



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Trawsnewid Addysg; Trawsnewid Bywydau
Transforming Education; Transforming Lives

Introduction to Fitness and It's importance in Dance

Dr Anna Stevenson

Lecture 3



RECAP COMPONENTS OF
FITNESS GAME



LAST WEEK – CARDIO +
FLEXIBILITY



**THIS WEEK -
MUSCULAR
STRENGTH,
ENDURANCE,
POWER**

Circle Movement Game



Movement	Main Component	Secondary
High jump	Power	Strength
Arabesque hold	Strength	Balance
Multiple fast turns	Balance	Agility
Repeated contemporary	Endurance	Cardio
Deep backbend	Flexibility	Strength
Quick directional changes	Agility	Speed
Repeated jumps in rhythm	Endurance	Power
One-leg balance reach	Balance	Core Strength
Fast footwork pattern	Speed	Agility
Controlled floor roll	Strength	Mobility

3 Stations - Circuit

Wall sit / Plank 40s

Repeated squats 40s

Vertical explosive jumps

- Which one burned fastest?
- Which felt explosive?
- Which required control?

Then define:

- Strength
- Endurance
- Power

What is Muscular Fitness?



Muscular Strength - maximal force that can be generated by single or group of muscles



Muscular Endurance - ability of muscle or group of muscles to sustain repeated contractions or maintain static contraction over a prolonged period of time without fatigue.



Muscular Power – ability of muscle or group of muscles to generate force rapidly, combining both speed and strength to produce explosive movements.



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

*Trawsnewid Addysg; Trawsnewid Bywydau
Transforming Education; Transforming Lives*

Why Muscular Fitness Matters for Dancers



What injuries are common in dancers?



Where do you lose control when tired?



What movements require power?

Why is Muscular Fitness important for Dance?



Strength and Power - Dancers require strength to perform jumps, lifts, and dynamic movements. Muscular strength ensures explosive power, stability during transitions, and resilience against fatigue.



Endurance - Dance routines often last for extended periods. Muscular endurance allows dancers to maintain energy and perform consistently without losing technique or precision.



Injury Prevention - Strong muscles help stabilize joints and improve alignment, reducing the risk of injuries like strains, sprains, or overuse conditions common in dance.



Balance and Control - Muscular fitness enhances core strength, which is vital for balance, posture, and fluid movement. This is crucial for complex footwork, turns, and maintaining poses.

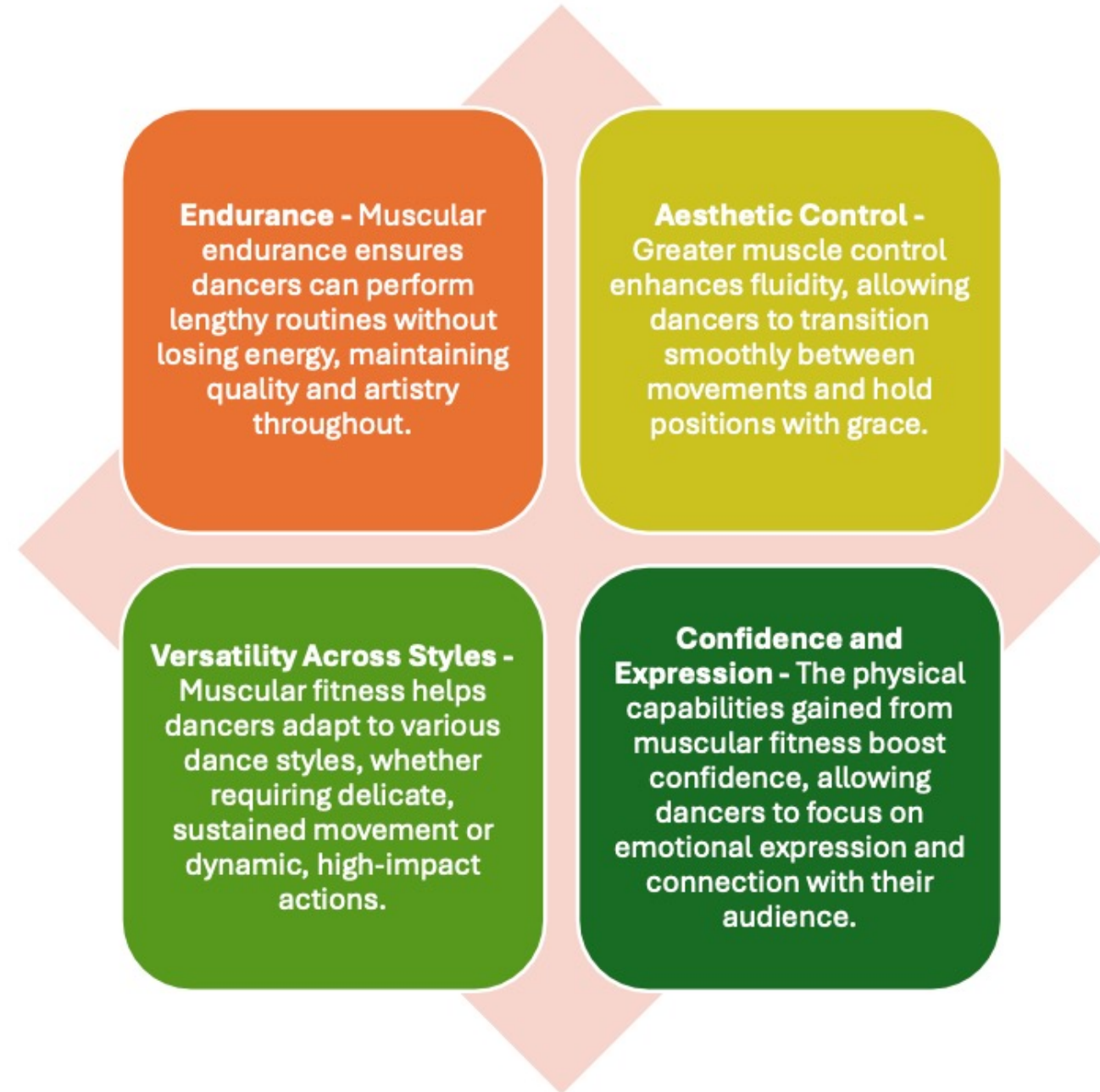


Flexibility and Range of Motion - While flexibility is crucial for dance, it works best in tandem with strong muscles. Strength ensures that movements like splits, extensions, and backbends are executed safely and with control.



Aesthetic Execution - Muscular fitness improves precision, allowing dancers to execute movements with clarity, grace, and power, enhancing the overall performance.

What are the benefits of higher levels of Muscular fitness for Dance?

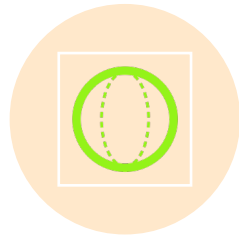


How Do We Train Muscular Fitness?

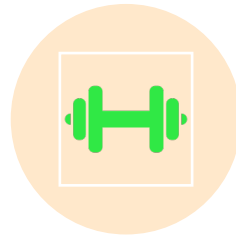
- **Resistance Training = Moving against load**
- Load can be:



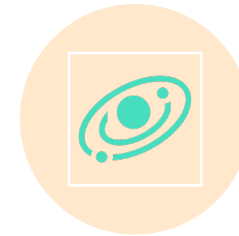
BODYWEIGHT



BANDS



DUMBBELLS



GRAVITY



PARTNER
RESISTANCE

The Training Design Pyramid



Needs Analysis



Exercise Selection (Foundational Movements)



Frequency



Order



Load & Reps



Volume



Rest

Step 1 - Needs analysis

What does the dance style demand?

(Repeated movements, muscles worked, is the style explosive, controlled, or sustained?)

What does THIS dancer need?

(Injuries, struggles, preferences)

Step 1 - Needs analysis Task

Task

In groups: Think about the demands of dance and fill in the table

- Ballet
- Contemporary (Lifts
- Jazz
- Hip Hop

Area	Fill in the gaps... (Here's some ideas)
Main Movements	
Key Muscles	
Fitness Quality/When	Strength / Endurance / Power
Common Injuries	

Step 2: Exercise Selection

CHOOSE EXERCISES BASED ON:



MOVEMENT PATTERN



EXPERIENCE/
TECHNIQUE LEVEL



EQUIPMENT
AVAILABLE



AMOUNT OF TRAINING
TIME AVAILABLE

Foundational Movements

Pattern	Dance Example
Squat	Plié, landing jumps
Lunge	Traveling steps, balances
Hinge	Tilts, arabesque
Push	Floor work
Pull	Partnering, holding body weight
Rotate	Turns, spirals
Brace	Core control, balances

Let's move & explore Foundational Movements

- **1. Warm-Up (5 minutes)**
- RAMP – Go through foundational movements as group
- **Squat** → reach
- **Lunge** → with twist
- **Hinge** → forward and roll up
- Arm swings into **push** & **pull** motion
- **Rotate** →
- **Brace** → Balance holds

Station Circuit (25 minutes)

- **7 stations** - Students work in pairs, 2–3 minutes per station.

Station 1 – Squat

Exercises:

- Parallel squat
- Second position plié
- Jump → soft landing

Focus:

- Quads, glutes, calves
- Strength & power
- Knee–hip–ankle alignment

Dance link: Jump take-off and landing

Station 2 – Lunge

Exercises:

- Forward lunge
- Curtsy lunge
- Lunge with arm reach

Focus:

- Glutes, quads, hip stabilisers
- Balance & control

Dance link: Traveling steps, weight transfer

Station Circuit (25 minutes)

Station 3 – Hinge

Exercises:

- Single-leg hinge
- T-position hold
- Good-morning pattern

Focus:

- Hamstrings, glutes, spinal control
- Posterior chain strength

Dance link: Tilts, penchés, arabesque lines

Station 4 – Push

Exercises:

- Wall push-ups
- Floor push-ups
- Plank shoulder presses

Focus:

- Chest, shoulders, triceps
- Upper-body strength

Dance link: Floorwork, lifts, weight-bearing arms

Station Circuit (25 minutes)

Station 5 – Pull

Exercises:

- Resistance band rows
- Scapula squeezes
- Towel pulls

Focus:

- Upper back, lats
- Postural strength

Dance link: Partnering, arm carriage, posture

Station 6 – Rotation

Exercises:

- Standing torso rotations
- Russian twists
- Spiral reaches

Focus:

- Obliques, deep core
- Control and deceleration

Dance link: Turns, directional changes

Station 7 – Brace

Exercises:

- Plank
- Side plank
- Dead bug

Focus:

- Deep core, spinal stability
- Balance and injury prevention

Dance link: All balances, lifts, turns

Step 3 - Training Frequency

Beginners: 2–3 x per week

Intermediate: 3–4 x

Advanced: 4-7 Split sessions

Consider the effects of

- Other aerobic or anaerobic training
- Sport skill practice
- Physically demanding occupations

Step 4: Exercise Order



1. Power first



2. Strength next



3. Endurance last



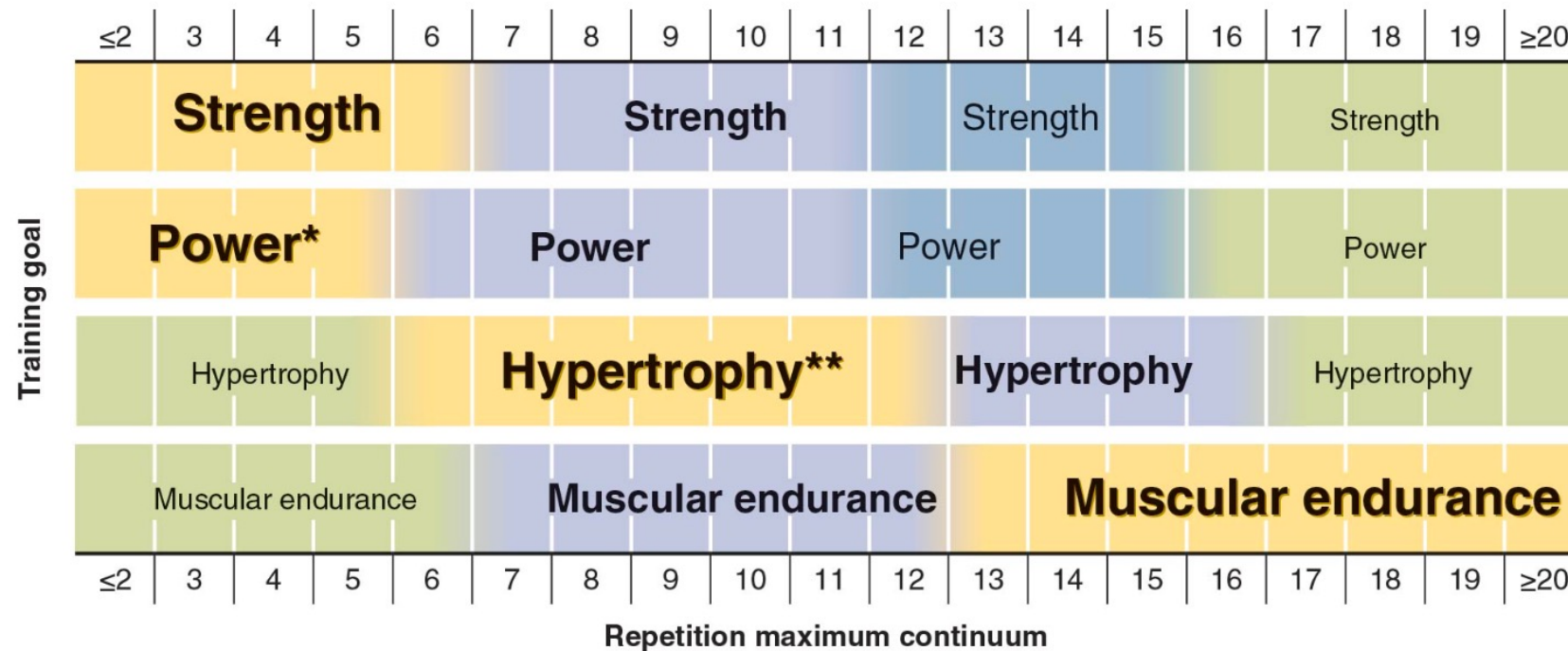
4. Core throughout

Step 5: Training Load & Repetitions

- The heavier the load (amount of weight), the lower the number of repetitions that can be performed.
- Load is commonly characterized as a percentage of a 1-repetition maximum (1RM = Greatest amount of weight in one rep) or as a repetition maximum (RM).

Step 5: Load & Reps (Simple)

- Assigning load and repetitions based on the training goal
- Use relatively heavy loads if the goal is strength or power.
- Use moderate loads for hypertrophy.
- Use light loads for muscular endurance.



Step 6: Volume

- Volume = Sets × Reps × Load
- Beginners: 1–2 sets
- Higher volumes are necessary to promote further gains in strength (3–4 sets)
- Especially for intermediate and advanced resistance-trained athletes

TABLE 17.11 Volume Assignments Based on the Training Goal

Training goal	Goal repetitions	Sets*
Strength	≤6	2-6
**Power: Single-effort event Multiple-effort event	1-2	3-5
	3-5	3-5
Hypertrophy	6-12	3-6
Muscular endurance	≥12	2-3

Step 7: Rest

- The time dedicated to **recovery** between sets and exercises is called the rest period or interset rest.
- The length of the rest period between sets and exercises is highly dependent on the goal of training, the relative load lifted, and the athlete's training status.

- Power: Long rest (2–5 min)
- Strength: Medium rest (2–3 min)
- Endurance: Short rest (30 sec)

**TABLE 17.12 Rest Period Length Assignments
Based on the Training Goal**

Training goal*	Rest period length
Strength	2-5 min
Power: Single-effort event Multiple-effort event	2-5 min
Hypertrophy	30 s to 1.5 min
Muscular endurance	≤30 s

RECAP: The Training Design Pyramid



Needs Analysis



Exercise Selection



Frequency



Order



Load & Reps



Volume



Rest



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Trawsnewid Addysg; Trawsnewid Bywydau
Transforming Education; Transforming Lives



Following weeks

- 1) **14/01: Intro to components of fitness**
- 2) **21/01 Cardiovascular fitness & Flexibility**
- 3) **28/01 (In Person): Muscular Fitness/Strength**
- 4) **04/02 (Online): Goal setting, Programme Considerations, Nutrition basics**
- 5) **11/02 (Online drop in) Submit assessment**

Assessment Groups

Presentation Groups:

Group 1

Carys
Kiana
Martha
Ethan

Group 2

David
Matthew
Eva
Sienna

Group 3

Erin
Lillie M
Harrison
Sandy-Sophie

Group 4

Evieanna
Ryan
Lilly S
Mia

Group 5

Isabelle
Jess
Lili W
Rebecca

Assessment

- Group Presentation (8 minutes)
- Outline the importance of fitness and training for dancers.
- Provide an overview of key components of fitness associated with dance and include examples of how dancers could train and develop these. In doing so, show how the principles of training have been considered.
- You can use Power Point (or equivalent) and include referencing and a bibliography.
- Research, evaluation and interpretation should be used. The correct referencing standard should be used throughout.

Reference List

- American College of Sports Medicine (ACSM). (2018). ACSM's Guidelines for Exercise Testing and Prescription (10th ed.). Wolters Kluwer.
- Haff, G. G., & Triplett, N. T. (2015). Essentials of Strength Training and Conditioning (4th ed.). Human Kinetics.
- Wilmore, J. H., & Costill, D. L. (2018). Physiology of Sport and Exercise (7th ed.). Human Kinetics.