Detailed Factsheet for Teachers to use to support parents

Notes for use:

1. Can work as internal training within your school for staff, or to inform a structured school approach
2. Can be shared edited or in full, as an information sheet to share with parents & pupils.
3. Works as a repeat and developed version of the table accompanying the poster.
4. Text in red indicates content which both teachers and parents should see clearly.

General

- Adolescence encompasses a big chunk of time and lots of different changes. Our current understanding of adolescence is from around age 10 to age 24. Adolescence isn't just about puberty and the physical changes this brings, it encompasses social, emotional and cognitive development too, which is why it spans such a long period of time.
- How we develop is individual – there can be differences in timing (when you go through puberty compared to your friends), tempo (how quickly you go through puberty) and stage (what stage of pubertal development you are in).
- Chronological and biological age can vary by up to 5 years – children may look older or younger than they are! A 12-year-old could look like an adult or a child and this amount of variation is completely normal. Consider the student's cognitive age alongside their biological age.
- Feed a growing student – at any age, food improves manners and confidence in a hungry student – because they may not realise how hungry their bodies and brains are – with the brain consuming much more energy than might be expected. Have quality snacks in dance bags or available at the studios (complex carbs, natural sugars etc).
- Be aware of any gender fluidity or arising body dysmorphia sensitivities which may arise strongly during the passage of adolescence.

Physical

- Hormonal changes are responsible for starting the process of puberty. This starts with adrenarche which takes place as early as age 6-9 in girls and 7-10 in boys and is related to changes in the skin, body odour, and body hair.
- Gonadarche is the next hormonal event to take place and kick starts the development of secondary sex characteristics e.g. breast development and the menstrual cycle – this usually happens around age 8 -14 for girls and 9 – 15 for boys.
- The next hormonal event is the activation of the growth axis – which leads to the growth spurt and other changes in body size and e.g., increases in fat mass (greater for girls) and lean muscle mass (greater for boys).
- The growth spurt includes not just a spurt in height but also in weight and can take around 3 years from beginning to completion.
- Peak height velocity refers to the most rapid period of growth during the growth spurt – look out for growing pains, frequent changes in shoe size/uniform – be especially vigilant during this time – it's not a time for increasing training or learning new skills e.g. pointe work or

strength cross-training – for girls this often happens around age 12, for boys around age 14 – but all young people are individual – better to be attuned to signs of change in growth.

- The sequence of key changes for girls (normally, but not always) is breast development, height spurt, menarche.
- The start of the menstrual cycle is one of the last changes to take place in female puberty, the first period, also known as 'menarche' usually takes place within a year of a young person's most rapid period of growth in height. This can vary widely but is often between age 10 and 16.5 years.
- There are not so many overt changes for us to see in boys, but in terms of sequence the height spurt is usually the first outwardly visible sign of puberty beginning, we may also notice the voice breaking and a spurt in strength.
- These physical changes can have lots of implications for the moving body and also for the mind.
- Things to look out for include 'loss of flexibility', changing centre of balance or 'loss' of coordination – these are all normal and temporary changes – usually related to the growth spurt, and also the timing and tempo of growth. The reasons for these temporary 'losses' or a reset are many, but include: rapid growth in limb length, growth in the torso, breast development for girls, and asynchrony between growth of bone and growth of the soft tissues (tendon/muscle); the skeleton grows first, with the soft tissues 'playing catch up'. There are consequential changes in managing momentum, engaging with the peripheral space, which is further away from the centre, loss of sensitivity at the ends of limbs, a sense of feeling too heavy for your muscles, etc. In addition to this, the processing challenge within a brain that is being 'rewired' can mean that cognitive response times are changed/slowed, which affects timely coordination and control of movement.
- Growth related injuries – look out for pain in the knees, shins, or the ankle area, as well as injury related to impacted coordination/control as a result of growth.
- 'Blur brain' – there can be a period when the brain is so busy that the response times are delayed, or there is a sense of the child's mind being somewhere else. This impacts the ability to process new information (choreography, feedback) and can vary from hour to hour. A student in this place may not be aware of it until looking back or may be hyperaware in the moment.

Psychological

Psychological development i.e. our social, emotional, and cognitive maturation are not directly linked to puberty and continue developing long after.

Mind the gap! - This disparity in timing between the physical and cognitive development can create vulnerability for the young dancer – we are often presented with young people who look physically adult/mature, but psychologically are not equipped to deal with the increased pressures and expectations that being treated like an adult can bring.

Early adolescence brings many changes, the most salient include:

- Peer comparison, concern over perceived physical differences
- Improved reasoning abilities, may argue or disagree with adults as these skills become more sophisticated

- May struggle to connect the importance of regular practice or training to the logical outcome of future dancing success
- Struggles with self-expression – physical, creative and verbal

Mid-adolescence

- Increased levels of independence – desire to make more choices themselves, or to rebel against 'norms'
- Rely more on peers as opposed to parents as a frame of reference
- Teacher may become a significant role model as they identify with non-parental adults
- Heightened emotional reactivity and sensitivity; greater self-awareness and social interest/sensitivity, risk taking behaviours may occur
- A young dancer may observe their own behaviour and analyse what was done correctly and what could be improved upon – evaluating strengths and weaknesses
- While at this stage they can perform these functions independently, feedback from teachers remains valuable

Late adolescence

- More adept at emotionally dealing with successes and failures, pressure from parents/teachers/societal expectations/dance demands
- Able to establish more realistic goals about their abilities and participation – more realistic understanding of the role of dance in their lives
- Decision making becomes more future oriented

Challenges and things to watch out for

- **Greater** self-consciousness and social anxieties
- **Greater risk** for the development affective disorders e.g. anxiety, depression, disordered eating
- **Adolescence** presents a period where girls choose to **reduce** participation in physical activity e.g. changes in body size and shape may deter girls from participating
- **Dropout** can be greater in contexts such as dance where there can be pressure to conform to a particular size and shape and to adapt quickly to physical changes
- **Student has a public self:** The processes of growth and maturation don't occur in a social vacuum!
- The **'value'** of specific pubertal changes may vary depending on the context
- Visible physical changes may have more **immediate social value** to a young dancer and to their social network
- **How changes are perceived and reacted to** by significant figures shape social expectations of the body and puberty

References

Brown, K.A., Patel, D.R., Darmawan, D. (2017). Participation in sports in relation to adolescent growth and development. *Translational Pediatrics, 6*(3), 150-159.

Blakemore, S. J., S. Burnett, and R. Dahl. 2010. "The Role of Puberty in the Developing Adolescent Brain." *Human Brain Mapping, 31* (6): 926–933

Dahl, R. (2004). *Adolescent brain development: A period of vulnerabilities and opportunities - Keynote address.* Adolescent Brain Development: Vulnerabilities And Opportunities, 1021, 1-22. doi: 10.1196/annals.1308.001

Malina, R. M., Bouchard, C., & Bar-Or, O. (2004). *Growth, Maturation and Physical Activity* (Second Edition ed.). Champaign, IL: Human Kinetics.

Mitchell, S. B., Haase, A. M., Malina, R. M., & Cumming, S. P. (2016). The role of puberty in the making and breaking of young ballet dancers: Perspectives of dance teachers. *Journal of Adolescence, 47*, 81-89.

Mitchell, S., Haase, A., Cumming, S., & Malina, R. M. (2017). Understanding growth and maturation in the context of ballet: A biocultural approach. *Research in Dance Education, 18*(3), 291-300.

Summers-Effler, E. 2004. "Little Girls in Women's Bodies: Social Interaction and the Strategizing of Early Breast Development." Sex Roles 51 (1–2): 29–44

Worthman, C., & Trang, K. (2018). Dynamics of body time, social time and life history at adolescence. *Nature*, 554, 451-457.