pivot dancer

www.pivotdancer.com

Return to Dance: Post Concussion Protocol

STAGE	AIM	ACTIVITY	GOAL OF THE STEP
1	Symptom limiting activity	Initial 24–48 hrs of relative physical & cognitive rest with daily activities that do not provoke symptoms: Light chores (making the bed, folding clothes), preparing meals & snacks	Gradual reintroduction of activities of daily living.
2	Light aerobic Activity	Trial return to school/learning and return to work that is not dance related Gentle cardio to increase heart rate without increasing symptoms: Very light cardio: walking or stationary bike without resistance (10-15 min) Light stretching (no inverted positions) Barre: plié, tendu, developé, rond-de-jambe, fondu (slow tempo exercises) Gentle floor work and floor-barre exercises Avoid: Running or high intensity cardio All resistance training Leaps & jumps, bounding, Tap & other styles	Gradual reintroduction of school and/or work activities (not dance). Return to learn before return to dance. Increase heart rate.
3	Return to the studio	Increased cardio: Light cardio: walking, stationary bike, elliptical, rowing (20-30 min) Stretching (no inverted positions) Light resistance exercises: body weight, mat Pilates Centre: slow tempo, low intensity Ballet: full barre, introduce pointe work at barre, adagio, port-de-bras Tap, Step & Irish: soft shoes For aerialists: hanging and light swings For acro & hip hop: planks Avoid: Running or high intensity cardio. Heavy resistance training including lifts & partnering Turns, pirouettes, leaps & jumps, bounding, grand allegro Inversions, release moves, tumbling	Increase aerobic activity and monitor for symptom return. Introduce activity specific conditioning. Add movement to exercises.
4	Partial rehearsal (no inversions or spins)	Moderate cardio: Walking, stationary bike, elliptical or light jogging on a treadmill (20-30 min) Resistance exercises: light resistance bands/weights, Pilates on reformer, Gyro) Reintroduce simple choreography: Return to small jumps (bounding, sauté, glissade, pas-de-chat) Ballet: reintroduce center work on pointe (no turns), petit allegro Tap, Step, Irish & hip hop: heavy footwork, progress to taps and hard shoes Avoid: Turns, pirouettes, leaps & jumps, grand allegro Inversions, release moves, tumbling, flips Lifts (partnering), powerlifting and valsalva (holding breath when lifting) Activities with risk of head impact	Maximize aerobic capacity and monitor for symptoms. Introduce head movement. Add increased need for coordination. Increased cognitive load.
5	Partial rehearsal	Moderate cardio (as above) High intensity accelerations (sprint for tumbling) Introduction to more complex choreography, combos & routines Repetitive jump sequences Floor: pirouettes & turns, leaps & jumps, across the floor Ballet: reintroduce all center pointe work, grand allegro Progress to simple partnering & lifts (no overhead, low risk) Progress to inversions: For acro & hip hop: add simple inversions (i.e. handstands, back walkovers, front walkovers, cartwheel), and light tumbling and tumbling progressions For aerialists: add simple inversions and progressions, slow spins Recommend teacher stand-by & support as dancer transitions to skills	Maximize aerobic capacity. Add deceleration and rotational forces in a controlled setting. Introduce inversion and vestibular stress.
6	Full rehearsal	Required medical clearance by a physician (MD, DO, NP or PA) for return to dance rehearsals and practicing dance routines. Not yet cleared for performances.	Restore confidence and assess functional skills by teaching staff
7	Return to dance	Full unrestricted rehearsal & training Clearance for performances, auditions and competitions	Return to all dance activities.

Prepared by: Dr. Shannon Bauman MD, Geneviève Renaud PT, Dinah Hampson PT

NOTE: Progress to the next stage may occur every 24 hours (or longer) as long as symptoms do not increase. If any symptoms worsen during exercise, the dancer should go back to the previous step. If symptoms are persistent (>14 days in adults or >1 month in children), the dancer should be referred to a healthcare professional and interdisciplinary team with experience in concussion care.

*Note for medical clearance: Ensure neck strength/control and vestibular system has been evaluated and the dancer is symptom-free with provocations prior to adding turns, pirouettes, center work on pointe, lifts & partnering, release moves, aerial movements, and tumbling passes.

References:

McCrory, P., Meeuwisse, W., Dvorak, J., Aubry, M., Bailes, J., Broglio, S., ... & Davis, G. A. (2017). Consensus statement on concussion in sport—the 5th international conference on concussion in sport held in Berlin, October 2016. British journal of sports medicine, 51(11), 838-847.

May, K. H., Marshall, D. L., Burns, T. G., Popoli, D. M., & Polikandriotis, J. A. (2014). Pediatric sports specific return to play guidelines following concussion. International journal of sports physical therapy, 9(2), 242.

Schneider, K. J., Leddy, J. J., Guskiewicz, K. M., Seifert, T., McCrea, M., Silverberg, N. D., ... & Makdissi, M. (2017). Rest and treatment/rehabilitation following sport-related concussion: a systematic review. British journal of sports medicine, 51(12), 930-934.

Darling, S. R., Leddy, J. J., Baker, J. G., Williams, A. J., Surace, A., Miecznikowski, J. C., & Willer, B. (2014). Evaluation of the Zurich Guidelines and exercise testing for return to play in adolescents following concussion. Clinical Journal of Sport Medicine, 24(2), 128-133.

Update and Implementation of the Guidelines for Diagnosing and Managing Pediatric Concussion: 2nd Edition. Ontario Neurotrauma Foundation Grant. 2017 Dec - 2019 April. 252,396 CAD. Principal Investigators: Zemek, R. & Reed, N. Co-Investigators: Babul, S., Bauman, S., Bayley, M, Beauchamp, M., DeMatteo, C., DePompei, R., Ellis, M., Emery, C., Fait, P., Fremont, P.,Gagnon, I., Gioia, G., Giza, C., Goulet, K., Marshall, S., Macartney, G., Meehan, W., Purcell, L., Schneider, K., Yeates, K.

Canadian Guideline on Concussion in Sport. Parachute (July 2017). Canadian Guideline on Concussion in Sport. Toronto: Parachute. Expert Advisory Committee on Concussions: Tator C, Ellis M, Babul S, Bauman S, Cusimano M, Emery C, Fremont P, Goulet C, Logan L, MacPherson A, Reed N, Schneider K, Singhal A, Vasilyadi M, Zemek R.

Ontario Neurotrauma Foundation Standards for Post Concussion Care. Ontario Neurotrauma Foundation (June 8, 2017)Toronto: ONF. Concussion Advisory Subcommittee: Velikonja D, Baldisera T, Bauman S, Davis S, Di Salle C, Freedman M, Ouchterlony D, Quon D, Reed N, Sims K, Wilcock R, Zemek R.

Ontario Neurotrauma Foundation Guidelines for Concussion/mTBI & Persistent Symptoms 3rdEdition. Guideline Development Committee/Contributor; publication & release June 2018.