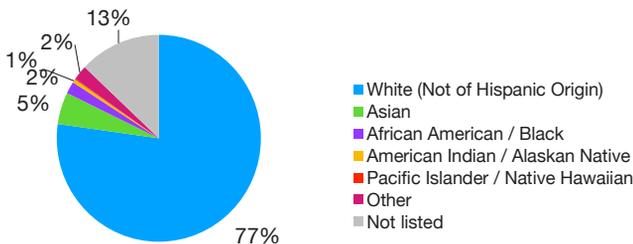
PASIG Identity

Who are the members of PASIG? Who do we want to be? One of the priorities of the PASIG leadership team is to ensure that all physical therapists that work with performing artists feel included in the PASIG community. We want to see the diversity of our members in our educational programming, in our leadership team, and the images depicted on the web. We are proud to highlight our new PASIG banner, which captures the diversity within the PASIG and our patients. If you have ideas for transforming the PASIG into a more diverse, inclusive, and equitable group, do not hesitate to reach out to me directly at PASIG email: labruzzese@orthopt.org.



Membership Committee Update - Jessica Waters

Of our 744 members, we have 278 members in our closed Facebook group. We created a PASIG membership survey to better capture the distribution of artists that we treat and to better meet the needs of our members. Our gender breakdown is 558 female, 159 male, 27 not listed. Our racial diversity is depicted below.



Show your PASIG pride! PASIG merchandise, featuring our new logo designed by Victoria Lu, will be available for purchase by members on our AOPT website. The revenue generated will support PASIG strategic initiatives.



Education Committee Update - VP, Rosie Canizares

All CSM 2021 conference activities will be virtual. Although it is challenging to plan, we are hopeful that the virtual format will allow more of our members to participate. The PASIG will host the educational session, “From the Clinic to the Big Top: Interprofessional Management of the Circus Artist”- featuring Stephanie Greenspan, Luc Fecteau, Dawn Muci, and Evert Verhagen. We are still planning to host some of our traditional events including a PASIG membership meeting, a Performing Arts Fellowship Q&A session, and a Performing Artist Screening meeting. We would also like to plan a session for all of the performing arts poster presenters. We will push out programming updates to our PASIG members closer to February. Be sure to join PASIG if you want to stay informed.

Our preconference course collaboration with the Imaging SIG, “Musculoskeletal Sonography of the Lower Limb Focused in Sport & Performing Arts” will be a live 1-day didactic session the first week of March (with the hope that we will be able to offer the hands-on experience as a pre-con for the next live CSM). We also have a newly formed ISC Task Force, led by Katrina Lee and Sarah Edely-Altas, working with authors Emily Scherb and Matt Greenfield on “Physical Therapy for Circus Artists.” Stay tuned for more information on this exciting project.

Outreach Committee Update - Brooke Winder

Long-awaited outreach materials have been added to our PASIG Website resources:

- Common Injuries in Circus Performers
- Common Injuries in Dancers
- Common Injuries in Figure Skating
- Common Injuries in Musical Theater
- Common Injuries in Instrumental Musicians
- PASIG - The Role of the Performing Arts PT
- PASIG - The Interprofessional Team

The committee will continue to move completed educational resources through the approval process and will work with the Education Committee on potential multi-media micro learning resources.

Communications Committee Update - Dawn Muci

The Communications Committee has been working closely with AOPT to push our messages out through various social media accounts. Be sure to follow the Twitter handle: @OrthopedicAPTA, Instagram handle: @APTA_Orthopaedic, and Facebook: @PT4Performers.

This committee also organized the PASIG member spotlight initiative. If you missed the Spotlight Series on social media, archived posts are also on the web. <https://www.orthopt.org/content/special-interest-groups/performing-arts/member-spotlight>

Research Committee Update - Mark Romanick

The Research Committee has worked with Communications to promote submission of abstracts and platform presentations for CSM 2021. We have a strong PASIG representation for the upcoming virtual conference. The PASIG continues to produce

Citation Blasts on a diverse array of topics that are sent directly to members and posted to the web. Thank you to the following authors for your contributions this fall:

AUGUST

Body Awareness Techniques in Musicians
Stephen Cabebe, SPT

SEPTEMBER-OCTOBER

Guidelines for the Dancer's Transition Back to Dance Post Initial Peak Phase of COVID-19: A Lens from the Organizational Level
Sarah Edery-Altas, PT, DPT, OCS
Will Zinser, MS, ATC
Elisa LaBelle, PT, MSPT, OCS

NOVEMBER

Injury Prevention in Dancers
Hanwen Wong, SPT

DECEMBER

Gymnastics Biomechanics and Injury
Anna Thatcher, PT, DPT, ATC

Performing Arts Update - Tiffany Marruli

A Performing Arts Fellowship is a great way to increase your knowledge and skill set for the management of performing arts patients. We are fortunate to have 4 Performing Arts Fellowship programs that offer a variety of opportunities for clinical practice, onsite coverage, and mentorship with performing artists. Fellowships are open to individuals who have completed an accredited physical therapy residency and/or a current specialist certification from the ABPTS. If you are interested in furthering your performing arts career, please contact the program directors below for more information regarding each program.

- **Columbia University Irving Medical Center and West Side Dance Performing Arts Fellowship**
 - Program Director: Laurel Abbruzzese la110@cumc.columbia.edu
 - <https://www.ps.columbia.edu/education/academic-programs/programs-physical-therapy/performing-arts-fellowship>
- **Harkness Center for Dance Injuries Performing Arts Fellowship**
 - Program Director: Angela Stolfi harkness@nyulangone.org
 - <https://med.nyu.edu/departments-institutes/orthopedic-surgery/specialty-programs/harkness-center-dance-injuries/education/professional-development-students-healthcare-practitioners/academic-observation-fellowship>
- **The Johns Hopkins Hospital Performing Arts Fellowship**
 - Program Director: Andrea Lasner danceFIT@jhmi.edu
 - https://www.hopkinsmedicine.org/physical_medicine_rehabilitation/education_training/therapy-residency/physical-therapy/performing-arts-pt-fellowship.html
- **The Ohio State University Wexner Medical Center Performing Arts Fellowship**
 - Program Director: Tiffany Marulli tiffany.marulli@osumc.edu
 - <https://hrs.osu.edu/academics/graduate-programs/clinical-doctorate-in-physical-therapy/residencies-and-fellowships/performing-arts>

Performing Arts -SIG Featured Content

Last but not least, the PASIG would like to thank Morgan Alexander, PT, DPT, Board Certified Clinical Specialist in Orthopaedic Physical Therapy and Fellowship Trained Performing Arts Medicine Physical Therapist at The Ohio State University Wexner Medical Center Jameson Crane Sports Medicine Institute, for her case study on the return-to-dance rehabilitation protocol of a pre-professional dancer s/p clavicle ORIF.

Return to Dance After an Upper Extremity Injury: A Descriptive Case Report

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of Sports Medicine Rehabilitation, Columbus, OH*

INTRODUCTION

The upper extremities are an integral part of expression and movement in dance. However, there is a relatively low incidence of upper extremity injuries in dancers. Liederbach et al¹ reported upper extremity injuries make up 3% to 8% of total injuries for dancers. These injuries are more common in modern and hip hop dance due to these styles being characterized by dynamic upper extremity weight bearing moves. With a low rate of upper extremity injuries there is a significantly limited amount of research about physical therapy management and appropriate return to dance protocols. It is important to establish appropriate physical therapy interventions and a return to dance progression for upper extremity injuries to return dancers to full participation in classes and performances safely.

Clavicle fractures are a common upper extremity injury in athletes.^{2,3} However, there is no research reporting incidence of clavicle fractures in dancers. The sports with the highest incidence of clavicle fractures are football, hockey, rugby, cycling, and horseback riding.² Clavicular fractures cause significant time lost from sport and have the third-longest timeline for return to play (RTP) among all sports-related fractures.^{2,4} Studies reported an average of 3.47 months for a player to return to play in the National Football League and 65 days to return to the National Hockey League after a clavicle fracture.^{5,6} Robertson and Wood⁴ reported that almost all athletes return to play after sustaining a clavicle fracture with 80% returning to their previous level of participation.

It is necessary to establish appropriate physical therapy interventions and return to dance progression to safely return dancers to class and performance following a clavicle fracture. There is limited research on physical rehabilitation and return to dance protocols status post clavicle open reduction internal fixation (ORIF). The purpose of this case report is to describe the physical therapy management and return to dance progression of a pre-professional ballet dancer status post clavicular fracture with ORIF.

CASE DESCRIPTION

History

The patient was a right-handed 19-year-old female pre-professional ballet dancer. On average she danced 8 hours per day for 5-6 days a week, a total of 40-48 hours per week. She primarily studied ballet, but also modern, Pilates, musical theater, and partner work. She fell in a parking lot carrying groceries and sustained a left distal

clavicle fracture (Figure 1). She underwent surgery for an ORIF of the clavicle. The patient's past medical history was insignificant. The patient's left shoulder was immobilized in a sling for 6 weeks. At postoperative week 7, she was cleared to initiate physical therapy and return to barre work in ballet class.

Imaging

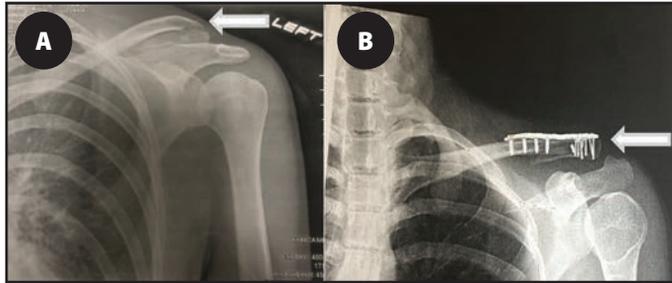


Figure 1. Radiographic imaging of left shoulder after patient fall. A, left distal clavicle fracture (arrow). B, Open reduction internal fixation of left clavicle fracture (arrow).

PHYSICAL EXAMINATION

The patient presented to physical therapy at postoperative week 7 no longer wearing a sling. At examination, the patient demonstrated limited left shoulder active range of motion (ROM) and passive ROM and left shoulder and elbow strength (Table 1). She demonstrated full cervical ROM and strength. The neurological screen was negative. The patient reported mild tenderness to palpation of left upper trapezius and levator scapulae. The Beighton score was 4/9, categorizing her as “hypermobile.”⁷ On the Quick DASH she reported 50% total impairment and 56.25% impairment for the performing arts category. She reported 2/10 pain on the Defense and Veterans Pain Rating Scale (DVRPS). The patient's chief complaints were limitations with dressing, carrying a backpack to the dance studio, sleep, and return to work as a pre-professional ballet dancer. She verbalized concern and a high level of fear of using her left arm. The patient's main goal was to return to participation in ballet, Pilates, modern, partner work and performances without limitation.

INTERVENTION

The patient attended 19 visits over the course of 16 weeks. The initial phase of rehabilitation, protection phase, consisted of sling immobilization and no participation in dance for 6 weeks. The patient presented to physical therapy at 7 weeks post-ORIF with the sling discharged by the surgeon, allowing transition to the second phase of rehabilitation. The restoration phase focused on restoring shoulder active ROM, passive ROM, and strength. This was achieved via manual therapy techniques, neuromuscular re-education, and therapeutic exercise (Table 2). The surgeon placed the patient on lifting restrictions of only the “weight of a coffee cup” for postoperative weeks 7-9 and no full weight bearing on the left upper extremity until week 12. The third phase, return to sport phase, consisting of therapeutic exercise focused on dynamic weight-bearing exercises, plyometrics, and dance specific interventions (Table 2).

Return to Dance Progression

In a ballet class, barre is the first portion of the class. Barre work consists of nonimpact exercises and movements assisted by

the upper extremity on the barre for balance and support. The patient was cleared for return to barre work at postoperative week 7 with light pressure of the left upper extremity on the barre. As previously mentioned, the patient was fearful of movement and use of her surgical arm. Also, on examination she had significant limitations in left shoulder mobility and strength. The patient and therapist collaboratively decided to return to barre work with the left arm at or below 90° in her flat ballet shoes (Figure 2). They decided to start in flat ballet shoes instead of wearing point shoes (*en pointe*) as point shoes are more unstable and may require increased upper extremity support for balance and catching herself if she were to fall. After a week of these modifications, the patient reported improved confidence in the use of her arm but complained of moderate fatigue with holding her arm at 90° for long periods.

The second component of a ballet class is termed centre. Dancers will perform pirouettes, jumps (*petite* and *grande allegro*), and sustained motions or changes in body position (*adagio*) in the middle of the dance floor without upper extremity support. At week 8, the patient was cleared for barre work *en pointe* with arm still at 90° or below and added centre work of *adagio*, *tendus*, and *pirouettes* in flat shoes at 90° or below. At postoperative week 9, she was able to add *petite allegro*, small jumps, in flat shoes with arm 90° or below. Now the patient reported significantly less fatigue with holding her arm at 90° for a significant amount of time and consistently demonstrated full left shoulder active ROM without upper trapezius compensation for one week.

At postoperative week 10, she was able to perform full shoulder ROM at barre and centre work, except for jumping. At 11 weeks, the patient was cleared by the surgeon for full weight bearing of the left upper extremity.

The patient was able to perform all of ballet class *en pointe* without modification of shoulder ROM at week 13. At this point, she had been unable to return to modern class, which was typically at the end of an 8-hour day and only once or twice a week. This was secondary to patient report of moderate muscle fatigue, pain with large repetitive circular movements, and non-clearance for return to floor work requiring pushing off of left arm and inversions. A progress note or re-evaluation was performed demonstrating improved shoulder active ROM, passive ROM, improved shoulder strength, but poor performance on upper extremity functional testing (see Table 1). On week 14, she was able to return to modern class with modifications of no floor work.

At week 15, the patient was cleared to return to a beginner level partnering class performing assisted pirouettes, turns, and arabesques, but no overhead press lifts. Partner work often requires one arm supported by another person and used to help turn, jump and catch, and with overhead lifts. It may also require support of one dancer at the waist as she maintains an extreme position on one leg. All of these movements require a level of safety and is important that the dancer would be able to catch herself safely if she were to fall. At this time, she had been cleared by the surgeon for full weight-bearing for 4 weeks, able to repetitively catch herself within her physical therapy session, and the patient reported confidence in a graded return to partner work.

The patient was able to achieve her goal of returning to performance at week 16 as it required no lifts or partner work and she had been able to perform all of her ballet classes for 3 weeks without limitation. Upper extremity plyometric training was initiated at week 18 as she needed power and explosive strength for

Table 1. Objective Measures

| Objective Measure | Evaluation | | Progress Note (10th visit) | | Discharge | |
|---|------------|------|-------------------------------|------|----------------|------|
| | Right | Left | Right | Left | Right | Left |
| SHOULDER PASSIVE RANGE OF MOTION | | | | | | |
| Flexion | 180° | 165° | 180° | 180° | 180° | 180° |
| Abduction | 180° | 155° | 180° | 180° | 180° | 180° |
| External Rotation | 110° | 90° | 110° | 110° | 110° | 110° |
| Internal Rotation | 60° | 50° | 60° | 60° | 60° | 60° |
| SHOULDER ACTIVE RANGE OF MOTION | | | | | | |
| Flexion | 180° | 130° | 180° | 180° | 180° | 180° |
| Abduction | 180° | 125° | 180° | 180° | 180° | 180° |
| External Rotation | T2 | T1 | T2 | T1 | T2 | T1 |
| Internal Rotation | T3 | T4 | T3 | T4 | T3 | T4 |
| UPPER EXTREMITY STRENGTH TESTING | | | | | | |
| Shoulder Flexion | 4/5 | 3+/5 | 4/5 | 4-/5 | 5/5 | 5/5 |
| Shoulder Abduction | 4/5 | 3+/5 | 4/5 | 4/5 | 5/5 | 5/5 |
| Shoulder External Rotation | 4/5 | 3+/5 | 5/5 | 4/5 | 5/5 | 5/5 |
| Shoulder Internal Rotation | 5/5 | 5/5 | 5/5 | 5/5 | 5/5 | 5/5 |
| Shoulder Extension | 5/5 | 5/5 | 5/5 | 5/5 | 5/5 | 5/5 |
| Middle Trapezius | 4-/5 | 3+/5 | 4/5 | 4/5 | 5/5 | 5/5 |
| Lower Trapezius | 3+/5 | 3/5 | 4/5 | 4-/5 | 5/5 | 5/5 |
| Elbow Flexion | 5/5 | 4/5 | 5/5 | 5/5 | 5/5 | 5/5 |
| Elbow Extension | 4/5 | 4/5 | 5/5 | 5/5 | 5/5 | 5/5 |
| UPPER EXTREMITY FUNCTIONAL TESTING | | | | | | |
| Modified Push-Up Test | not tested | | 0 | | 25 repetitions | |
| Closed Kinetic Chain Upper Extremity Stability Test | not tested | | 15 repetitions | | 23 repetitions | |

floor work and other modern dance movements. These exercises were not initiated before this time due to the primary focus being to return to performance at week 16. By week 19, the patient was able to perform 13 modified push-ups and 20 taps of the Closed Kinetic Chain Upper Extremity Stability Test (CKCUEST) (see Table 1). Her performance met the minimal clinically important difference threshold for these functional upper extremity tests.⁸ With this improvement, she was cleared for 2 handed inversions or handstands in modern dance and overhead lifts in partner class. She did well with this progression and was able to quickly progress from two-handed to one-handed floor work in modern at week 20. This now allowed her to participate in all dance classes without modification or limitation. For the next 3 weeks, the patient continued to improve upon dynamic power and strength in the clinic to discharge at 23 weeks postoperative (Figure 2).

OUTCOMES

At visit 10 (13 weeks post-ORIF), the patient's left shoulder strength, mobility, and functional upper extremity performance was re-evaluated (see Table 1). At this time the patient demonstrated full shoulder active ROM, passive ROM, and improved

shoulder and elbow strength. She reported an improvement from 50% to 0% total impairment and from 56.25% to 6.25% impairment for the performing arts category. She was still reporting intermittent shoulder pain of 2/10 on the DVPRS with large shoulder movements and after several dance classes. At the initial evaluation, the patient was unable to perform functional upper extremity testing due to limitations in full weight-bearing of the upper extremity. She was cleared by the surgeon at 11 weeks post-op for full weight-bearing allowing her to safely perform the modified push-up test and the CKCUEST.

The modified push-up test is a push-up performed on the knees and is recommended by the American College of Sports Medicine to assess upper-body endurance in women (Figure 3).⁹ Low muscular endurance has been associated with elevated risk for injury. Adequate muscular endurance is essential in partner dancing, maintaining positions such as handstands or inversions, and transitioning from one posture to another. For these reasons the modified push-up test was selected as a functional test for discharge from physical therapy. Ambegaonkar et al⁹ found that collegiate modern dancers were able to perform 22 modified push-ups when compared to age-matched physically active non-dancers. Mozum-

Table 2. Physical Therapy Interventions

| | Restorative Phase (6-8 weeks post-op) | Restorative Phase (8-12 weeks post-op) | Return to Sport Phase (12-15 weeks post-op) | Return to Sport Phase (15+ weeks post-op) |
|--|---|---|--|--|
| Manual Therapy | <ul style="list-style-type: none"> • STM • Passive ROM | <ul style="list-style-type: none"> • STM | | |
| Neuromuscular Re-education | <ul style="list-style-type: none"> • Scapular retraction • Supine alphabet • Supine and sidelying perturbations in multiple shoulder ranges | <ul style="list-style-type: none"> • Seated on stability with perturbations in ballet arm positions for 30 seconds in each position • Disc arm weight shifts on counter top • Quadruped perturbations with arm overhead | | |
| Therapeutic Exercise | <ul style="list-style-type: none"> • Shoulder active assistive ROM • Table slides flexion & abd • Prone row & extension • Sidelying shoulder ER & abd • Supine weighted ballet arm positions | <ul style="list-style-type: none"> • Shoulder row, extension, IR, ER, and horizontal abd on Pilates reformer • Wall push-ups • Shoulder taps on edge of counter top • Weighted serratus punches • Prone scapular 6 • ½ Turkish get up • Prone plank • Overhead kettlebell carry | <ul style="list-style-type: none"> • Modified push-ups • Shoulder taps in plank • Serratus plus • Full Turkish get up • Side plank • Plank on Pilates reformer • Superman on Pilates reformer | <ul style="list-style-type: none"> • Prone shoulder reach, roll & lift • Full push-up • Tall kneeling overhead press on Pilates reformer |
| Plyometrics | none | none | <ul style="list-style-type: none"> • Chest press throw • Shuttle press push outs in tall kneeling • Pilates reformer press outs in tall kneeling | <ul style="list-style-type: none"> • Overhead ball toss to rebounder • Weighted slam ball • Weight squat to overhead ball toss • Pilates reformer press outs with arms overhead in prone |
| Abbreviations: STM, soft tissue mobilization; FWB, full weight-bearing, ROM, range of motion; ER, external rotation; IR, internal rotation; abd, abduction | | | | |

dar et al¹⁰ reported 26 repetitions of modified push-ups was the 100th percentile normative for college-age females. Based on these studies, a goal of 25 modified push-ups for discharge from physical therapy was created. At her 10th visit, the patient was unable to perform any repetitions with proper set-up and position (see Table 1).

The CKCUEST is a dynamic upper extremity test that is correlated with good muscular strength and stability.⁸ The test is performed in a push-up position for males and modified push-up for females with the hands placed 36 inches apart (Figure 4). The participant is asked to touch one hand with the opposite hand, alternating for 15 seconds. This is repeated 3 times with a 45-second rest in between each round. Silva et al⁸ reported a normal values of 25 repetitions for males in full push-up position and 30 repetitions for females in a modified push-up position. A goal was created for the patient to perform 30 repetitions in a modified push-up position or 20 repetitions or greater in a full push-up position in order to be discharged from physical therapy.

The patient was discharged at postoperative week 23, following 19 physical therapy visits over a 16-week period. At discharge, the

patient reported 0/10 shoulder pain on the DVRPS and Quick DASH score of 0 for all categories. She was able to perform 23 repetitions on the CKCUEST and 25 modified push-ups (see Table 1). She was able to return to all dance styles and participate in 40-48 hours of dance a week without limitation.

DISCUSSION

This case report describes the successful return to dance progression of a pre-professional ballet dancer following a distal clavicle fracture with ORIF. Although she was able to return to her prior level of function, her time frame for a return to dance was longer than what has previously been reported in other athletes.^{5,6} There were many factors that influenced her return to dance timeline and progression.

Upper extremities are a key component of expression and movement in dance. However, the usage and demand of the upper extremity is determined by the style of dance. Ballet is characterized by more repetitive lower body movements than upper body movements.¹¹ Comparatively, modern dance is an amalgamation of dance styles that require significant demand of the upper body

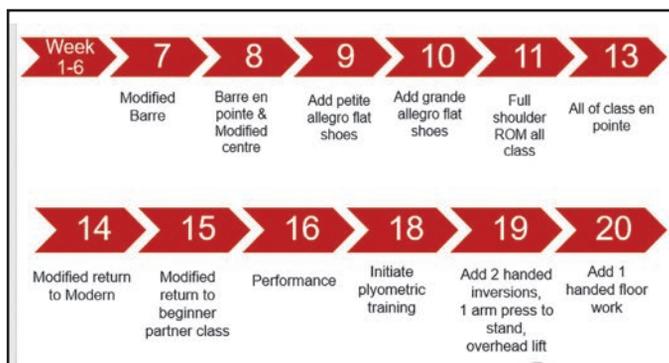


Figure 2. Return to dance progression.



Figure 3. Modified push-up test.



Figure 4. Closed Kinetic Chain Upper Extremity Stability Test.

such as falls, handstands, and partner lifts.⁹ This helps explain why the patient was able to return to full ballet class without modifications before returning to modern class.

At examination, the patient reported moderate fear avoidance behavior with use of the left upper extremity despite being medically cleared by her surgeon. This was a theme throughout the restoration phase of physical therapy. She often required verbal encouragement and education to increase use of the arm in daily activities, dance, and in the physical therapy clinic. This may have affected the speed of her progression for return to pointe work and use of the arm above 90° during dance class. However, once in the return to sport phase the patient no longer demonstrated these concerns so a referral to sports psychology was not made.

The patient did not do any form of strength training or cross-training outside of dance. It has been found that dance alone is not

sufficient exercise to create physical fitness and muscular endurance gains.⁹ At examination, the patient did not demonstrate full shoulder strength of the uninvolved and dominant limb. This eludes to the lower level of upper extremity strength the patient had before injury. She also had limited knowledge of upper body exercises and techniques requiring moderate time spent on education and technique training.

The patient was able to quickly achieve full shoulder active ROM and passive ROM within the first two weeks of initiating physical therapy. She was a highly motivated patient who was ready to learn and open-minded to new forms of exercise. She reported compliance with doing her home exercise program daily. These factors most likely contributed to her ability to return to full dance participation, achieve full bilateral upper extremity strength, and meet all discharge criteria.

The increased weight bearing demand of specific dance styles, fear avoidance behavior, and limited upper body and strength training before injury may have contributed to why this patient returned to full dance participation later than prior studies for return to sport after a clavicle fracture. However, this patient was able to successfully return to dance and performance without limitation.

CLINICAL APPLICATION

It is important to understand that return to dance may take longer than the time frame that has been previously reported for other athletes to return to sport. This may be due to the dynamic demands of upper extremity in dance. Using the modified push-up test and the CKCUEST were beneficial in assessing the patient's upper extremity strength, endurance, and stability needed for dance. However, a dance specific upper extremity test that simulates the lifting and floor work requirements of dance may be beneficial in clearance for return to these activities safely.

Dance requires repetitive movement and long duration holds of the arm in specific positions, which was challenging for the patient to progress early on in her rehab program. Focusing on neuromuscular control and endurance of ballet specific arm positions during the restorative phase (Table 2 and Figure 5) were the most beneficial for improving her in class endurance of the upper extremity. Safety is imperative when performing partnering and dynamic floor work. Instruction of falling safely and high repetitions of practice was integral in improving the patient's confidence and clearance for return to partnering and floor work. Lastly, challenging the power of the upper extremity with plyometric exercises in weight bearing and multiple ranges of motion (Figure 6) was most beneficial for her progression for return to partner and floor work.

Traditionally, dancers do not engage in cross-training or strength training outside of their dance requirements. This patient demonstrated a significant lack of upper body strength before injury and poor knowledge of

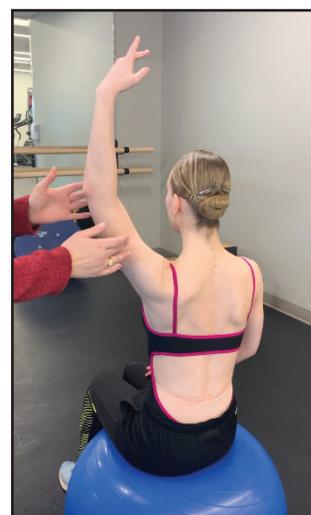


Figure 5. Seated perturbations with arm in 5th position.

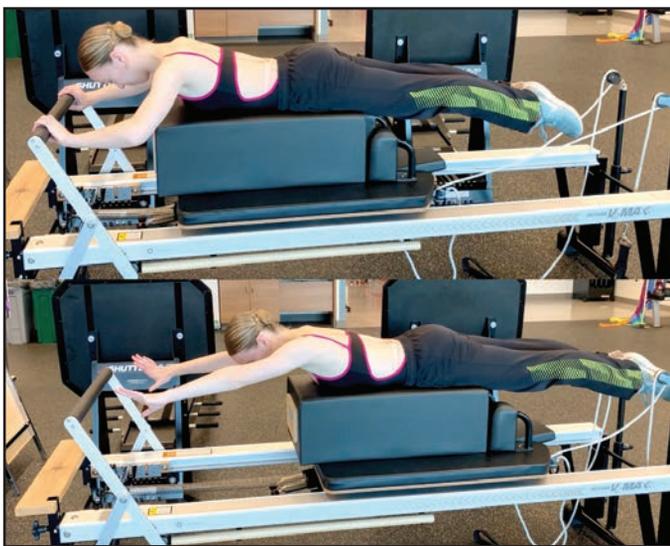


Figure 6. Prone plyometric press out on Pilates reformer.

upper body strengthening. This patient may make a case for upper body strengthening and conditioning in dancers outside of class to meet the demands of their sport and improve the timeline for return to dance after an upper extremity injury.

This dancer reported a high rate of fear-avoidance of the use of the arm in the early phases of rehabilitation that may have affected her return to dance time frame. It would be beneficial to give the patient a patient-reported outcome measure at initial evaluation to help screen for psychosocial factors that may affect the patient's prognosis and plan of care. This will help identify factors that need to be addressed by physical therapist education and possible referral to other healthcare providers such as sports psychologist.

There is limited research on physical therapy return to dance progressions for dancers with upper extremity injuries. This case describes the management and return to dance and performance training for a dancer status post distal clavicle ORIF. This case report can help guide the clinician in physical therapy management and return to dance progression for dancer's surgical post clavicular ORIF and possibly other upper extremity injuries.

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