

PE



Chapter 11

Physical education (PE)

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The National Curriculum states:

'The aim of high-quality physical education curriculum inspires all pupils to succeed and excel in competitive sport and other physically demanding activities. It should provide opportunities for pupils to become physically confident in a way which supports their health and fitness. Opportunities to compete in sport and other activities build character and help to embed values such as fairness and respect.'

Department for Education, 2013

Schools have a responsibility to make 'reasonable adjustments' to their policies and practice for PE, aim for accessibility and promote equality. Teachers need to think creatively to set suitable learning outcomes that respond to the diverse needs of the class and overcome barriers. Some educationalists refer to the 3Ps – Presence, Participation and Performance – when thinking about PE. This can focus the teacher on thinking about how to ensure the young person accesses PE, what modifications can be made and what they want to achieve. Inclusion is a process and it involves everyone in planning, delivering, evaluating and modifying lessons.

The evidence for exercise in muscle-wasting conditions

For people living with muscle-wasting conditions, exercise may have benefits for maintaining or improving muscle strength, maximising function and minimising contractures. A lack of exercise can contribute to de-conditioning, and the development of a vicious cycle whereby the person gains weight thus making exercise more difficult. People who live with muscle-wasting conditions need to exercise with care and take advice relevant to their condition from

the healthcare professionals who see them regularly.

Anziska and Sternberg, 2013

Benefits

The benefits of joining in with PE are far-ranging and include not only the benefits of physical activity, but also the knowledge and awareness of the principles of a healthy lifestyle, teamwork, leadership skills and the 'feel-good' factor associated with activity. Exercise and physical activity may help a person to maintain their ability to perform daily living tasks, help maintain bone density, and help maintain a healthy weight, release the 'feel-good' hormones and help with sleep.

Pacing

It is not uncommon for young people with muscle-wasting conditions to find that they are enthusiastic to participate in PE, but to then feel over-fatigued afterwards. This is tricky to explain to a young person who loves joining in but then does not understand the after-effects.

It is often useful to use stories such as the 'Hare and the Tortoise' to explain to younger children that they don't have to be the fastest to be successful, and that working too hard can mean you don't achieve your goal. This can be used in conjunction with diaries where they mark their activities on to a blank diary and colour-code them according to how tired they are. This helps when explaining trends, and cause and effect. It also helps to explain the 'boom and bust cycle' where a 'boom' of activity caused you to 'bust'!

Pacing activity in PE helps to enable participation and should aim to let the

young person enjoy the lesson but not to the detriment of activities later in the day. It can be useful to use a simple equation to try to establish how much activity is reasonable. It depends on the teacher's knowing how much activity will cause fatigue, and is an estimate to be used as a guide only:

$$\text{Time} \times 80 = \text{number of minutes of activity}$$

The Borg Scale (Borg RPE scale. Copyright Gunnar Borg, 1970, 1985, 1994, 1998) offers another effective way to monitor the intensity of exercise and the physiotherapist can advise the levels to aim for:

0	nothing at all
1	very light
2	fairly light
3	moderate
4	somewhat hard
5	hard
6	
7	very hard
8	
9	
10	very, very hard

Some young people may also wear a pedometer, or an electronic measuring device, to track exercise. This can help the young person understand how their activity levels impact on their fatigue, and help them to plan how physical activity fits in with all their other activities.

The key to success is in the preparation and it can be useful to divide this into:

- ▶ present moment awareness – how is the young person today?
- ▶ prioritising – what does the young person need to learn?
- ▶ planning – what, how, why, when, who and where?
- ▶ pacing – what causes the fatigue and how can reasonable adjustments be made?

Ideas to try

1. Look at the class as a whole, so that all young people are integrated into an activity as much as possible.
2. Save energy by using a wheelchair to get to and from the activity.
3. Aim to do part of the activity well, rather than the whole activity.
4. Keep it fun.
5. Break activities into manageable chunks.
6. Add in rest periods.
7. Plan activities in a realistic time-frame by thinking about what the young person can do before they get tired, in other parts of their school day.
8. Think about how to do a task differently, for example, sitting instead of standing, using different equipment, or making changes to the environment.
9. Be prepared to vary the activity if the young person is having a difficult day.
10. Celebrate success!

The barriers to joining in with PE

- ▶ **Pre-conceived ideas.** Young people with muscle-wasting conditions, as well as their families, can have pre-conceived ideas about the possibilities of joining in with PE. These can range from wanting the child to join in with all aspects without any differentiation, through to not wanting the child to participate at all. It is important to reassure the young person as well as their parents that schools are skilled at looking at individual

differences and adapting the curriculum to meet the needs of a range of children. It is valuable to spend time with parents to reassure them that the staff will work with the young person's physiotherapist to ensure activities are safe and no movements are contraindicated.

- ▶ **Teachers' fears.** Teachers can sometimes feel overwhelmed about having a child with physical needs in their class. Their fears may include not having sufficient space or equipment, health and safety risks, not having staff to support the lesson, or worries about how long it will take the young person to get ready at either end of the lesson. Managing PE to ensure the curriculum is delivered to all the children, while not excluding anyone, can heighten this anxiety. So, it is important not to under-estimate the importance of getting information about the condition and the young person's abilities, assessment and planning. With the right information, most teachers are really creative in adapting games and activities. This planning may include ways to reward effort, rather than focusing on National Curriculum or P-score achievement.
- ▶ **Equipment and costs.** The concerns that a range of specialist equipment will be required can be a worry. However, borrowing from other parts of the school can be helpful. Often, young children will have access to lighter and smaller equipment, which can help in grading skills. It is also useful to look at schemes, such as the supermarket sports voucher schemes or asking the Parent Teacher Association to fundraise for equipment.
- ▶ **Sensory profile.** Some young people can struggle with PE lessons because they find it hard to process information from the environment. This can include noise, movement and sound. The OT should be

able to work with the child, parents and school to assess and formulate a plan.

- ▶ **Progressive conditions.** Most muscle-wasting conditions are progressive and many will also change with time. The young person may realise that the gap in physical skills is growing, and this can lead to reluctance to participate. This can show in a number of ways, and may include changes in their behaviour and their mood. Those working with the child need to be mindful of this, and support the young person. If this leads the young person to question their knowledge about their condition, parents should be made aware and advice sought from the NCA and therapists. It is important to plan activities that are fun and enable the young person to succeed.
- ▶ **Pain.** Young people with muscle-wasting conditions may report pain and this may stop them from wanting to join in with physical activities. Prolonged periods of sitting in a wheelchair, or joint weakness and contractures, can be a cause. These young people can also report muscle fatigue, which they see stopping them joining in. Reasoning with the young person about the benefits of inclusion in PE can support them to understand how to participate and pace themselves and should not be underestimated as part of a healthy lifestyle message.

Planning

It is helpful to break down all aspects of the PE lesson, so that planning goes into all stages right from changing into PE kit.

The practicalities of PE

1. Where are the changing rooms? Are they accessible? Do they meet the needs of the young person?
2. Can the young person get there?
3. Where will the lesson take place?
4. If the young person is not moving around

as much as others, will they get cold? What can we do to prevent this?

5. Who is available to support the young person? What are their training needs?
6. If the activity means moving between different surfaces, how will the young person do this?
7. Does the school have a range of PE equipment, which will help when differentiating activities?
8. What lesson follows PE and how will increased activity levels affect this?

Safer Moving and Handling may differ slightly in PE from other activities in the school day. Looking at the changing rooms, the location for the lessons and the type of activities should enable the staff to think about how best to keep the young person and themselves safe. This could potentially mean adapting techniques, sourcing equipment and training, or addressing structural access issues in the gym or sports hall. The local therapy team and the LA's Officer can advise.

It could also mean looking at who supports the young person in this lesson, and applying an assessment framework to ensure they are trained, competent and fit to move and handle.

The school can ask the local therapy team to become involved in assessing the child in PE. This will mean that staff will have a baseline for activity and whether there are any contra-indicated moves. It also enables the staff to work alongside the therapists to look at activities which meet therapy goals, and fit the National Curriculum. It is often useful to look at pacing and grading of activity in PE, as this can often be meaningful to the young person.

Often the language used when asking children to carry out a task can foster an ethos of inclusion. For example, asking the class to 'practise chest passes with a netball' could be exclusive, whereas asking them to 'choose a ball to pass' could allow the child to roll or

kick and still achieve a pass. The objective is defined so that everyone can achieve it at their level in this case. Using the creative ideas of the young people can extend the repertoire of accessible skills, and should be fostered where possible.

Many PE activities can be modified to provide a 'more level playing field'. This could be as simple as everyone playing volleyball while sitting on the floor, 'bum shuffling' football, or everyone using the same equipment as the young person. It might also mean looking at specialist sports and incorporating them into the Learning Outcomes through activity, playing the game, or inviting the local specialist team in to coach a session.

Sometimes parts of the PE curriculum can be difficult to modify to provide sufficient challenge and inclusion for everyone in the class. In these cases, parallel activities may need to be considered. It is often useful to choose an activity that a small group can participate in and perhaps rotate the groups regularly so everyone gets an opportunity to play the game with the young person. This is seen as positive, as the activity chosen will be one that everyone is able to achieve and can sometimes lead to a new interest or activity some young people may wish to pursue in their leisure time.

Following on from the success of the Paralympic Games and Invictus sporting events, there is an increased awareness of the range of sports available for disabled people. It may be possible to look at some of these as a whole class activity. It is worth looking at local clubs to see what is available locally.

Using technology to support activity through games such as the Wii / Kinect can have health benefits and can be used in a PE session with a small group of participants. Games need to be selected, which mirror the learning outcomes of the lesson but are an additional resource to explore.

The school can access support from Youth Sports Trust, as they employ Inclusion Support Workers nationally.

www.youthsporttrust.org

Adapting lessons

It is helpful to look at levels of inclusion when modifying lessons. This is known as the Inclusion Spectrum (Training and Development Agency, 2009).

1. **Open activity** – everyone does the same with minimal adaptation or modification.
2. **Modified activity** – all young people work to their ability level and changes are made to support this. The lesson should aim to stretch everyone. The Space, Task, Equipment, People (STEP) template (see on p91) can be applied to support changes.
3. **Parallel activity** – participants are grouped according to ability level and each group takes part in a graded/differentiated version of the same activity.
4. **Alternate/disability sport** – everyone takes part in a sport, which is accessible to disabled people. It may be valuable to look at what organisations run locally and may be happy to visit or provide information.
Adapted activity – the lesson is based on an accessible sport in which the young person with a muscle-wasting condition can participate. They could teach a sport or skill or as a group, young people could carry out a project to learn rules, improvise equipment, and organise a tournament. It could also include looking at the accessible activities in the area, which could open opportunities for activities not available in school. This may include dance, mountain trike sessions, adapted outdoor adventure sports, and so on.

The Space, Task, Equipment, People (STEP) template offers way to make an activity harder or easier:

S	Space	<p>Where is the activity happening?</p> <ul style="list-style-type: none"> ▶ shorter distances if mobility is a challenge ▶ smaller areas for games ▶ zones and visual markers to define areas to work in ▶ enlarging the space to improve reaction time ▶ staggering start times for different groups of abilities ▶ the child's ability to perform in the chosen space may also be considered if they struggle with sensory processing, as sports halls can be noisy, cold and have harsh lighting. ▶ can the location be changed if the surface is unsuitable for moving around on foot or in a wheelchair?
T	Task	<p>What is happening?</p> <ul style="list-style-type: none"> ▶ simplify the task ▶ how is the teaching delivered? ▶ re-write the rules ▶ vary the speed that everyone participates at ▶ change the format, for example, everyone kneels or sits/throws underarm/uses left hand ▶ plan the activity around the strengths of the young person.
E	Equipment	<p>What is being used?</p> <ul style="list-style-type: none"> ▶ provide a range of equipment ▶ lighter equipment ▶ vary target sizes and placement ▶ be creative, think beyond PE – borrow from younger classes where equipment may be lighter or smaller. All equipment can be graded, for example ▶ if a wheelchair is being used, does it have anti-tip bars fitted?
P	People	<p>Who is involved?</p> <ul style="list-style-type: none"> ▶ working with 'buddies' who have similar abilities ▶ team work, with differentiated roles ▶ assistance from another pupil ▶ coaching as an activity, etc.

If the activity requires bats and balls you could differentiate using a similar format to the following:

Bat	Ball
Wheelchair Any part of the body Glove bat Short badminton or tennis racket Normal racket Kwick cricket bat Flat rounders bat Normal rounders bat	Balloon Slightly deflated beach ball 'Floater' air-filled balls Foam ball Soft tennis ball Tennis ball Rounders ball

By identifying the barrier to inclusion, it may be possible to use creative options to support skill development. Sometimes equipment will need to be purchased but it may be worth looking at voucher schemes or Parent Teacher Association funding to help with this.

Ideas to try:

- ▶ a board or gutter for a seated person to use to roll balls down to access a target
- ▶ a floor-based tee so that a young person can kick or strike a static ball when they are balanced
- ▶ tethering a ball by attaching a line, so that a young person can pull the ball back in to themselves
- ▶ rebound boards, for example, on the side of a table tennis table, so the ball is more likely to 'stay in play'
- ▶ glove bats or modified bats that have straps to help the young person grip the handle.

Participation

This should include giving young people a voice, listening to them and involving them in school-life decisions. Listening to their ideas encourages empowerment.

Participation may mean different things to different young people, and it is important to let them know the options available. These might include participating in the activity, scoring, refereeing, coaching or being the captain of a team. These options could be dovetailed with the physio programme, the warm-up and cool-down or some participation with the actual activity. Value comes from setting achievable goals.

Parents also need to be consulted about their children's participation. They will often need reassurance and information about the overall benefits of the subject, how the PE curriculum will be delivered, and the support their child will receive. Parents need to understand the benefits of the lesson and to be reassured that their child is not

being put in vulnerable situations or feeling undermined. In particular, consideration needs to be given to teenagers as they may have increased awareness of the variance in skills between them and their peers. They can be reluctant to be seen as being different so the planning needs to be treated with a great deal of sensitivity. Perhaps these teenagers might prefer to learn a new skill, for example, coaching/refereeing.

Indicators of an inclusive lesson might include:

- ▶ clear learning objectives
- ▶ all young people take an active role in the lesson
- ▶ as much physical activity as possible
- ▶ no eliminations
- ▶ sufficient challenge for all participants
- ▶ progression
- ▶ everyone is involved in decision-making and feedback
- ▶ respect for each other, the rules and the equipment
- ▶ some team work
- ▶ participants enjoy the activity.

Contra-indications (a movement that is not recommended because it is potentially dangerous)

With each condition, there may be some contra-indicated activities or physical moves, so it is important to work alongside the therapy team supporting the child.

It can be important for a child to move in a particular way, wear supportive footwear, and be advised not to jump from equipment, and so on. The physiotherapist will be able to advise on specifics related to a particular condition.

It is also important to think about the potential for injury, how best to manage this and whether or not a health professional needs to be notified.

It is also important to be aware that some neurological conditions, such as Charcot-Marie-Tooth disease (CMT), make it very difficult for young people to participate in PE. They may already have issues with their body image as a result of foot abnormalities, poor balance, being unable to walk as quickly as their peers and suffering from, in some cases, overwhelming fatigue. There may also be difficulties with dressing and undressing for PE. Although the benefits of inclusion are important, the young person should always have a choice, and their decision should be recognised and supported.

Getting changed and ready

Getting changed and ready for a PE lesson can mean one of two things to young people with muscle-wasting conditions. It can either offer opportunity to practise personal care skills, or it can cause the young person to become fatigued and not be able to join in with the lesson effectively. Look at what is important to the individual, and make a plan accordingly.

In either situation, look at the environment, assess, plan for reasonable adjustments, and ensure any equipment is available.

Some schools will think creatively and plan alternative strategies to avoid changing either taking more time or causing fatigue. In some schools, a young person will come to school in jogging bottoms and only need to change their top, while in other schools, the whole class will come to school wearing PE kit.

The supporting adult will need to know the techniques for assisting the young person and be sensitive and flexible in their approach.

Swimming

Swimming is part of the National Curriculum for young people in KS2 and it needs to be planned with thought to every part of the activity. Consider the following:

Transport

- ▶ How does the school get children to and from the pool?
- ▶ Will the usual travel arrangements work for the young person?
- ▶ Will they need a different type of transport?
- ▶ What are the additional costs and who will fund these?
- ▶ Will the young person be more fatigued after swimming?
- ▶ Will different arrangements need to be made to get them back to school?

Access

- ▶ Can the young person get into the pool building and access all parts that they need to?
- ▶ What are floor surfaces like, and can the young person manage these safely?
- ▶ Is there space for the young person to change in the changing rooms?
- ▶ Is there a personal care suite with hoist and plinth?
- ▶ If the young person is hoisted in the personal care suite, are the sling and the hoist compatible?
- ▶ How will the young person get into the water?
- ▶ How will the young person get out of the water?

Support

- ▶ Which staff members will support this activity?
- ▶ Will a member of staff be required to go into the water?
- ▶ Is there a member of staff who will not go into the water, and be able to assist with personal care once the young person is out of the water?

Time

- ▶ It may take longer for the young person to get ready. How will this work if there are strict times for the transport?

Temperature

- ▶ How warm is the water?
- ▶ Will cooler temperatures affect the young person?
- ▶ How can this be managed?

Fatigue

- ▶ Will this activity significantly tire the young person?
- ▶ Will they be able to carry out all other tasks that day after swimming, or will they be too tired?
- ▶ Can swimming be arranged for the end of the day so the young person can go home straight afterwards?
- ▶ Can the time in the water be shortened to conserve the young person's energy, and also allow time for personal care before getting back on transport?

What activities or movements can be carried out in the water?

- ▶ Seek advice from the physiotherapist.

Sport beyond school

There are a growing number of sporting opportunities for people living with disabilities, particularly following high-profile coverage of the Paralympics and Invictus Games. The BBC has a dedicated Disability Sports page at www.bbc.co.uk/sport/disability-sport.

Ideas for adapted sports

Below is a list of sports that could potentially be incorporated into the school sports programme, or be discussed with the young person as an out-of-school opportunity. Please note, the list is not exhaustive.

- ▶ Wheelchair basketball – fast-paced, requires upper limb strength sufficient to propel the chair. www.gbwbba.org.uk/gbwba/welcome.htm
- ▶ Inclusive zone basketball – this is a game with two teams of players, and can be played with a combination of wheelchair and standing players.

www.gbwbba.org.uk/gbwba/index.cfm/get-involved/inclusive-zone-basketball/

- ▶ Pollybat – a table-top game that has evolved from table tennis. It is an accessible form of table tennis. www.ntu.ac.uk/adapted_sports/games_development/games/polybat/index.html
- ▶ Pollybat squash – played like Pollybat, but with a table up against a wall with the table legs elevated on blocks. Sides are created for the table out of cardboard or plywood, for example. The ball is played up the ramp, it bounces off the wall and is returned by the opponent.
- ▶ Table cricket – table-top cricket game. www.lordstaverners.org/table-cricket
- ▶ Target cricket – adapted from table cricket, it is useful for a young person who has a learning disability. www.ntu.ac.uk/adapted_sports/adapted_games/target_cricket/index.html
- ▶ Table hockey – table-top hockey game.
- ▶ Floor lacrosse – adapted lacrosse, which can be played indoors or outdoors. www.ntu.ac.uk/adapted_sports/adapted_games/floor_lacrosse/index.html
- ▶ Tee ball – rounders/baseball skills, breaking throwing/catching into manageable skills. www.littleleague.org/learn/about/divisions/TeeBallDivision.htm www.baseballpositive.com/tee-ball
- ▶ Pyramid shuttle – the player travels to collect an item at three progressively further points, returning each time to score on the try line.
- ▶ Zone hockey – integrates ambulant and mobility-impaired players. www.ntu.ac.uk/adapted_sports/adapted_games/zone_hockey/index.html
- ▶ New Age Kurling. www.gbkcurling.co.uk
- ▶ Short mat bowls.
- ▶ Powerchair football. www.thewfa.org.uk
- ▶ Boccia. gb-boccia.org
- ▶ Table tennis. etta.co.uk/our-sport-modules/table-tennis-for-people-with-disabilities

Sports resources

- ▶ Athletics.
academy.uka.org.uk/parallel-success
- ▶ Boccia England
www.bocciaengland.org.uk
- ▶ Sport England. www.sportengland.org/our-work/disability
- ▶ English Federation of Disability Sport.
www.efds.co.uk
- ▶ Finding a Sport. parasport.org.uk
- ▶ Northern Ireland. www.dsni.co.uk
- ▶ RADAR (general resource about sport – not specifically for children).
www.disability.co.uk/doing-sport-differently-0
- ▶ Scotland.
www.scottishdisabilitysport.com/sds
- ▶ Sports Opportunities. www.wheelpower.org.uk/WPower/index.cfm/who-we-are
- ▶ Support for Adapted Sports.
www.sportanddev.org/en/learnmore/sport_and_disability2/actors_involved_in_sport___disability/international_organisations/international_federation_of_adapted_physical_activity
- ▶ TOP Sportsability On-Line Learning Resource. topsportsability.co.uk
- ▶ Training. www.disability.co.uk/doing-sport-differently / inclusivepe-eng.co.uk
- ▶ Wales. www.disabilitysportwales.com
- ▶ Wheelchair Dance.
wdsauk.co.uk/about-us
- ▶ Wheelchair Football Association.
www.thewfa.org.uk
- ▶ Wheelpower. www.wheelpower.org.uk
- ▶ Youth Sports Trust.
www.youthsporttrust.org
- ▶ Young Coaching Opportunities.
www.efds.co.uk/resources/past_programmes/582_young_officials

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Boom and Bust. Moving Into Balance.
www.movingintobalance.co.uk/pacing
Pete Moore, Jessica Bird & Dr. Frances Cole. (2012). *The Pain Toolkit.* www.paintoolkit.org/downloads/ptk-for-teenagers2012.pdf
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Planning For PE

Name:	DOB:
Year group:	Teacher:
Support adult:	

Generic planning

Considerations	Comments / plans
List the young person's strengths	
List the young person's needs: <ul style="list-style-type: none"> ▶ physical / movement ▶ sensory ▶ learning ▶ behaviour ▶ medical ▶ other 	
What are the young person's interests?	
Are there any contra-indications to joining in with activity?	
Does the young person require help to move around in the environment: <ul style="list-style-type: none"> ▶ independently? ▶ with supervision? ▶ with physical assistance? ▶ with equipment? 	
Can the young person get on and off equipment: <ul style="list-style-type: none"> ▶ independently? ▶ with supervision? ▶ with minimal physical help, for example, holding a hand? Can they get down on to the floor independently? Can they get up from the floor independently?	
What preparation needs to happen before PE and does the young person know: <ul style="list-style-type: none"> ▶ what to expect? ▶ how they are going to be joining in with the activity? ▶ who will be supporting them? ▶ how they will be supported? Do they need information presented in a particular way, for example, kinaesthetically, visually, simple instructions, etc.?	

Lesson-specific planning

What is the learning outcome for the lesson?	
What are the activities planned?	
How will outcomes be measured?	
Does the risk assessment relate to the young person and the activity planned?	
Have the young person's views been taken into account?	
If the activity is modified for the young person, how can other children in the class be included?	
Will the young person be undertaking a parallel activity for part of the session, for example, physio stretches?	