



SPORTS
SCIENCE
INSTITUTE OF
SOUTH AFRICA



Teacher's information guide:

A guide to children's health



High

school

Teacher's information guide:



Introduction 3

Children's growth and development 4

Definitions 4

The benefits of physical activity 5

The general benefits of physical activity in children 5

How much physical activity is enough? 6

What is moderate-intensity activity? 6

What is vigorous-intensity activity? 6

Components of fitness 7

Cardio-respiratory endurance 7

Musculoskeletal fitness 7

Flexibility 7

Components of an exercise session 8

Warm-up 8

The warm-up and cool-down 8

Cardio-respiratory exercise 12

Strength, coordination and balance 12

Cool-down 12

Nutrition 14

The role of healthy eating in a healthy lifestyle 14

Essential elements of healthy eating 14

Dietary guidelines 15

The food groups 16

Important micronutrients 17

High-fat and high-sugar foods 17

Nutrition for teenagers 18

Iron 18

Calcium 19

Body image and teens 19

Healthy weight 19

Portion sizes for teens 20

Breakfast 20

Tips on implementing the lesson plans 21

References 23

A CATHSSETA-accredited training provider. 613/P/000126/2008

Introduction

Recent research shows that South African children are at medium to high risk of developing lifestyle related chronic diseases. This research was conducted by a panel of leading scientists, convened by the Sports Science Institute of South Africa and sponsored by Discovery Vitality.

The panel created the Healthy Active Kids Report Card. The Report Card showed that the number of children who are overweight or obese, or at risk of becoming overweight or obese, has increased significantly in recent years. This is mainly caused by unhealthy eating habits and too little physical activity.

These findings have serious implications for the future health of our nation as there is considerable evidence suggesting unhealthy behaviours adopted by children become entrenched as they grow older. These behaviours become difficult, if not impossible, to change in adulthood. There is urgency, therefore, in increasing knowledge and understanding of unhealthy behaviour in children to prevent them adopting these behaviours and to detect and reduce these behaviours early on.

We believe schools can play a key role in promoting children's healthy lifestyle choices.



Children's growth and development

Children get many benefits from regular physical activity. However, these activities must be appropriate for the age of the child. As a child grows, there will be physical, cognitive and psychosocial development. This section focuses on physical and motor skills development.

Motor skills development can vary from child to child. The type of activity or sport a child is expected to participate in should be matched to his or her individual developmental capacity and maturity.

Natural play and games allow children to develop strength, coordination, agility and flexibility, which all help to improve physical motor improvement. These improvements are gradual and continuous as children develop new gross and fine motor skills. Children of the same age may not be at the same stage of development. Therefore, what may be safe for one child may not be ideal for others of the same age. Each child should be treated as an individual and his or her stage of development should be assessed accordingly.

Definitions

The following terms are often used when discussing children's development:

Fine motor skills

These skills refer to small, precise, specific and fine responses. Examples: threading shoe-laces, using a pair of scissors and writing.

Gross motor skills

These are larger movements, typically involving the whole body and in part depend on coordination, balance, control of posture and agility. Examples: jumping, hopping and walking down stairs.

Physical development

These are external and physiological (biological) changes that occur as a child grows older. Example: when a child enters puberty or grows taller.

Cognitive development

This refers to mental development and includes improvement or changes in attention, alertness, memory, thinking skills, problem-solving skills and the ability to perform more than one task at a time.

Social development

This occurs as a result of interactions with other people such as family, friends and teachers. It improves children's social interaction skills and promotes their emotional development and improves their powers of perception.

Perceptual motor development

This refers to hand-eye and hand-foot coordination, the ability to judge speed and direction (including moving objects like a ball) and a sense of self-orientation in space and reaction time.



The benefits of physical activity

Before discussing the benefits of physical activity, it's important to clarify the difference between physical activity and exercise.

Physical activity refers to any type of bodily movement produced by contracting the muscles. Examples of physical activity are hanging up the washing, walking up stairs or to school and walking the dog.

Exercise is a subcategory of physical activity. It refers to a structured programme of activity geared toward achieving or maintaining physical fitness. Examples of exercise are aerobic dancing, soccer, netball, hockey and jogging.

1 The general benefits of physical activity in children

Regular physical activity plays an important role in maintaining health and preventing illness. Regular physical activity in children has health, fitness and psychological benefits.

Health benefits

- Promotes motor development
- Promotes sensory development
- Strengthens bones, muscles, ligaments and tendons as children grow
- Promotes good posture and balance
- Helps to develop movement and coordination
- Promotes healthy growth and the development of the lungs and heart and improves their function
- Reduces the risk of obesity
- Reduces the risk of chronic diseases like diabetes, hypertension, high cholesterol, osteoporosis and cancer in later life.

Fitness benefits

- Strengthens the muscles and joints
- Improves flexibility
- Improves cardiovascular and respiratory fitness
- Helps improve motor skills
- Improves coordination and balance.

Psychological benefits

- Improves self-esteem, self-expression and confidence. Physically active children are more likely to feel happy and relaxed, and they sleep better.
- Improves self-efficacy (belief in one's ability to perform a task or skill)
- Increases relaxation
- Raises energy levels and vitality
- Situations created during games and play can strongly resemble those of everyday life. As a result, physically active children are often better able to handle daily physical and emotional challenges and cope with feelings of anxiety and depression.
- Increases the likelihood of adopting other healthy behaviours – avoiding tobacco, alcohol, drugs and violence, making healthier dietary choices, getting enough rest and making less risky lifestyle choices
- Can improve academic performance
- Introduces the child to more friends
- Social interaction and integration skills can improve if children participate in team games (not necessarily sport).

2 How much physical activity is enough?

Children and youth need to do at least 60 minutes of moderate to vigorous activity a day. However, some children are completely inactive, so 60 minutes of physical activity a day may be too intimidating and, in fact, too much for them. Therefore, we recommend that these children aim to do 30 minutes of physical activity a day, gradually building up to 60 minutes. Children can do smaller sessions of 10 to 15 minutes at a time and thereby accumulate the 60 minutes they need.

3 What is moderate-intensity activity?

Moderate-intensity activities cause children to huff and puff and sweat a bit.

Examples of moderate-intensity activities:

- Brisk walking
- Cycling
- Playing games in the garden.

4 What is vigorous-intensity activity?

Vigorous-intensity activities make children feel more out of breath and make their hearts beat faster than moderate-intensity activities do. For example, recreational swimming or cycling can be classified as moderate-intensity exercise. If you increase the speed, the activity can be classified as vigorous-intensity. Similarly, brisk walking is moderate-intensity exercise, whereas running is vigorous-intensity exercise.

Examples of vigorous-intensity activities:

- Jogging or running
- Swimming laps quickly
- Most sports such as soccer, netball, squash and basketball.



Components of fitness

Definition of fitness

“Physical fitness has been defined as the ability to perform occupational, recreational, and daily activities without becoming unduly fatigued.” (Heyward: Principles of Assessment, Prescription, and Exercise Programme Adherence)

1 Cardio-respiratory endurance

Cardio refers to the heart and respiratory refers to lungs. Cardio-respiratory fitness refers to the fitness of the heart and lungs, that is, their ability to cope with activities. This aspect of fitness is sometimes called aerobic fitness (aerobic relates to activities that increase oxygen use).

2 Musculoskeletal fitness

Musculoskeletal fitness refers to fitness associated with the muscular and skeletal system’s ability to perform tasks or cope with physical activity. This component of fitness can be further divided into muscle strength and muscle endurance.

- **Muscle strength**

How strong are you? Can you lift 20kg, or perhaps 30kg or even 40kg? Muscle strength refers to the maximum force a muscle can produce to perform an activity once.

- **Muscle endurance**

This is the ability to lift a weight or to perform a movement a few times. This weight will be lower than the maximum weight. The ability to do push-ups continually for one minute is a measure of muscle endurance.

3 Flexibility

An individual’s flexibility is affected by the bony structure of their joints and the size and strength of muscles, ligaments and other connective tissue. This is an important component of fitness and is often overlooked. Flexibility can be improved by including stretching in your daily routine.

Much like you need a lesson plan or guide for each class that you teach, it is also necessary to have a structure for an exercise or physical activity session. It is very important that you always start with a warm-up and end with a cool-down session. The following section will provide you with some guidelines on, and the benefits of, each component of a physical activity session.

Components of an exercise session

1 Warm-up

The purpose of the warm-up is to gradually increase blood flow to the muscles and increase the heart rate and breathing rate. The warm-up also plays an important role in reducing the risk of injury to muscles, joints and ligaments.

The warm-up should be at a lower intensity than the main exercise session. It could be a slow run, brisk walk, dancing to music or playing a game at 50% of the normal effort level.

2 The warm-up and cool-down

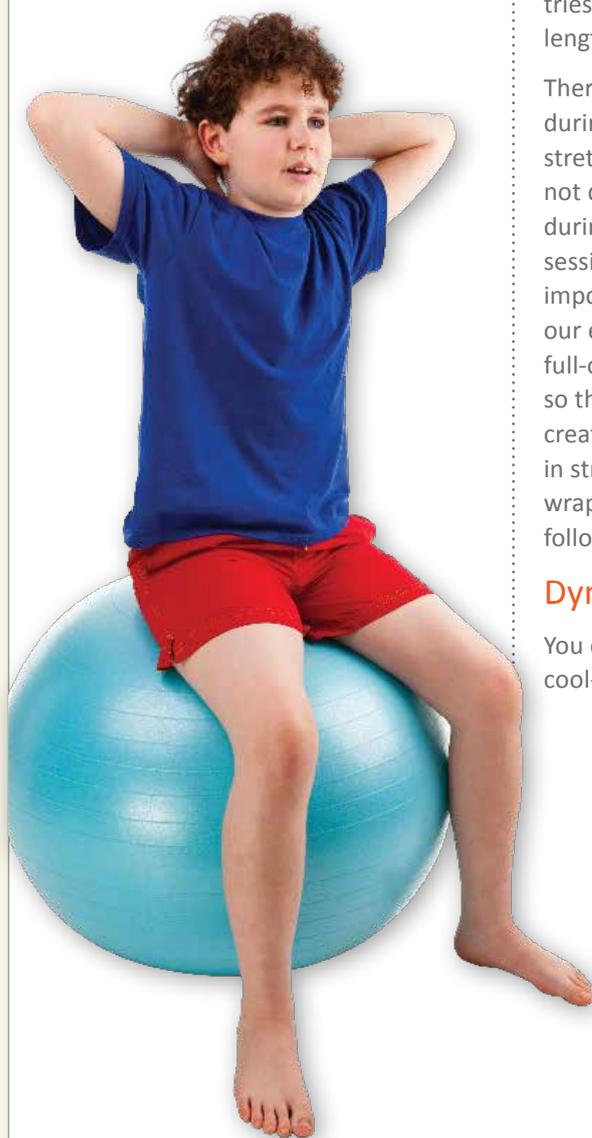
A note on stretching

There are two types of stretching. One is static stretching, where the person tries to stretch as far as possible and then **hold** the position for a particular length of time, and the other is dynamic stretching, which involves **movement**.

There is some controversy around whether static stretching is important during the warm-up. Most sports scientists are now of the opinion that static stretching can be damaging and increase the risk of injury during the warm-up if not done properly, and that it is less likely to be of any benefit to young children during the warm-up. We suggest you don't plan a structured static stretching session in the warm-up. Dynamic stretching, however, is considered to be a very important part of the warm-up, so we have included this form of stretching in our exercises. Please note that children should not go straight from rest into full-out sprinting and changing direction. It is best to control their energy levels so that, regardless of which activity you choose (or make up if you are being creative), you ease them into training. One of the benefits of warm-ups that end in stretching is that all the players are together, which makes it easier for you to wrap up the warm-up with a short session that explains the activities that will follow.

Dynamic stretches

You can use any of the dynamic stretches below in your warm-up and cool-down sessions.



Stretching exercise 1



Stand with feet shoulder-width apart and swing the arms to the front, ‘hugging’ yourself as tightly as possible. Then swing them back trying to touch your fingers behind your back. Elbows should be straight but not locked. Complete 15 swings in each direction.

Stretching exercise 2



Stand with feet shoulder-width apart and swing the one arm up above the head, as far back as possible, while swinging the opposite arm down as far as possible. Elbows should be straight but not locked. Complete 15 arm swings in each direction. This stretch can also be done by swinging both arms together.

Stretching exercise 3



Stand with feet shoulder-width apart and rotate the arms in big circles in a forward direction. The arms alternate positions so that as one arm is up, the other arm is down. Do this stretch while keeping the back straight and locked, or allow rotation through the back, hips, knees and ankles. Complete 15 circles.

Stretching exercise 4



Stand with feet shoulder-width apart and rotate the arms in big circles in a backward direction. The arms alternate positions so that as one arm is up, the other arm is down. Do this stretch while keeping the back straight and locked, or allow rotation through the back, hips, knees and ankles. Complete 15 circles.

Stretching exercise 5



Stand with feet shoulder-width apart and rotate the arms and body from side to side trying to move the whole body as far as possible from side to side. Complete 15 rotations in each direction.

Stretching exercise 6



Stand with feet shoulder-width apart and rotate the arms in big circles in a forward and then a backward direction. Complete 15 circles in each direction.

Stretching exercise 7



Hold onto a partner for balance and kick the one leg to the front and then to the back. Try to get the leg as far forward and then as far back as possible without bending the back. Kick each leg 15 times.

Stretching exercise 8



Hold onto a partner for balance and kick the one leg from side to side. Kick each leg 15 times on each side. Make sure that the same legs are being kicked to avoid injury.

Stretching exercise 9



Place hands and feet on the floor. Keeping hands, arms and body as stable as possible, push the one heel down towards the floor and then repeat with the other leg. Alternate, doing 15 stretches on each side.



3 Cardio-respiratory exercise

The main focus of the exercise session could be cardio-respiratory. Cardio-respiratory fitness is improved when participating in activities that involve large muscle groups and are continuous and rhythmic in nature. Examples of these types of activities include walking, running, cycling and swimming.

4 Strength, coordination and balance

Strength

This type of training is sometimes referred to as resistance training or weight training. The main aim is to improve muscle strength and muscle endurance. Age-appropriate and safe resistance training programmes can increase muscle strength and are not always accompanied by an increase in muscle bulk.

Safe resistance training can involve using one's own body weight (for example, push-ups, squats, tricep dips) or by using gravity or elastic forces to oppose muscle contraction and movement.

Balance and coordination

Balance and coordination activities play a role in improving posture, finer movements and motor skills such as writing. Dancing and activities that involve using equipment such as hoops, balls and bats require coordination.

5 Cool-down

The cool-down is the opposite of the warm-up and is your way of saying thank you to your body for the exercise session.

The cool-down should be easy and at a low intensity and ideally last for 5 to 10 minutes. Examples of activities for the cool-down include slow walking and stretching. It is very important to include stretching in the cool-down.

Static stretches

You can use any of the static stretches below in your cool-down sessions. Each stretch should be held for 20 seconds. Repeat them twice on each side only stretching to the point of pulling, not to the point of pain.

Stretching exercises



Quadriceps



Hamstrings



Chest



Shoulder



Calf stretches



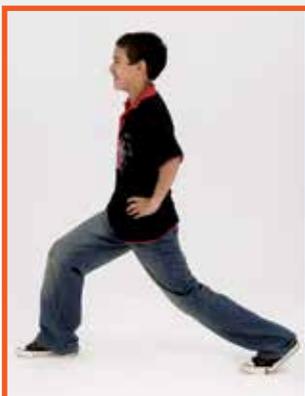
Front of shoulders



Shoulder (back)



Tricep



Hip flexor stretch



Quadriceps



Hamstrings

Nutrition

Food is a complex mixture of nutrients that help the body grow, maintain and repair itself. Food also provides energy for day-to-day activity. It contains macronutrients or energy-yielding nutrients (protein, carbohydrates and fat), micronutrients (vitamins and minerals), water and many other substances that help the body function normally.

1 The role of healthy eating in a healthy lifestyle

In isolation, food cannot guarantee longevity and health. Healthy eating must form part of a good lifestyle, which includes regular physical activity, not smoking, limiting alcohol and managing stress. Genetics also play an important role in determining health risks and risks for morbidity.

There are many good reasons to teach children good eating habits. Good nutrition has immediate health benefits for children – it can positively influence their energy levels and their growth and development. There is also convincing evidence that the basis for several key adult health problems can be established in early childhood. The food given to children will help them to establish certain eating habits, many of which will be carried right through their lives. It is therefore essential to lay a good foundation.

Many social and personal problems are associated with poor lifestyle choices and high-risk behaviours. Sound health practices and an understanding of the relationship between health and the environment can improve the quality of life and wellbeing of children.

2 Essential elements of healthy eating

The essential elements of healthy eating are balance, moderation, variety and enjoyment.

Balance

For optimal health, the body needs the right balance of macronutrients (carbohydrates, proteins and fats) and micronutrients (vitamins and minerals).

- Carbohydrates and fats are the major sources of energy (kilojoules) in the diet
- Proteins also contribute energy when there isn't enough carbohydrate in the diet, but their most important role is to provide amino acids to promote growth (in children) and to repair body tissues
- Vitamins and minerals act as facilitators for many metabolic reactions and some also have a role in immune function.

There are no good or bad foods, only good or bad diets. The combination of foods eaten over a period of time is most important. In other words, balance is achieved over time. A meal that is low in one nutrient can be balanced by a meal higher in that nutrient at another mealtime.



Moderation

Moderation means eating neither too much nor too little of any food or nutrient. Eating too much can result in an excess of kilojoules, which leads to weight gain. Eating too little can lead to nutrient deficiencies and weight loss. Moderation must be applied regularly in the types of foods and the quantities that are eaten.

Variety

While some foods are higher in nutrients (more nutrient-dense) than others, no single food or food group contains all the important nutrients. Eating a variety of foods is therefore critical to obtain all of the macro- and micronutrients the body needs.

Every food contains a unique mix of nutrients. A wide range of foods should therefore be enjoyed, while the nutritional quality of the diet should be judged over a period of days and not only from one meal or even one day's intake.

Enjoyment

In today's world, concern about the relationship between health and food can make it too easy to overlook the important social functions of eating. Eating is not just for nourishment, it's one of life's great pleasures. Food plays an important role in cultural identity.

A diet based on many different foods is more interesting and enjoyable than a diet containing a restricted range of foods. Sitting down to a meal and sharing it with family and friends makes eating more pleasurable.

3 Dietary guidelines

The Department of Health has adopted a core set of Food-Based Dietary Guidelines (FBDGs) for South Africans older than six years.

The guidelines were developed in consultation with health teachers, dietitians and other nutrition experts. These guidelines are intended to be used:

- As an effective nutrition educational tool to promote the importance of nutrition in decreasing the growing burden of chronic diseases
- To decrease existing nutritional disorders associated with poverty and under nutrition.

The government's nutrition education messages are based on the guidelines in order to promote healthy lifestyles among South Africans.

The Food-Based Dietary Guidelines for South Africa:

1. Enjoy a variety of foods
2. Be active
3. Make starchy foods the basis of most meals
4. Eat plenty of vegetables and fruits every day
5. Eat dry beans, peas, lentils and soy regularly
6. Chicken, fish, milk or eggs can be eaten daily
7. Eat fats sparingly
8. Use salt sparingly
9. Drink lots of clean, safe water
10. If you drink alcohol, drink sensibly
11. Use food and drinks containing sugar sparingly and not between meals.

Growing children need plenty of energy (kilojoules) and nutrients from their diets to grow and develop optimally. Meals and snacks can be both nutrient-dense (a high concentration of nutrients in a small volume) like full-cream yoghurts or low in energy (kilojoules) but high in nutrients, like vegetables and fruit. The choice of meals and snacks depends on each child's nutritional status and growth. In a society where childhood obesity is on the increase, children making healthy choices provides the basis for a healthy diet in later life.

As with adult diets, it is not only the amount of food that is important, but also the variety. The greater the variety, the better the vitamin and mineral status of the child's diet is likely to be.

At school-going age, children have more freedom over their food choices and have either packed or school lunches away from home. A poor range of foods offered at school, peer pressure and junk food campaigns start to influence dietary choices and eating behaviour even at this young age.

Children should be encouraged to be as active as possible and to base their meals and snacks on the basic food groups, with limited fat and sugary snacks.

4 The food groups

- **Bread, cereals, rice and pasta** provide energy, fibre, vitamins and minerals. This group includes bread, rolls, cereals, crisp bread, pasta, crackers, rice, couscous, potatoes and sweet potatoes.
- **Vegetables and fruit** provide vitamins and minerals including vitamin C, vitamin A and fibre. This group includes all methods of preserving vegetables and fruit – fresh, frozen, dried and tinned.
- **Milk and dairy products** provide protein, carbohydrates, calcium, vitamins and other minerals. This group includes milk, yoghurt, cheese – hard, soft, spread and cottage.
- **Meat and meat alternatives** provide protein, iron, vitamins and other minerals. This group includes beef, pork, lamb, chicken, turkey, liver, white and oily fish (sardines, salmon, tuna, mackerel), eggs, beans and lentils.
- **Fats and oils** provide energy and essential fatty acids. This group includes oils (such as olive oil and canola oil), butter, margarine, mayonnaise, olives, nuts, seeds and avocado.

Children should be given the opportunity to choose foods from each food group. They need to learn to make the healthy choices from each food group instead of having chips, sweets and chocolates.

Teach children to choose the following foods at mealtimes:

- A starchy food – bread, jacket potatoes, boiled potatoes, brown rice or pasta
- A protein – meat, fish, eggs, cheese or beans. Avoid pies, pastries, sausages and burgers
- At least one portion of vegetables – raw or cooked
- At least one piece of fruit – fresh or dried
- A little healthy fat – nuts, seeds, olives and avocado.



5 Important micronutrients

- **Iron** helps to maintain healthy red blood cells. Too little iron can cause iron-deficiency anaemia. Good sources of iron are red meat, liver, egg yolk, fortified breakfast cereals, pulses (beans, peas), dried apricots and raisins. Foods rich in Vitamin C such as citrus fruits, fruit juice and tomatoes help to absorb the iron in food more effectively.
- **Calcium** is important for developing healthy bones. Calcium sources include milk, cheese, yoghurt, green leafy vegetables, cereals, sesame seeds and tofu.
- **Folate** is important for growth. Intakes appear to be quite low in some children, especially those that skip breakfast. Good sources are high-fibre breakfast cereal, bread, green leafy vegetables and pulses.

6 High-fat and high-sugar foods

These foods include butter, margarine, cooking oils, sugar, biscuits, cakes, crisps, sweets, chocolate, cream, ice-cream and sugary drinks.

You shouldn't eat or drink these foods on a regular basis. When children have these foods, it should only be in small amounts. They are very high in kilojoules, fat and sugar and don't provide many vitamins or minerals. Sugary foods and drinks (including fruit juice) also contribute to tooth decay. Milk and water are better drinks between meals.



Nutrition for teenagers

Adolescence is signified by rapid growth and the development of sexual maturity. This means that the primary dietary need is for energy, which often leads to a large appetite. It can also cause an emotional yo-yo, typical of the teenage population. A teenager's diet should support growth, promote health and be enjoyable.

Food choices should be in line with healthy eating principles, but this is seldom the reality amongst teenagers. Average fat and sugar intakes are high, while carbohydrate and fibre intakes are low.

Teenagers should be encouraged to choose a variety of foods from the food groups:

- Plenty of unrefined, whole-grain starchy foods, for example whole-grain bread, brown rice, pasta, unrefined breakfast cereals, couscous, potatoes and sweet potatoes
- Plenty of vegetables and fruit – at least five portions every day
- Moderate amounts of low fat dairy products, for example milk, yoghurt and cheese
- Moderate amounts of lean protein, for example meat, fish, eggs, beans and pulses
- A small amount of healthy fat.

Other important dietary habits:

- Drink plenty of water every day (although this depends on environmental conditions and how physically active the teenager is)
- Eat breakfast to get essential nutrients and improve concentration in the mornings
- Exercise regularly for overall fitness, cardiovascular health and bone development.

1 Iron

Rapid growth, fast lifestyles and poor eating habits can result in iron-deficiency anaemia. Teenage girls need to pay particular attention to iron as menstruation may deplete their iron stores.

The main dietary source of iron is red meat. Non-meat sources are high-fibre breakfast cereals, bread and green leafy vegetables. Iron absorption from non-meat sources can be enhanced by combining them with a vitamin C-rich food (for example citrus fruits and tomatoes).

Tannins are compounds in tea that reduce the absorption of iron. Therefore, a glass of water or milk is a better choice with breakfast cereal than a cup of tea.

2 Calcium

Inadequate calcium intake can contribute to osteoporosis, a disease that causes bones to become brittle and break very easily in later life.

Vitamin D, calcium and phosphorous are essential nutrients for bone growth. Adolescence is a very important stage for bone development and bones continue to grow until the age of about 30.

Calcium-rich foods should be eaten or drunk everyday. The richest sources are milk and dairy products. Non-dairy sources of calcium include fortified soya milk, seeds and nuts, green vegetables (kale, bok choy, broccoli) cooked greens, tofu and legumes (soybeans, white beans, navy, chickpeas, and dried figs).

3 Body image and teens

Pressure from the media and peers, and an awareness of their changing bodies, may cause teenagers to lose weight to try to obtain the perfect body. Teenagers, particularly girls, are at risk of developing eating disorders, such as anorexia or bulimia, as they strive towards excessive thinness due to a distorted body image.

As a parent or teacher, the following behaviour in teens should ring alarm bells:

- Refusing to eat or eating only small portions of food
- Losing a lot of weight in a short period of time and denying weight loss
- Displaying extreme fear of being fat or thinking he/she is fat even if not
- Exercising excessively
- Appearing depressed, moody, insecure and/or hyperactive.

On the flipside, children who are overweight, like many adults in South Africa, may not acknowledge their weight status and often think they are thinner than they actually are. Obesity among teenagers is twice as common as it was 30 years ago, while many overweight teens are in denial about their weight or have poor self-esteem.

4 Healthy weight

Emphasise that a diet high in nutritional quality is important in teenagers because the growth spurt increases their demand for nutrients. Sensible eating and regular exercise are the ways to achieve a healthy weight. Teenagers who wish to diet should consult a healthcare professional such as a dietitian or GP.

The changing portion size of chips

Today: Small



17g

In 1950, this was the only chip size offered.

Today: Large



154g

In 1998, this was considered supersize.

Today: Supersize



196g

The current 'supersize' is 28g more than 1999's

5 Portion sizes for teens

In the last three decades, portion sizes have exploded into supersized chips, giant muffins and jumbo drinks, resulting in more calories being consumed and a serious childhood obesity problem. Teenagers are a vulnerable group to this portion distortion, so it's important to teach our kids about healthy portion sizes.

Restaurants are using larger dinner plates, pizzerias are using larger pans and fast-food outlets are using larger drink and chip containers. An average teen should eat about 8 400kJ, which roughly split across three meals is 2 772kJ per meal. The average pepperoni pizza is 6 720kJ, which means that 80% of your daily kilojoule intake is from one meal if you eat the whole pizza!

Portion control tips for teens:

- Go for small or regular sizes in restaurants, grocery shops or take away outlets
- If only large portions are served in a restaurant, share your meal with a friend or take half home for tomorrow
- Watch out for bottomless refills of fizzy drinks or 'all-you-can-eat' buffets
- Choose single-serving bags or bite-size versions
- Eat regular healthy meals and snacks to avoid overeating at one particular meal
- Eat fibre-rich foods and five fruit and vegetables a day, which are full of healthy nutrients, so you can eat smaller amounts and still feel satisfied
- Lower your intake of kilojoule-dense foods that are high in fat and sugar
- Eat off a smaller plate so the portion appears larger.

6 Breakfast

Breakfast is the most important meal of the day. Eating breakfast has very positive effects on the nutritional status and learning abilities of children of all ages. Missing a single breakfast can have negative effects on the school performance of undernourished children.

Breakfast provides a critical source of calories, fibre and iron that may not be replaced later in the day if breakfast is missed.

A healthy breakfast should include at least three of the four food groups, for example:

- Wholewheat toast, peanut butter and orange juice
- Unrefined/wholegrain cereal, milk and a banana
- Fruit salad and yoghurt
- Eggs, cheese and wholewheat toast
- A smoothie made from yoghurt or milk, fruit, nuts and some honey.

There are, however, no defined breakfast foods. A good breakfast is whatever a child eats in the morning as long as it's healthy, nutritious and sustains energy.

Tips on implementing the lesson plans

Here are some tips to help you implement the lesson plans of the Vitality Schools Programme

Communicate the rules effectively to your learners

Determine rules with your learners when doing physical activities and playing games. Here are some questions and points to consider:

- Noise is inevitable when doing these activities, but decide what is an acceptable level of noise
- Tell learners what the consequences of unfair play will be
- What should be done when learners don't cooperate or refuse to participate in the lessons? Be careful not to discipline learners by giving physical activities as punishment
- Which signals can you use to bring the class to attention? This can be decided by discussing it with the learners. You can choose, for example, a certain number of whistle blows or hand claps
- At the beginning of each lesson, make sure the learners know which skills you'll focus on during the lesson. Always emphasise that above all, they should enjoy what they're doing! Encourage self-improvement, participation and cooperation
- If you are going to use the physical activities for assessment, be clear about what your area of focus is. If you are monitoring learner participation, you can do this by observing learners during the activities and make notes after the lesson. If you are assessing a specific skill, you could take smaller groups and score their performances
- When doing an activity with a big group, make sure you are seen by all the learners and that you give clear, concise instructions.

Plan your equipment and space requirements

- If you are working in a very big open space, mark off the area you need with cones or other markers so that learners know where the physical boundaries are
- Make sure you have all the equipment you need before the lesson starts. If learners need to share equipment, make sure you know how you are going to manage the process. For example, you could ask them to sit down once they have had their turn. This will make it easier for you to know which groups have completed the activity
- Discuss with your learners how to use the equipment safely. This is very important when working with younger learners. Talk about which parts of the body can get hurt if the equipment is not used properly
- Ensure the activity area is safe and make children aware of working in their own space to avoid collisions with other learners.

Know the material well before the lesson

- Planning your lesson is very important
- Make sure that you are familiar with the activities and exercises before you teach them to the class
- Always demonstrate the activity to your learners and wear appropriate, comfortable clothing. You may not be able to keep it up as you will be moving between the learners or monitoring the activities, but learners should see you engaging in the physical activities.
- Make it clear to the learners when you are teaching them correct technique for certain physical activities. In these cases, movements need to be precise, disciplined and coordinated. Make sure you are familiar with the technique before you teach the lesson.

Cater for different attitudes to physical activity

- Be sensitive when correcting learners. Try to do it quietly with the individual and not publicly. Older learners in particular can be very self-conscious.
- Encourage all children for the efforts they are making, not just the sporty or naturally fitter ones.

Be aware of the learners' different needs and skill levels

- When you are creating teams, make sure you get the mix of learners in each team right. Competition can be healthy. Be sure to mix groups so that there are learners of equal strength and ability on all teams if the game or activity is competitive. At other times, you could allow learners to choose their own partners. This may be useful when learners are required to work in close physical space with someone. They may be more comfortable doing this with a friend. At other times, the activity may require one strong leader with followers. Use your discretion when creating these groups or teams.
- What about learners with physical disabilities? Design your lesson so that they are also able to participate. For example, a learner in a wheelchair may not be able to use his or her lower body, but encourage such learners to explore movements with their upper body. It may be difficult for learners with physical disabilities to participate in running or skipping games, but you could allocate different roles like referee or score keeper.

Manage the lesson time effectively

- If there is a 30-second countdown before a change in activity, it's a good idea to count down aloud from 5 so the learners are prepared for the change
- Use the time for physical activities optimally. Try to do theory and reflection when the learners are back in the classroom. If possible, let the learners change into their exercise clothes before the lesson starts
- Do not try to teach too much in one lesson – rather teach less material more effectively.



References

Patel DR, Pratt HD and Greydanus, DE (2002). Pediatric neurodevelopment and sports participation: When are children ready to play sports? *Pediatric Clinics of North America* 49: 505-531

Piaget J and Inhelder B (1969). *The psychology of the child*. New York: Basic Books

Hass CJ, Feigenbaum MS, Franklin BA. (2001). Prescription of resistance training for healthy populations. *Sports Medicine*, 31: (14), 953 – 964

Pearson D, Faigenbaum A, Conley M, Kraemer WJ. (2000), The National strength and conditioning association's basic guidelines for resistance training of athletes. *Strength and Conditioning Journal*, 22: (4), 14 – 27

Centers for Disease Control (CDC): Active Community Environment Initiative (ACES) (www.cdc.gov)

Ferreira I, van der Horst K., Wendel-Vos W, Kremers S, van Lenthe FJ, Brug J. Environmental correlates of physical activity in youth – a review and update. *Obes.Rev.* 2007;8:129-54

Revised National Curriculum Statement Grades R-9 (Schools) Life Orientation

© 2002 Department of Education, Pretoria

ISBN: 1-919917-46-2

Gazette no.: 23406, Vol 443, May 2000



Discovery Vitality | 155 West Street | Sandton | 0860 109 939 | www.vitalityschools.co.za | vitalityschools@discovery.co.za