CORRECT IT!

Corrective VET international training
for obesity prevention and healthy life style promotion

Co-funded by the
Erasmus + Programme
of the European Union

Intellectual Output 4. Correct IT

LEARNING MATERIALS FOR FACE TO FACE BLENDED-LEARNING OBESITY PREVENTION AND HEALTHY LIFESTYLE TRAINING COURSE

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Erasmus+

INTRODUCTION

What is this booklet for:

The learning materials for face to face ``Obesity prevention and healthy lifestyle skills`` training course are reported in this booklet as part of Correct it! VET International blended-learning course.

Based on the "Healthy lifestyle concept analysis and collection of good practices" and the "Obesity prevention and healthy lifestyle curriculum" developed in the frame of Erasmus+ 2017-1-RO01-KA202-037373 project, the learning materials constitute the second pillar of the blended-learning course, the on-line materials being the other one that completes the course.

The Obesity prevention and healthy lifestyle curriculum is available on the website **https://correct-it.eu** in English, Romanian, Italian, Lithuania, Portuguese, Norwegian languages.

The online course ``Obesity prevention and healthy lifestyle skills`` can be attended on the platform **https://correct-itcourse.eu/** in English, Romanian, Italian, Lithuania, Portuguese, Norwegian languages.

Target group to which it addresses:

Correct IT! Blended course is mainly addressed to nursery students and professional nurses working in schools and kindergartens, community, primary medicine, nurse educators and other health professionals, VET teachers, social workers, psychologists, and other professionals who have an important and educative impact on population.

Objective of the course:

The main goal of Correct IT! Course is to equip the Correct IT professionals with the necessary knowledge, skills and competences to better introduce training in the concept of Obesity prevention and healthy lifestyle. To develop the necessary know-how of the professionals to implement the Correct IT Model and provide training and change amongst the target group.

How it is organized:

Materials are organized in six modules, the same as for the on-line materials. Each of the module was developed by one of the project partners and shared in a common teaching platform. Causes of obesity and health risks (by OAMGMAMR Iasi, Romania), Nutrition Education (by University of Foggia, Italy), Prevention strategies, (by KAI, Lithuania), Physical activity (by IP Portalegre, Portugal), Lifestyle and mental health (by Triskelion, Norway) and Attitude change and media influence (By Asociatia Everest, Romania).

Each module is resumed in a table presenting the main information needed to conduct the course and to use the teaching materials. First, learners are advised to acquire confidence with the overall organization of the module and then study materials for their use in the class activities. At the end of the 6 modules an evaluation questionnaire (developed by Asociatia Everest, Romania) is reported and is recommended to be completed by learners after the completion of the course. This will allow them to have a precise feedback about the efficacy of the learning activities.

How to use the materials:

Before starting the course trainers must be aware of the devised duration and have availability of rooms and materials for the 24 hours teaching program (4 hours per each module). The course is intended for 4-6 days intensive activity but can also be spread in a wider interval of time, considering that it is strongly suggested to work over a single module in one day.

A Methodology for VET trainers in obesity prevention and healthy lifestyle skills that constitutes essential part of the materials for the trainers is available at the website **https://correct-it.eu** in English, Romanian, Italian, Lithuania, Portuguese, Norwegian languages.

THE TRAINING CURRICULUM

The ***Correct IT*** Training Curriculum consists in a total of six learning units or modules. This curriculum allocates 150 hours of total learning, distributed by the six main units of learning outcomes, corresponding to a total of 6 ECVET points (1 credit = 25 hours). These hours encompass contact/ theoretical hours, face to face/ practical sessions, self-study and assignments/ assessments as suggested below:

Units of Learning Outcomes	Face to face hours	Online study hours	Self-study hours	Assessment hours	Total learning hours	ECVET Credits
1 Causes of obesity and health risks	4	10	9	2	**25**	**1**
2 Nutrition education	4	10	9	2	**25**	**1**
3 Prevention strategies	4	10	9	2	**25**	**1**
4 Physical activity	4	10	9	2	**25**	**1**
5 Lifestyle and mental health	4	10	9	2	**25**	**1**
6 Attitude change and media influence	4	10	9	2	**25**	**1**
Correct IT **Training Curriculum**	**24**	**60**	**54**	**12**	**150**	**6**

The distribution of the 150 hours can be revised according to the national needs, cultural specificities and teachers/trainers/training providers' practices.

Title	
Correct IT : Corrective VET, international training for obesity prevention and healthy life style promotion	
Proposed EQF level	**Training type**
4-6	Classroom/online
Target group	
Professionals, teachers including nurses, students, teachers and kindergarten staff.	
Entry requirements	
None.	
Overall objectives	
To develop the necessary know-how of the professionals to implement the Correct IT Model and provide training and change amongst the target group	
Training outline	
Module 1: Causes of obesity and health risks **Module 2: Nutrition education** **Module 3: Prevention strategies** **Module 4: Physical activity** **Module 5: Lifestyle and mental health** **Module 6: Attitude change and media influence**	
Hours of total learning	
Contact hours = 24 Online study = 60 Self-study hours = 54 Assessment hours = 12	
Total number of learning hours	**Total number of ECVET credits**
150	6

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MODULE 1 – Causes of obesity and health risks

GENERAL GOAL(S):	**The general aim of the activity is to know the causes of obesity and health risks**
OBJECTIVES:	By the end of the module, participants will be able to: • know the key factors that contribute to obesity • recognize obesity symptoms in children • know Body Mass Index indicators • be aware of the risk factors associated to obesity and how they impact the children's life • identify the key factors that contribute to obesity in specific cases • diagnose obesity using the Body Mass Index
METHODS	Lectures, presentations, self-study, discussions based on case studies, role play, group discussion, educational film, self-assessment
DURATION:	**4 hours**
RESOURCES NEEDED:	Video projector, paper, power point software, pen, evaluation sheet.
SECTION 1.1	**CHILD OBESITY SYMPTOMS (1h 15min)**
ORDER OF ACTIVITIES:	**Activity 1: (15 min.)** • The trainer presents the child obesity symptoms to the trainees, using **theoretical materials** of section 1.1; **Activity 2: (15 min.)** • Trainer divides participants into small groups and asks them to discuss on the following questions: ✓ Why is it important for you to recognize child obesity symptoms? ✓ Why do we have to intervene when the child is still young? ✓ How child obesity can influence adult life? and to write down conclusions and present to the other groups. **Activity 3: (45 min.)** Change the small groups from the previous exercise, watch the film in **exercise 1** and create an activity that you can apply in your workplace with children using the educational video. Present all activities to the whole group.
SECTION 1.2	**OBESITY DIAGNOSIS (1h 35min)**
ORDER OF ACTIVITIES:	**Activity 1 (20 min.)** • Trainer presents the main ways to diagnose obesity, using **theoretical materials**; **Activity 2 (35 min.)** Work in pairs. Imagine an individual counseling activity with children from your workplace making use of the **worksheet 1**. Use BMI and waist measurements to raise awareness regarding the child's health condition. Present relevant conclusions to the group. **Activity 3: (40 min.)** • Participants are asked to read the questions in **exercise 2** and volunteer for role-plays nurse-obese/overweight child parent, social worker – obese/overweight child parent, teacher – obese/overweight child parent; In a group discussion participant are asked to share: ✓ what have been the difficulties in both roles: nurse/social worker/teacher vs overweight child parent; ✓ what have they learned from the discussion;

SECTION 1.3	RISK FACTORS ASSOCIATED TO OBESITY (1h 10min)
ORDER OF ACTIVITIES:	**Activity 1: (25 min.)** Trainer presents the health risk factors and the psychological risk factors associated to obesity using **theoretical materials** of section 1.3 **Activity2: (45 min.)** Trainer asks the participants to reflect on **worksheet 2** and then read the **case study** and discuss about it, using the following questions: ✓ Have you met similar cases in their professional activity? ✓ What was different in the child obesity situation they encountered? ✓ What additional arguments would you use to convince Tommy's mother? ✓ What possible follow-ups would they imagine
EVALUATION OF THE MODULE:	Teacher evaluation of student's activities
KEEPING LEARNERS SAFE:	• Ensure that access to the activity available for all • Ensure room large enough to allow mobility for all learners.
REFERENCES	- Bibbins-Domingo K, Coxson P, Fletcher MJ, et al. Adolescent overweight and future adults coronary heart disease. N Engl J Med. 2007; 357:2371-2379. - Baker JL, Olsen LW, Sørenson TIA. Childhood body-mass index and the risk of coronary heart disease in adulthood. N Engl J Med. 2007; 357: 2329-2337. - Ludwig DS. Childhood obesity – the shape of things to come. N Engl J Med. 2007; 357: 2325-2327.

SECTION 1.1 CHILD OBESITY SYMPTOMS

Activity 1

Obesity is a global epidemic and children are affected in increasing numbers. Overweight children are at increased risk of becoming overweight adults with associated chronic diseases.

Obesity in childhood is strongly associated with increased rates of premature death from endogenous causes.

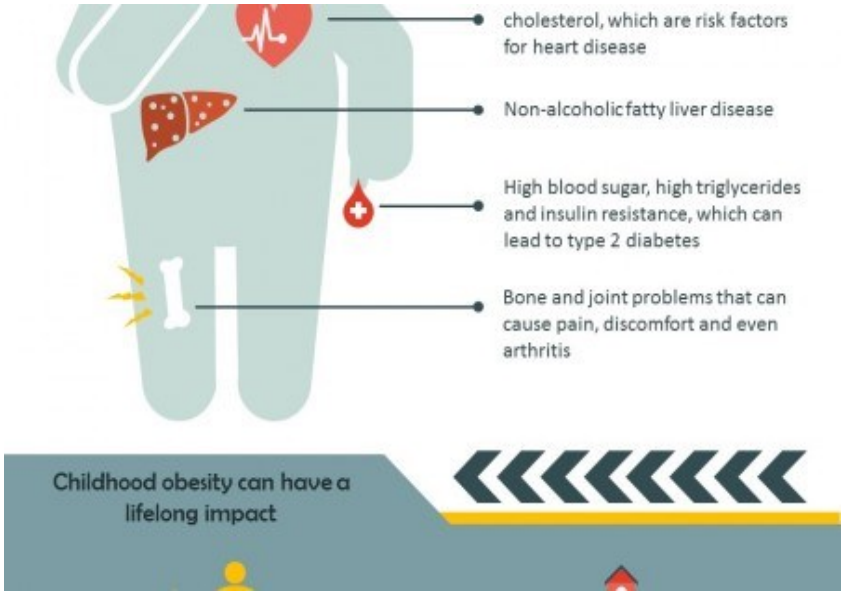
Obese adolescents are more likely to have prediabetes, a condition in which blood glucose levels indicate a high risk for development of diabetes.

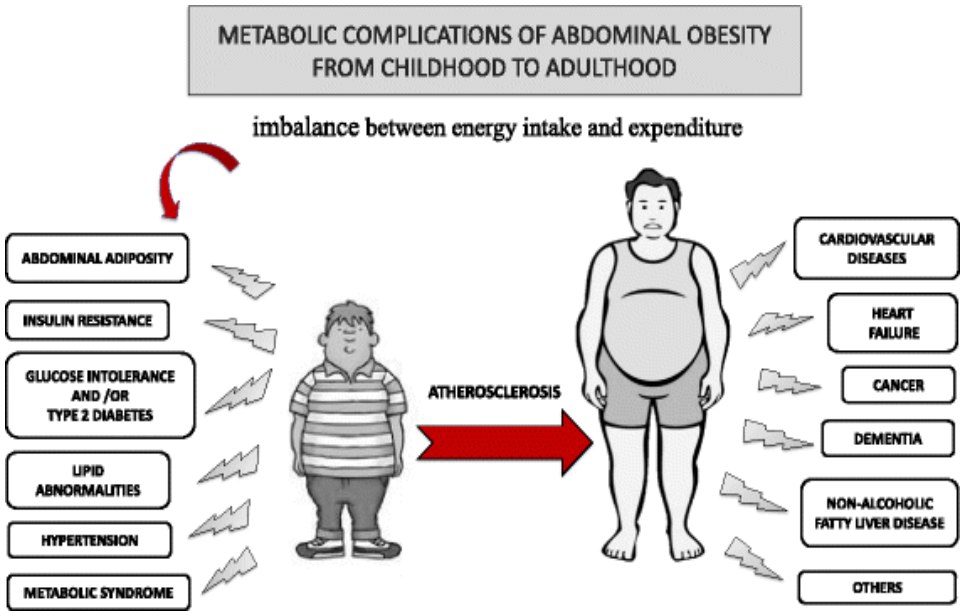
Children and adolescents who are obese are at greater risk for bone and joint problems, sleep apnea, and social and psychological problems such as stigmatization and poor self-esteem.

Long-term health effects:

Children and adolescents who are obese are likely to be obese as adults and are therefore more at risk for adult health problems such as heart disease, type 2 diabetes, ***stroke, several types of cancer, and osteoarthritis***.

One study showed that children who became obese as early as age 2 were more likely to be obese as adults.





What are the symptoms of childhood obesity?

Each child may experience different symptoms but some of the most common include:

- Appearance: stretch marks on hips and abdomen; dark, velvety skin (known *as acanthosis nigerians*) around the neck and in other areas; fatty tissue deposition in breast area (an especially troublesome issue for boys)
- Psychological: teasing and abuse; poor self-esteem; eating disorders
- Pulmonary: shortness of breath when physically active; sleep apnea
- Gastroenterological: constipation, gastroesophageal reflux
- Reproductive: early puberty and irregular menstrual cycles in girls; delayed puberty in boys; genitals may appear disproportionately small in males
- Orthopedic: flat feet; knock-knees; dislocated hip

The following are the most common symptoms that indicate a child is obese. However, each of them may experience symptoms differently. Symptoms may include:

- Facial features often appear disproportionate
- Adiposity (fat cells) in the breast region in boys
- Large abdomen (white or purple marks are sometimes present)
- In males, external genitals may appear disproportionately small
- Puberty may occur early
- Increased adiposity in the upper arms and thighs
- Genu valgum (knock kneed) is common

Children who are obese often experience significant ***social pressure***, ***stress***, and ***difficulties*** accomplishing developmental tasks.

Psychologic disturbances are also very common.

The symptoms of obesity may resemble other conditions or medical problems.

Symptoms of obesity in children include one or more of the following:

(try to make a brief analysis of your child) -

- Clothes that do not fit around his waist
- Trouble doing activities, such as climbing stairs or playing running games
- Restless sleep and snoring
- Shortness of breath while resting or with activity
- Tiredness

Activity 2

Class discussion in small groups, on the following questions:

- Why is it important for you to recognize child obesity symptoms?
- Why do we have to intervene when the child is still young?
- How child obesity can influence adult life?

Then each goup will write down conclusions and present to the other groups.

Activity 3

Exercise 1 – Educational film: **https://www.youtube.com/watch?v=rbDKM1BP7Bw**

SECTION 1.2 DIAGNOSIS OF OBESITY

Activity 1

Obesity is a topical issue of modern society, which raises many health problems.

"Obesity" is defined as the accumulation and storage of excess body fat, while "overweight" is weight in excess of a weight reference standard (Ogden & Flegal, 2010). Because there are no consensus criteria defining childhood obesity on the basis of excessive body adipose tissue, weight-based classification based on body mass index (BMI, kg/m2) has been routinely used for both epidemiological and clinical purposes.

What causes obesity and overweight?

The fundamental cause of obesity and overweight is an energy imbalance between calories consumed and calories expended. Globally, there has been:

- ✓ An increased intake of energy-dense foods that are high in fat;
- ✓ An increase in physical inactivity due to the increasingly sedentary nature of many forms of work, changing modes of transportation, and increasing urbanization

Changes in dietary and physical activity patterns are often the result of environmental and societal changes associated with development and lack of supportive policies in sectors such as health, agriculture, transport, urban planning, environment, food processing, distribution, marketing and education.

Obesity is a chronic disease

The WHO recognizes that in this century, obesity has prevalence similar or higher than that of malnutrition and infectious diseases. For this reason, if drastic measures are not taken in order to prevent and treat obesity, more than 50% of the world population will be obese in 2025.

Obesity is, therefore, a chronic disease with enormous prevalence in developed countries, afflicting men and women of all races and ages.

Pre-obesity and obesity are important public health concerns demanding a joint strategy that includes the promotion of healthy eating habits and a more active lifestyle, as well as making available appropriate treatment and aftercare.

Participation in 150 minutes of moderate-intensive aerobic physical activity each week (or equivalent) is estimated ***to reduce the risk of ischaemic heart disease by approximately 30%, the risk of diabetes by 27%, and the risk of breast and colon cancer by 21–25%.***

In addition, it has positive effects on mental health by reducing stress reactions, anxiety and depression and by possibly delaying the effects of Alzheimer's disease and other forms of dementia.

In Europe, estimates indicate that over one third of adults are insufficiently active. Men were more active than women, particularly in high-income countries, where nearly every second woman was insufficiently physically active. Through decisions impacting urban design, land use and transport, societies have become increasingly car-friendly over time, and there is a growing geographical separation of living, working, shopping and leisure activities.

Health in later life is influenced by an accumulation of experience across the life-course. Action to encourage physical activity for children and adolescents in day-care centers, kindergartens, schools and the community is reinforced and sustained by the promotion of physical activity as a part of daily life for adults and for older people, at home, in the community and at the workplace. It also includes the promotion of sufficient levels of physical activity in health-care settings, such as primary health-care centers, hospitals and residential homes.

Measurement of height and weight are the most commonly used tools to quickly evaluate the proportionality of children. These measurements allow calculation of the **body mass index (BMI).**

It is important to consider the physique of the individual. While having a weight in excess of what would be expected for a certain height is most commonly a documentation of excessive fat tissue, certain individuals may be over-muscled (for example, weightlifters).

With the exception of very rare bone diseases, the idea of an individual's excessive weight due to being "big boned" is an urban myth.

Being a little overweight may not cause many noticeable problems. However, once a child is carrying a few extra kilograms, he may develop symptoms that affect his daily life.

Obesity diagnosis

Despite a growing epidemic, many medical providers fail to diagnose obesity in their patients—missing an opportunity to identify an important component of long-term health.

Among patients whose body mass index (BMI) indicated obesity, providers diagnosed and documented obesity in less than a quarter of office visits with children, and less than half for adolescents and adults, researchers found. The study also shows that patients living in less educated communities were even less likely to receive an accurate diagnosis.

“As a medical community, we can’t effectively manage obesity until we are identifying it properly in our patients,” says Robert J. Fortuna, assistant professor of medicine and pediatrics in primary care at the University of Rochester Medical Center and one of the study’s authors.

"By not accurately diagnosing obesity, we are missing the opportunity to influence the trajectory of our patients' health over the course of their lives."

Clinical Information

- A condition marked by an abnormally high, unhealthy amount of body fat.
- A disorder characterized by having a high amount of body fat.
- Obesity means having too much body fat. It is different from being overweight, which means weighing too much. The weight may come from muscle, bone, fat and/or body water. Both terms mean that a person's weight is greater than what's considered healthy for his or her height. Obesity occurs over time when you eat more calories than you use. The balance between calories-in and calories-out differs for each person. Factors that might tip the balance include your genetic makeup, overeating, eating high-fat foods and not being physically active. Being obese increases your risk of diabetes, heart disease, stroke, arthritis and some cancers. If you are obese, losing even 5 to 10 percent of your weight can delay or prevent some of these diseases.

Body mass index (BMI) is widely used as a simple and reliable way of finding out whether a person is a healthy weight for their height.

For most adults, having a BMI of 18.5 to 24.9 means you're considered to be a healthy weight. A person with a BMI of 25 to 29.9 is considered to be overweight, and someone with a BMI over 30 is considered to be obese.

While BMI is a useful measurement for most people, it's not accurate for everyone.

For example, the normal BMI scores may not be accurate if you're very muscular because muscle can add extra pounds, resulting in a high BMI when you're not an unhealthy weight. In such cases, your waist circumference may be a better guide (see below).

The exams and tests generally include:

- Taking your health history. Your doctor may review your weight history, weight-loss efforts, exercise habits, eating patterns, what other conditions you've had, medications, stress levels and other issues about your health. Your doctor may also review your family's health history to see if you may be predisposed to certain conditions.
- A general physical exam. This includes also measuring your height; checking vital signs, such as heart rate, blood pressure and temperature; listening to your heart and lungs; and examining your abdomen.
- Calculating your BMI. Your doctor will check your body mass index (BMI) to determine your level of obesity. This should be done at least once a year. Your BMI also helps determine your overall health risk and what treatment may be appropriate.
- Measuring your waist circumference. Fat stored around your waist, sometimes called visceral fat or abdominal fat, may further increase your risk of diseases, such as diabetes and heart disease. Women with a waist measurement (circumference) of more than 35 inches (80 centimeters, or cm) and men with a waist measurement of more than 40 inches (102 cm) may have more health risks than do people with smaller waist measurements. Like the BMI measurement, your waist circumference should be checked at least once a year.
- Checking for other health problems. If you have known health problems, your doctor will evaluate them. Your doctor will also check for other possible health problems, such as high blood pressure and diabetes.
- Blood tests. What tests you have depended on your health, risk factors and any current symptoms you may be having. Tests may include a cholesterol test, liver function tests, a fasting glucose, a thyroid test and others. Your doctor may also recommend certain heart tests, such as an electrocardiogram.

Gathering all this information helps you and your doctor determine how much weight you need to lose and what health conditions or risks you already have. And this will guide treatment decisions.

Waist circumference

Another useful method to assess your weight is to measure your waist circumference. Men whose waist measurement is 94 cm or more and women whose waist measurement is 80 cm or more are more likely to develop obesity-related health problems, such as type 2 diabetes, heart disease and some types of cancer.

Visiting your doctor

If you are overweight or obese, visit your doctor to find if you are at increased risk of health problems, and how you can safely lose weight. Talk to your doctor about:

- any underlying causes your might have for your obesity - for example, if you are on certain medication or have a medical condition that causes weight gain
- your lifestyle - particularly your diet and how much physical activity you do, and also whether you smoke, and how much alcohol you drink
- how you feel about being overweight - for example, if you are feeling depressed about it
- how motivated you are to lose weight
- your family history of obesity and other health conditions, such as diabetes (a condition where there is too much glucose (sugar) in the blood)

Further tests

As well as calculating your BMI, your doctor may also perform tests to determine if you are at increased risk of health complications because of your obesity. These could include:

- measuring your blood pressure
- measuring the glucose (sugar) and lipid (fat) levels in your blood

Activity 2

Worksheet - 1

Physical Activity and Nutrition Survey

Source:L https://www.nichq.org/sites/default/files/resource-file/Healthy_Care_for_Healthy_Kids_Obesity_Toolkit.pdf

JUMP UP & GO!

Are You a Healthy Kid?

Patient Name: _____ **Age:** _____ **Date:** _____

While you are waiting to see your clinician, please take a moment to answer questions 1–10 below. For each of the following questions, circle "yes" or "no."

1. Do you eat five or more fruits and vegetables per day?	Yes	No
2. Do you have a favorite fruit or vegetable that you eat every day?	Yes	No
3. Do you eat breakfast every day?	Yes	No
4. Do you watch TV, videos, or play computer games for two hours or less per day?	Yes	No
5. Do you take gym class or participate in sports or dance in or outside of school three or more times a week?	Yes	No
6. Doyou have a favorite sport or physical activity that you love to do?	Yes	No
7. Do you eat dinner at the table with your family at least once a week?	Yes	No
8. Do you have a TV in your bedroom?	Yes	No
9. Do you eat in front of the TV?	Yes	No
10. Do you drink more than one soda, juice, or other sugar-sweetened drink a week?	Yes	No

NICHQ

Activity 3

Counselling parents- Exercise 2

- You may ask the parent such questions as:
  - What does your child eat in a typical day?
  - How much activity does your child get in a typical day?
  - What are the factors that you believe affect your child's weight?
  - What diets or treatments, if any, have you tried to help your child lose weight?
  - Do you have any family members with weight problems?
  - Are you ready to make changes in your family's lifestyle to help your child lose weight?
  - What do you think might prevent your child from losing weight?

- How often does the family have meals together? Does the child help prepare the food?
- Does the child, or family, eat while watching TV or using a computer?

➢ The conclusions of your analysis might be the child needs a lifestyle and behavior change and visit a family/specialist doctor.

➢ Prepare a list of questions for a possible meeting with your family doctor / specialist, to include:

- What other health problems might my child have?
- What are the treatment options for my child?
- Are there medications that might help manage my child's weight and other health conditions?
- How long will treatment take?
- What can I do to help my child lose weight?
- Are there any brochures or other printed material that I can take home with me?
- What websites do you recommend visiting?

➢ Recommendations for the parents: find out more about child obesity, recommend reading.

SECTION 1.3 RISK FACTORS ASSOCIATED TO OBESITY

Activity 1

Health Risk Factors

Obesity can cause day-to-day health problems such as:

- breathlessness
- increased sweating
- snoring
- inability to cope with sudden physical activity
- feeling very tired every day
- back and joint pains
- low confidence and self esteem

Obesity can also cause changes they may not notice, but that can seriously harm their health, such as high blood pressure (hypertension) and high cholesterol levels (fatty deposits blocking your arteries). Both conditions significantly increase the risk of developing a cardiovascular disease, such as:

- coronary heart disease, which may lead to a heart attack
- stroke, which can cause significant disability and can be fatal

Another long-term problem that can affect obese people is type 2 diabetes. It is estimated that just under half of all cases of diabetes are linked to obesity. The main symptoms of diabetes are:

- feeling very thirsty
- going to the toilet a lot, especially at night
- extreme tiredness

Obesity can contribute to many other chronic conditions, including some cancers, some asthma, back problems, chronic kidney disease, dementia, gallbladder disease, gout, and osteoarthritis.

Being overweight or obese is also associated with dying prematurely.

Risk factors

Many factors — usually working in combination — increase child's risk of becoming overweight:

- Diet. Regularly eating high-calorie foods, such as fast foods, baked goods and vending machine snacks, can easily cause your child to gain weight. Candy and desserts also can cause weight gain, and more and more evidence point to sugary drinks, including fruit juices, as culprits in obesity in some people.
- Lack of exercise. Children who don't exercise much are more likely to gain weight because they don't burn as many calories. Too much time spent in sedentary activities, such as watching television or playing video games, also contributes to the problem.
- Family factors. If your child comes from a family of overweight people, he or she may be more likely to put on weight. This is especially true in an environment where high-calorie foods are always available and physical activity isn't encouraged.
- Psychological factors. Personal, parental and family stress can increase a child's risk of obesity. Some children overeat to cope with problems or to deal with emotions, such as stress, or to fight boredom. Their parents may have similar tendencies.
- Socioeconomic factors. People in some communities have limited resources and limited access to supermarkets. As a result, they may opt for convenience foods that don't spoil quickly, such as frozen meals, crackers and cookies. In addition, people who live in lower income neighborhoods might not have access to a safe place to exercise.

Complications

Childhood obesity can have complications for your child's physical, social and emotional well-being.

Physical complications

- Type 2 diabetes. This chronic condition affects the way your child's body uses sugar (glucose). Obesity and a sedentary lifestyle increase the risk of type 2 diabetes.
- Metabolic syndrome. This cluster of conditions can put your child at risk of heart disease, diabetes or other health problems. Conditions include high blood pressure, high blood sugar, high triglycerides, low HDL ("good") cholesterol and excess abdominal fat.
- High cholesterol and high blood pressure. A poor diet can cause your child to develop one or both of these conditions. These factors can contribute to the buildup of plaques in the arteries. These plaques can cause arteries to narrow and harden, which can lead to a heart attack or stroke later in life.
- Asthma. Children who are overweight or obese might be more likely to have asthma.
- Sleep disorders. Obstructive sleep apnea is a potentially serious disorder in which a child's breathing repeatedly stops and starts during sleep.

- Nonalcoholic fatty liver disease (NAFLD). This disorder, which usually causes no symptoms, causes fatty deposits to build up in the liver. NAFLD can lead to scarring and liver damage.

PSYCHOLOGICAL FACTORS

Psychological problems

In addition to the day-to-day health problems, many people may also experience psychological problems.

These can affect relationships with family members and friends and may lead to depression (there are some methods to improve the child behavior about food and diet as we can see in the next table – it is a suggestion).

Childhood obesity is associated with lower self-concept. Less disruptive behavior and the lack of a higher prevalence of anxiety and depression in childhood obesity appear to be a unique pattern, which deserves further consideration.

Although emotional and disruptive behaviors might not be a major issue in young overweight and obese children, careful attention should be paid to low self-esteem, consistently observed in Western studies, because of its adverse effects on mental health.

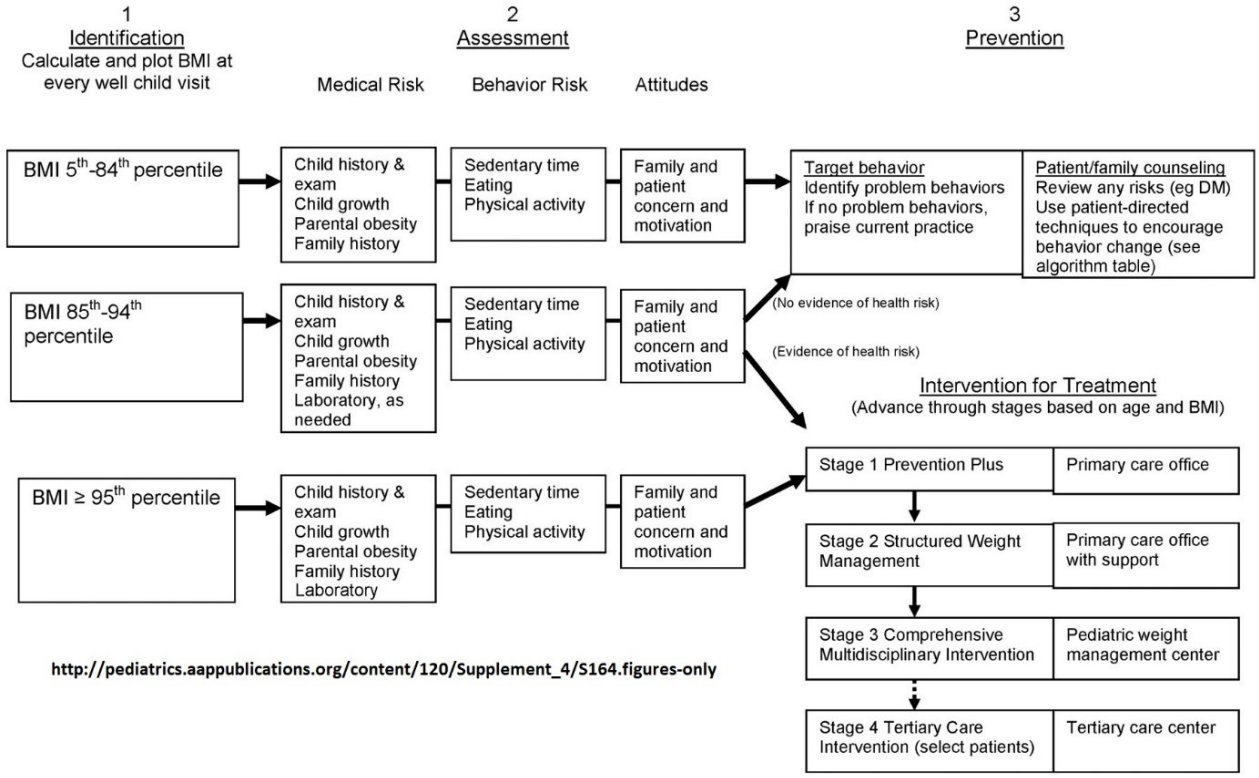
With increasing trends of obese children in both Western and Eastern countries, it is critical to recognize unfavorable values of certain physiological and psychological characteristics among overweight and obese students as young as 6–7 years and 9–10 years (first and fourth graders, respectively) to promote the physical and mental well-being of children in the current obesogenic environment.

Social and emotional complications

- Low self-esteem and being bullied. Children often tease or bully their overweight peers, who suffer a loss of self-esteem and an increased risk of depression as a result.
- Behavior and learning problems. Overweight children tend to have more anxiety and poorer social skills than normal-weight children do. These problems might lead children who are overweight to act out and disrupt their classrooms at one extreme, or to withdraw socially at the other.
- Depression. Low self-esteem can create overwhelming feelings of hopelessness, which can lead to depression in some children who are overweight.

Activity 2

Worksheet - 2



Case study

Tommy is an 8-year-old boy with no significant medical history. He has not visited the pediatrician during the last 3 years.

Tommy's teacher/school nurse/neighborhood social worker asks for Tommy's mother visit and informs her, and asks if Tommy is registered with any disease. "He's just a little overweight; he's not sick. It's baby fat; he'll grow out of it." his mother says. The teacher/school nurse/neighborhood social worker proceeds to explain that obesity is a serious condition, and asks for medical health family history and explains the obesity risks factors. Tommy's mother mentions proudly that Tommy resembles his parents, and grandparents, who are all fat, but pretty good-looking people. It's true that in her family history there is hypertension and diabetes.

The teacher/school nurse/neighborhood social worker explains that the physical health consequences of obesity in children include: orthopedic problems, sleep apnea, diabetes and glucose intolerance/insulin resistance, fatty liver, dyslipidemia, hypertension, cholelithiasis, asthma and it also has social and psychological risks. Once provided with factual information

about the battery of health risks posed by obesity, she lowered her defense mechanism for her son.

The teacher/school nurse/neighborhood social worker provides Tommy's mother with printed pamphlets and materials aimed to educate both the parents and Tommy with age-appropriate literature and information. The educational materials outlined potential causes of obesity in young patients, and identified how these can be related to an adverse environment, including:
1. Decreased physical activities and walking;
2. Consumption of high caloric convenience foods used to decrease preparation time;
3. Reduced accessibility/affordability to nutritious foods, vegetables and fruit;
4. Reduced biking/walking to/from school, decreased physical activity opportunities at school or after school;
5. More sedentary activities such as television, playing computer/video games rather than playing outdoors

Conclusion

The teacher/school nurse/neighborhood social worker asks Tommy's mother to read the materials and visit the pediatrician, and call her again in a week.

Follow-up

During the next visit, Tommy's mother told the teacher/school nurse/neighborhood social worker that it was a good idea to educate the parents about how to engage a healthier lifestyle. The teacher/school nurse/neighborhood social worker mentioned it is recommended that they monitor Tommy to increase his exercise, watch less television, eat healthier (more fruits, vegetables and less fried food and fast food) and initiate a fun and incentive-driven plan to track loss of excess weight. Tommy's parents set a goal for him to receive a new bike once 15 pounds of weight are shed. The bicycle will provide wholesome outdoor exercise for Tommy, while encouraging him to make better eating choices. At the time of this writing, Tommy was bicycling his way to better health.

MODULE 2 – Nutrition Education

GENERAL GOAL(S):	**To equip the Correct IT professionals with the knowledge, skills and competences about body composition, nutrition, food safety, law and economics for obesity prevention and healthy lifestyle**
OBJECTIVES:	By the end of the module, participants will be able to: • List the methods to evaluate the nutritional status and their application • Know the principles of nutrient assimilation and energy extraction from food; • Be aware of the healthy physiological role of gut microbiota; • List and describe the effects of food nutrients and supplements on human health; • Use practical tools for analysis and evaluation of health promoting nutritional plan. • Propose the most relevant food safety rules and best practices to the target group • Propose correct labelling of a food product in accordance with legal requirements; • Indicate the incorrectness on the packaging of the food product. • Explain basic knowledge concerning economics of obesity • Know how main international legal instruments in the fight against obesity works
METHODS:	face to face lecturing, group activity in the classroom, on line quiz, group activity workshop, brain storming game.
DURATION:	**4 hours**
RESOURCES NEEDED:	laptop, LAN or wi-fi connection, projector, handouts, stadiometer and/or plicometer, calculator, Blackboard or whiteboard, paper sheets and pencils, headphones or speakers
SECTION 2.1	**NUTRITIONAL STATUS AND ITS EVALUATION; BODY COMPOSITION AND MEASUREMENT (1 hour)**
ORDER OF ACTIVITIES:	**Activity 1: (30 min.)** • The trainer presents the **theoretical materials:** the Body composition and measurement and briefly introduce the body measurements methods • practical activity: taking body measurements and evaluation. The trainer divides the class in groups of two and ask the students to use stadiometer (if available) and/or plicometer on the partner and record the measurements. After the recording, each student must briefly report his/her evaluation of the measurements done and significance for the health.
SECTION 2.2	**ROLE OF THE FOOD COMPONENTS IN THE ORGANISM AND FOOD FUNCTIONALITY IN THE ORGANISM (1 hour 30 min.)**
ORDER OF ACTIVITIES:	**Activity 1**: (**45 min.)** • The gut microbiota mind map and group discussion conducted by the trainer.
	Activity 2: (45 min) • Lecturing in the classroom and discussion with the trainer**.**

SECTION 2.3	SHAPING GOOD HABITS FOR HEALTHY EATING (1 hour)
ORDER OF ACTIVITIES:	**Activity 1: (30 min.)** **Basics of food safety** First the trainer will introduce the topic aided by using the **theoretical materials** of section 2.3. Then the Students, individually or grouped, will attempt to one of the **on-line quiz** about food safety, by using the reported links: Finally the trainer starts the class workgroup with materials prepared by following the instructions reported.
	Activity 2: (30 min.) Practical evaluation of correctly and incorrectly prepared food labels Workshop guided by the teacher, realization of food labels. Student's work consists on invention, preparation and presentation of a clear, flexible to most products' nutrition declaration. 1. It should be simple and clear in understanding by most consumers, regardless of their education or age 2. The idea must rely on 1169/2011 rules 3. To fulfil above should follow the rules reported in the **section 2.3 activity 2** :
SECTION 2.4	**CONSEQUENCES AND PREVENTION OF INCORRECT FOOD EATING HABITS (1 hour)**
ORDER OF ACTIVITIES:	**Activity 1 (20 min.)** International law for the fight against obesity and the promotion of healthy lifestyles. The trainer will explain to the students the content of the main obligations of international law relating to the protection of health and a proper lifestyle, dealing with them both in terms of material content and with regard to international organizations that have expertise in this matter.
	Activity 2 (40 mon) Economic and policy framework of obesity and promotion of the healthy lifestyles • Brain storming game
EVALUATION OF THE MODULE:	Teacher evaluation of student's activity
KEEPING LEARNERS SAFE:	• Ensure that access to the activity available for all; • Ensure room large enough to allow mobility for all learners; • Briefly informing about the use of plicometer and stadiometer to avoid misuse.
REFERENCES	- https://www.healthypeople.gov/2020/topics-objectives/topic/nutrition-and-weight-status - https://ec.europa.eu/health/nutrition_physical_activity/policy/strategy_en - Early Years Nutrition and Healthy Weight. L. Stewart, J. Thompson (2015) Wiley-Blackwell Eds. - Drewnowski, A., & Darmon, N. (2005). The economics of obesity: dietary energy density and energy cost–. The American journal of clinical nutrition, 82(1), 265S-273S. - Philipson, T., & Posner, R. (2008). Is the obesity epidemic a public health problem? A decade of research on the economics of obesity (No. w14010). National Bureau of Economic Research.

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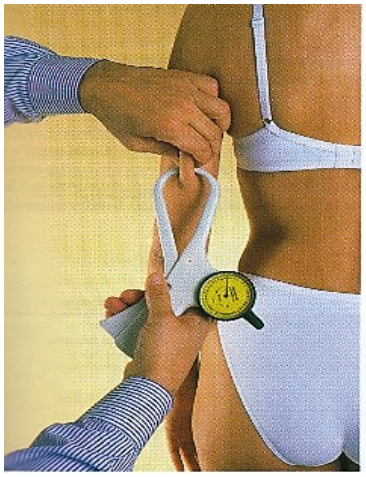
SECTION 2.1 THE BODY COMPOSITION AND MEASUREMENT (30 MIN.)

Activity 1

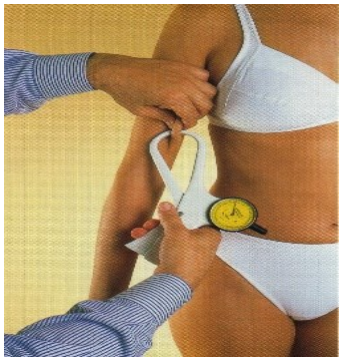
For weight measurement, the operator places himself in front of the subject to be measured. The subject gets on the weight scale standing in the middle of it. The measurement should be in the morning on an empty stomach.

- Body height is generally determined by a stadiometer. The subject has his back to the operator, standing in the middle of the stadiometer without shoes. His head is in the "Frankfort plane". This position is an imaginary line from the center of the ear hole to the lower boarder of the eye socket. At this time the operator measures the height standing at the side and bringing the head plate down onto the head of the subject, ensuring it rests on the crown of the head.

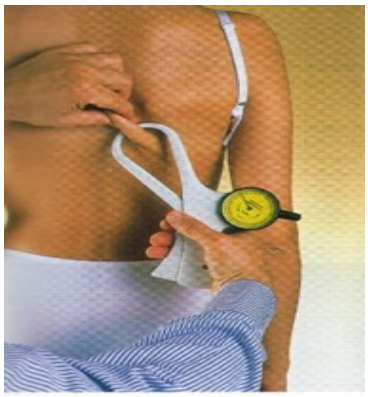
- The triceps skin fold is taken over the triceps muscle. It is measured using a plicometer. The measurement is taken at a standardized position at the midpoint of the back of the upper arm. The measurement is taken with the person standing upright, with arms hanging down loosely. The skin fold is pulled away from the muscle and measured with the plicometer, taking a reading 4 **seconds after the plicometer have been released. The measuring** point is halfway between the olecranon process of the ulna and the acromion process of the scapula.



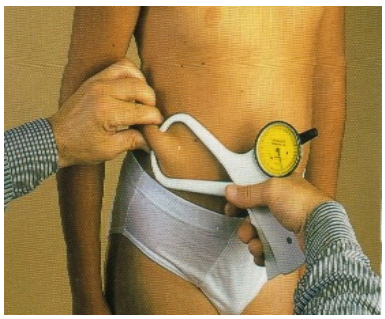
- The biceps skin fold is taken over the biceps muscle. It is measured using a plicometer. The measurement is taken at a standardized position at the midpoint of the anterior surface of the upper arm. The measurement is taken with the person standing upright, with arms hanging down loosely. The arm should be relaxed with the palm of the hand facing forwards. The skin fold is pulled away from the muscle and measured with the plicometer, taking a reading 4 seconds after the plicometer have been released. The measuring point is halfway between the olecranon process of the ulna and the acromion process of the scapula.



- The subscapular fold is taken on the lower angle of scapula. It is measured using a plicometer. The measurement is taken following the natural fold of the skin, approximately on a line running laterally (away from the body) and downwards (at about 45 degrees). The arms should be relaxed on each side of the body. The skin fold is pulled away from the muscle and measured with the plicometer, taking a reading 4 seconds after the plicometer have been released. If there is difficulty finding this landmark, get the subject to reach behind their back with their right arm, while feeling for the movement of the scapula.



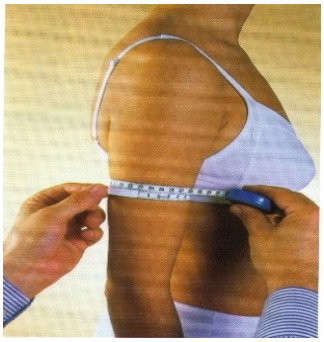
- The supra-iliac fold is taken approximately two centimeters above the right hip bone from the right side of the body. It is measured using a plicometer. The arms should be relaxed on each side of the body. The measurement is taken at a standardized position diagonally at an angle of 45° above the iliac crest at the intersection with the axillary line. The skin fold is pulled away from the muscle and measured with the plicometer, taking a reading 4 seconds after the plicometer have been released.



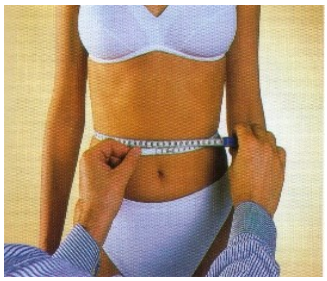
- The sum of the tricipital, bicipital, subscapular and supra-iliac folds is frequently used for the estimation of body fat mass.

sum of skin folds (mm)	Males (age)				Females (age)			
	17 – 29	30 - 39	40 - 49	50+	17 – 29	30 - 39	40 - 49	50+
15	4,8	–	–	–	10,5	–	–	–
20	8,1	12,2	12,2	12,6	14,1	17,0	19,8	21,4
25	10,5	14,2	15,0	15,6	16,8	19,4	22,2	24,0
30	12,9	16,2	17,7	18,6	19,5	21,8	24,5	26,6
35	14,7	17,7	19,6	20,8	21,5	23,7	26,4	28,5
40	16,4	19,2	21,4	22,9	23,4	25,5	28,2	30,3
45	17,7	20,4	23,0	24,7	25,0	26,9	29,6	31,9
50	19,0	21,5	24,6	26,5	26,5	28,2	31,0	33,4
55	20,1	22,5	25,9	27,9	27,8	29,4	32,1	34,6
60	21,2	23,5	27,1	29,2	29,1	30,6	33,2	35,7
65	22,2	24,3	28,2	30,4	30,2	31,6	34,1	36,7
70	23,1	25,1	29,3	31,6	31,2	32,5	35,0	37,7
75	24,0	25,9	30,3	32,7	32,2	33,4	35,9	38,6
80	24,8	26,6	31,2	33,8	33,1	34,3	36,7	39,6
85	25,5	27,2	32,1	34,8	34,0	35,1	37,5	40,4
90	26,2	27,8	33,0	35,8	34,8	35,8	38,3	41,2
95	26,9	28,4	33,7	36,6	35,6	36,5	39,0	41,9
100	27,6	29,0	34,4	37,4	36,4	37,2	39,7	42,6
105	28,2	29,6	35,1	38,2	37,1	37,9	40,4	43,3
110	28,8	30,1	35,8	39,0	37,8	38,6	41,0	43,9
115	29,4	30,6	36,4	39,7	38,4	39,1	41,5	44,5
120	30,0	31,1	37,0	40,4	39,0	39,6	42,0	45,1
125	30,5	31,5	37,6	41,1	39,6	40,1	42,5	45,7
130	31,0	31,9	38,2	41,8	40,2	40,6	43,0	46,2
135	31,5	32,3	38,7	42,4	40,8	41,1	43,5	46,7

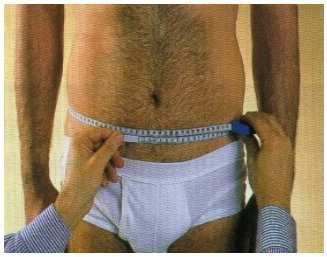
- The arm circumference is taken on the upper arm, measured at the mid-point between the tip of the shoulder and the tip of the elbow with a centimeter. The subject is in an upright position and flexes the elbow 90°. The operator finds on the subject's arm the mid-point between the olecranon and the acromium; this is the point to take the measurement, after the arm is relaxed on its side of the body.



- The waist circumference is taken at the narrowest point above the navel after a breath. The subject is in an upright position and his abdomen is relaxed. In some cases, when the subject has obesity, the circumference is taken between the last rib and the iliac crest.



- The hip circumference is taken at the widest point at the level of iliac crest after a breath. The subject is in an upright position and his abdomen is relaxed. His arms are relaxed on each side of the body.



- Bioelectrical impedance analysis (BIA) is a commonly used method for estimating body composition. The subject lying supine on a flat non-conductive surface with arms relaxed on each side of the body. The operator puts two injector electrodes on the dorsal side of hands and feet at the distal ends of metacarpals and metatarsal, respectively, and two electrodes placed on the dorsal surfaces of wrists and ankles. Then the operator proceeds to the recording of data, usually already transformed into data of fat mass, cell mass, body water content, etc. The subject should be on an empty stomach. This test must be conducted with standardized conditions, after urination, at a comfortable temperature.

SECTION 2.2 ROLE OF THE FOOD COMPONENTS IN THE ORGANISM AND FOOD FUNCTIONALITY IN THE ORGANISM

Activity 1

The gut microbiota: – mind map and group discussion

To proceed with this activity, it is necessary that students have already dealt with the online materials of this sub-module (i.e., concerning with "gut microbiota" and "probiotics & prebiotics". In fact, this class activity is just a way to check and "structure" those acquired notions, as it requires students to recall, expose and organize them under a graphical and visually shared form.

The teacher invites all the students to participate to build up a schematic mind map of the effects and beneficial functions of gut microbes on our physiology. The teacher draws the scheme on the blackboard leaving a series of empty boxes all-around and close to this central sentence "effects and benefits from gut microbiota". Students are then encouraged to fill in the boxes, indicating the actions exerted by the gut microbial community (especially in relation to nutritional physiology). Benefits should be highlighted.

In the same area of the blackboard and, possibly, linking it by arrows to the corresponding gut microbiota activity / benefit, students should indicate which health problem could derive from or has been associated to an improper gut microbiota functionality (i.e. dysbiosis). If students fail to remember, then they could consult, together with the tutor, the relative online materials.

When this mind map is sufficiently populated, in another area of the blackboard, students are invited to reach the teacher and write down a list of factors that are known to influence type, composition and activity of our gut microbiota. Factors that can be modulated by our own actions and thus can depend on our habits should be highlighted. E.g. some healthy practices associated to our everyday life that can contribute to improve gut microbe's functionality. Students should try to briefly explain why and how such factor/habit concurs to shape gut microbiota. Practical examples, pointing to every-day life are much welcome.

As a general rule, whenever specific and/or technical terms arise (e.g. probiotics, prebiotics, SCFA, etc,) students are invited to provide, in simple words, a definition for them. A further discussion can be stimulated and can take the cue from how and in which context the students have heard about these technical terms in their every-day life (e.g. commercials, TV, drugs and chemist shop) as well as in their professional environment/settings. (For instance, does the definition provided by the course correspond to that perceived through commercials, TV and common opinion?)

Activity 2

Role of hydration in nutrition

The importance of water

About three quarters of your body are made of water and our body can afford weeks without food, but only few days without any water. The functions of water in our body are: moistening tissues in the mouth, nose, and eyes, regulating body temperature, lubricating joints, removing toxins and waste products, protecting the vital organs, facilitating nutrients' delivering, preventing constipation.

Alternative from drinking, sources of water are also many foods either fresh or pre-cooked such as Vegetables (lettuce, cucumber, tomato, sugar snap peas, and celery) fruits (oranges, pineapples, strawberries) or broth-based soups, milk, and juices. It should be kept in mind that whole fruit or vegetable should be preferred over a juice because: juice contains much less fibers and more sugars (more caloric!)

How much water should drink? Guideline indicates that 8 cups of water should be consumed during the day; However, this amount should be increased if: You spend more time outdoor in hot weather, you work out, you are pregnant or breastfeeding or you are convalescent

How do I know if I need to drink? If you are thirsty, of course, if you feel dry mouth, eyes, throat or nose, and chapped lips, if your urine are dark yellow or brown colors instead of pale yellow color.

How can I drink more? Drink a glass of water before each meal or when you are waiting for your coffee, keep a bottle of water at your desk, every time you send or receive an email, take a sip of water, train yourself to have water at certain times.

What happens if you are dehydrated? Unfortunately, the sense of thirst that prompts us to drink can lag behind the body's actual need. Drinking alcoholic solution, even beer, without extra water will accelerate the dehydration process, thus, you should prefer water or electrolyte solution. **Remember**: if you are feeling thirsty, the dehydration process is already on!

Dehydration is a process:

- your fluid level is less than 5% below normal you can feel: thirsty as well as dry, flushed skin, a lack of saliva, a loss of appetite, fatigue, lightheadedness, weakness, and chills

- your fluid level drops about 5% below normal you can feel: muscle cramps, nausea, vomiting and tingling limbs, body temperature, breathing rate and pulse can increase, you may be unable to sweat or produce tears, and you may experience extreme fatigue and muscle cramping

- your fluid level drops about 10% below normal: muscles may spasm painfully, seizure can occur, it will be very hard to walk, think, or communicate, skin will become very dry and prune-like, blood pressure will drop, and pulse will race. **YOU NEED MEDICAL HELP.**

Pay attention to not get confused. **Sport drinks** are designed to provide one greater hydration than water. **Energy drinks** provide a higher carbohydrate load than recommended for an active population causing the slowing down the speed at which the fluids are absorbed into the bloodstream, thus producing a marked diuretic effect, natriuresis and a thermogenic effect. Furthermore, **energy drinks** contain high level of caffeine and other psychostimulants.

Sugars and sweeteners, proteins and amino acids, soluble and insoluble fibers

- **SUGARS**

The sweet-tasting mono- and di-saccharides, including glucose, fructose and sucrose, are ubiquitous and naturally present in fruit and vegetables. Recent evaluations commissioned by the WHO have concluded that limiting the amount of sugar added to foods and decreasing the intake of sugar sweetened beverages (which are a major source of added sugars) would be beneficial in promoting public health, particularly with regard to reducing the risk of dental caries, type 2 diabetes and cardiovascular disease (recommendation: "*adults and children reduce their daily intake of free sugars to less than 10% of their total energy intake. A further reduction to below 5% or roughly 25 g (6 teaspoons) per day would provide additional health benefits" WHO., 2015*).

The idea of a low-calorie diet (for reasons of overweight, obesity or diabetes) pushes the consumer to use synthetic sugars as a substitute for sugar, which, besides the strong sweetening capacity, are generally reduced or reduced no energy power.

At the same time and for the same reason there is a tendency to take low-calorie foods, such as those defined as "reduced energy value" or "without added sugar", in which there is partial or total substitution of sugars with sweeteners synthetic.

However, these products defined as low-calorie because they contain less sugar or even less fat, cannot be defined diet because the reduced energy content does not justify the restriction of consumption to a small part of the population, being a common requirement for all that of the control of the alimentary caloric intake, for an optimal healthy state.

- **SWEETENERS**

Sweeteners are substances used to impart a sweet taste to food and drink, or for extemporaneous sweetening, with the ability to ensure or not a caloric intake to the body, as a result of their intake. They are divided into: natural (sucrose, fructose, glucose, maltose, lactose, polyalcohols such as xylitol, sorbitol, etc.), with a caloric value (4 Kcal / g or 2 Kcal / g for

polyalcohols) and synthetic (saccharin, acesulfame, cyclamate, aspartame, neohesperidina), almost without energy power.

- **Oligosaccharide supplements**

They are generally proposed to sportsmen to give energy before the athletic tests or after the effort. Sugars, particularly sucrose, would be preferable to common sugars because they did not immediately raise the glycemic peak. In some subjects, either drinks with fructose or those containing maltodextrin can cause nausea, gastrointestinal and hepatic problems. It is therefore good to test them during training to plan the doses and the methods of recruitment during the competition. However, it should be kept in mind that all the carbohydrates taken in excess are converted into fat, so it would be useless to take maltodextrin if the physical activity was not balanced with the calories of the diet.

- **Natural sweeteners-STEVIA**

Stevia is a small perennial plant native to South America. It belongs to the family of Asteraceae or Compositae, has a high sweetening power, it seems to be 300 times higher than with absence of calories and glycemic impact. Its active ingredients are stevioside, dulcoside A, rebaudioside A and rebaudioside C. The daily intake limit of 4 mg / kg. E960 which identifies steviotic glycosides.

- **PROTEINS AND AMINOACIDS**

Animal proteins, large molecules with molecular weights ranging from 1000 to over 1 000 000 Da, can be divided into two kinds: **fibrous** and **globular**. They can be broken down by hydrolysis into simple units – the amino acids.

Proteins have many functions such as:

- *Growth and maintenance*: part of skin, tendons, membranes, muscles, organs and bones and they support the growth and repair of body tissues.
- *Enzymes:* facilitating chemical reactions.
- *Hormones*: regulating body processes.
- *Antibodies*: protecting the body against diseases.
- *Fluid and electrolyte balance*: helping to maintain the fluid volume and the composition of the body fluids.
- *Acid-base balance*: helping in maintaining the acid-base balance of body fluids by acting as buffers.
- *Transportation:* Proteins transporting substances, such as lipids, vitamins, minerals and oxygen around the body.
- *Energy:* Proteins provide some fuel for the body's energy needs.

Every species of animal has its characteristic proteins. It is the sequence of amino acids in proteins that gives each species its specific immunological characters and uniqueness. There are

20 amino acids found in biological materials. Essential (provided only by diet) aminoacids are isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, valine.

The DRI (Dietary Reference Intake) is 0.8 grams of protein per kilogram of body weight, or 0.36 grams per pound (56 grams per day for the average sedentary man and 46 grams per day for the average sedentary woman).

The use of proteins and aminoacids as food supplements is becoming very widespread nowadays. However, the safe use of protein or amino acid supplements is still discussed, due to the risk of renal damage, if not for an increase in mortality in general, especially if protein supplementation is accompanied by a low intake of carbohydrates in the long term.

- **FIBERS**

In general, fiber supplements are taken by people, often elderly, who wish to stimulate intestinal function due to recurrent constipation. However, a current misuse of products based on polysaccharides, assimilated with the fiber, is associated with their use for slimming purposes or to reduce the absorption of sugars and fats

Fibers can be distinguished in soluble or insoluble. The **hydro-soluble fibers**, such as pectins, gum, mucilage, some hemicellulose, glucomannan, chitosan, are made of polysaccharides of vegetable or animal origin capable of forming real gels with water. They are often used to give satiety and control nutrient intake. The **insoluble fibers** are those purely vegetable, such as cellulose, hemicellulose and lignin, which due to their "rigid" structure tend to absorb water, swelling without however changing the chemical-physical state. They should be avoided in patients suffering from diverticulosis or irritable bowel.

Recommendation: in order to avoid the worsening of constipation, it is generally important to keep in mind the advice to take **at least 2-2.5 liters of liquids a day!**

Furthermore, a rather dreaded adverse effect is the drastic reduction of the assimilation of important micronutrients such as vitamins and minerals.

Although rare, it would be advisable to choose different types of fiber if there is any risk of deficiencies, for example during pregnancy

Wheat bran and other cereal at risk could bring a percentage of gluten absolutely contraindicated in the case of celiac disease.

SECTION 2.3 SHAPING GOOD HABITS FOR HEALTHY EATING

Activity 1

basics of food safety

Use by and best before

- **Use by date is about safety**
  Foods can be eaten (and most can be frozen) up until the use by date, but not after. You will see use by dates on food that goes off quickly, such as meat products or ready-prepared salads. For the use by to be a valid guide, you must carefully follow storage instructions.
- **Best before date is about quality**
  Best before date is about quality and not safety. The food will be safe to eat after this date but may not be at its best. Its flavor and texture might not be as good. The best before dates appear on a wide range of frozen, dried, tinned and other foods. The best before date will only be accurate if the food is stored according to the instructions on the label.

Watch this short video on the web:
https://www.food.gov.uk/science/microbiology/use-by-and-best-before-dates

Questions

- ✓ Can harmful microorganisms affect food without being noticeable (smell etc.)?
- ✓ Why the cold barrier of 5 °C is considered safe?
- ✓ Can quality be lowered by microorganisms?
- ✓ Why freezing is a «pause» and not an «erase» button?

Can harmful microorganisms affect food without being noticeable (smell etc.)?

- Pathogenic microorganisms on food can develope and produce pigments, gas, loss of texture, off odors and flavour
- Blue mozzarella: pigmentation caused by *Pseudomonas fluorescence* that produces 2 pigments, pyocyanin and pyoverdin
- Production of pigmented slime on poultry meat by *Brochothrix thermosphacta*

- Bloated yogurt and gorgonzola cheese: production of gas by yeasts, coliforms, eterofermentative lactic acid bacteria
- Sometimes they are «silent and unnoticed» like *Clostridium botulinum*
- Bacterial toxin can survive the bacteria itself after food processing!
- Example: *Staphylococcus aureus* thermostable toxins

Why the cold barrier of 5 °C is considered safe?

- Most of the pathogenic microorganisms are mesophilic
- Some of them can multiply or produce toxins even at low temperature

Can quality be lowered by microorganisms?

- Spoilage microorganisms can compromise food quality (without compromising the safety)
- Enzymatic action, production of off-odours and flavours, texture change
- Not harmful for the health but for the food quality

Why freezing is a «pause» and not an «erase» button?

- Freezing will NOT render an unsafe food safe!
- Water subtracted in the form of ice
- Biochemical reactions are stopped
- Partial damage of cells by ice forming

Foods that don't have and don't need a "use by" expiration date

Fresh fruit and vegetables

- They are fresh by definition
- Average shelf life 15 days
- Must be not cut or peeled
- Must be washed before consumption
- Important exception: sprouts!!! (require a date of minimum durability)

Wine and <10% alcohol beverages

- No pathogenic bacteria are able to tolerate ethanol levels above 5%

Baker and pastry cooks

- Normally consumed within 24 hours!
- Their quality attributes lower faster than any potential microbial contamination
- Not applicable to packaged products with longer shelf-life

Vinegar

- Protected by the very low pH, both from pathogens and spoilage microorganisms

Salt and sugar

- Single ingredient products
- Dry state (crystals)
- Natural preservative of foods

- Only excess moisture can cause problems
- That doesn't mean there aren't bacteria in it!!!

Confectionery and Chewing products

- Protected by very low activity water (Aw)

What happens after you open the packaging?

- Producers guarantee quality and safety of intact packaging
- After the opening the safety and quality issues dramatically changes and consumer must be aware of it
    - Pasteurized juice (see table below)
    - Meat products (Mandatory if previously frozen facultative to advise for cooking procedures)
    - Dough for bakery products (must be used in few days and stored in the fridge)
- 1-10 days after opening to avoid safety and quality issues

Examples of pasteurized juice durability before and after opened

(Unopened)	Pantry	Refrigerator
	Past Printed Date	Past Printed Date
Fresh Apple Cider lasts for	--	7-10 Days
Bottled Apple Juice lasts for	2-3 Months	2-3 Months
Canned Apple Juice lasts for	6-9 Months	6-9 Months
Bottled Grape Juice lasts for	2-3 Months	2-3 Months
Orange Juice lasts for	--	1-2 Weeks
Cranberry Juice Cocktail lasts for	6-9 Months	6-9 Months
Apple juice boxes last for	2-3 Months	2-3 Months
Capri Sun Juice Boxes last for	6-9 Months	6-9 Months
Minute Maid Juice Boxes last for	2-3 Months	2-3 Months
(Opened)	Refrigerator	Freezer
Fresh Squeezed Citrus Juice lasts for	2-3 Days	--
Treetop Apple Juice lasts for	7-10 Days	--
Orange Juice lasts for	5-7 Days	--
Grapefruit Juice lasts for	5-7 Days	--
Mango Juice lasts for	5-7 Days	--
Guava Juice lasts for	5-7 Days	--
Fruit Juice Concentrate lasts for	5-10 Days	6-9 Months
Minute Maid Juice Boxes last for	2-3 Days	--
Capri Sun juice Boxes last for	5-7 Days	--

video and quiz on line for workshop with student

Students, individually or grouped, will attempt to one of the following on line quiz about food safety:

- http://www.who.int/features/qa/food-safety/quiz/en/
- https://www.youtube.com/watch?v=ONkKy68HEIM
- https://www.mysafetysign.com/xp/quiz.aspx?eqs=ez6jgi93LlkbHxrqRJmUcg%3d%3d
- https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/safe-food-handling/food-safety-quiz/ct_index
- http://www.abc.net.au/news/health/2017-11-18/food-safety-quiz/9139702
- https://www.highspeedtraining.co.uk/hub/level-3-food-hygiene-quiz/

at the end of the quiz the teacher will discuss with the class about the results obtained by each student/group.

Class workgroup

- Prepare food labels from different products on the market, containing at least ingredients list, storage information, food preparation advice;
- Divide your class in groups of 3-4 students and give one food to each group
- Give students 15 minutes to fill the following checklist

  ✓ How long can you store the product?
  ✓ What temperature is needed for storage?
  ✓ How can be stored after opening
  ✓ How can be stored after cooking?
  ✓ is the product safe for any consumer or are there special limitations?

Activity 2

Practical evaluation of correctly and incorrectly prepared food labels;

WORKSHOP: Nutritional declaration on food labels (Activity leaded by the teacher)

Student's work consists on **invention, preparation and presentation** of a clear, flexible to most products' **nutrition declaration**.

- It should be simple and clear in understanding by most consumers, regardless of their education or age
- The idea must rely on 1169/2011 rules
- To fulfil above should follow the rules below:

REGULATION:

(EU) No 1169/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL Article 35 - Additional forms of expression and presentation

*In addition to the forms of expression (…) the energy value and the amount of nutrients (…) may be given by other forms of expression and/or presented using graphical forms or symbols in addition to words or numbers provided that the following requirements are met:

- ✓ they are based on sound and scientifically valid consumer research (…);
- ✓ (…) are the result of consultation with a (…) of stakeholder groups;
- ✓ (…) to facilitate consumer understanding (…) energy and nutrient content;
- ✓ (…) are supported by scientifically valid evidence (…) but understandable by the average consumer;
- ✓ in the case of other forms of expression, they are based either on the harmonized reference intakes set out in Annex XIII, or in their absence, on generally accepted scientific advice on intakes for energy or nutrients;
- ✓ they are objective and non-discriminatory;
- ✓ their application does not create obstacles to the free movement of goods.

NEEDS:

The European Union tends to accept a common, transparent, understandable, simple and non-discriminatory model of additional labelling of food products with nutritional value.

HELP:

Such a way of labeling the nutritional value would be a great facilitation for consumers who do not have professional knowledge in the field of:

- the effect of nutrients in the human body

- energy demand
- food composition

ADVANTAGES:

Clear and simple labeling can contribute to:

- easier understanding of the nutritional value of the products
- selection of ingredients in relation to the body's needs
- knowledge about the body's needs for certain nutrients
- raising consumer awareness of food composition

RESULTS:

….and this may shift into a reduction in the risk of many diet-related diseases and obesity….

ACTION:
participants are encouraged to propose additional labeling with nutritional value according to the tips below:

- It must be legible and clear
- it must be understandable to the average consumer
- it must be built based on scientific knowledge
- it must be not discriminatory (nutrients, types of food); applicable to all type of food

FINISH:
…and now evaluate the work of each other, finding:

- weak points
- strong points

…if this labelling proposal can be applied to all products? Is applicable for e.g. “ice creams”; “bread with corns”; “fresh fruit salad with sweet cream”; “chocolate” …

SECTION 2.4 INTERNATIONAL LAW FOR THE FIGHT AGAINST OBESITY AND THE PROMOTION OF HEALTHY LIFESTYLES

Activity 1

Global Health and International Law

The following ones are the main issues to be explained:
"Global health is an area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide. Global health emphasizes transnational health issues, determinants, and solutions; involves many disciplines within and beyond the health sciences and promotes interdisciplinary collaboration; and is a synthesis of population based prevention with individual-level clinical care." (Koplan et al. 2009).

Substantive Sources

1) Universal Declaration of Human Rights 1948
Article 25: "Everyone has the has the right to a standard of right to a standard of right to a standard of right to a standard of right to a standard of right to a standard of right to a standard of living adequate for the health and well -being of being of being of himself and of his family".

2) International Covenant on Economic, Social and Cultural Rights 1966 Article 12:

"The "States Parties to the present Covenant recognize the right the right of everyone to the enjoyment of highest attainable standard of physical and mental health."

Obligations

1. right to health imposes on States three categories of obligations:
2. obligations to respect;
3. obligations to protect;
4. and obligations to fulfil the right to health.

These include:

- ✓ preventing discrimination in access or delivery of care
- ✓ refraining from limitations to contraceptive access or family planning
- ✓ reducing environmental pollution
- ✓ restricting coercive and/or harmful culturally-based medical practices.

Human rights-based approach to health imposes States:

To provide strategies and solutions to help/urge/force political entities to help people enjoy the right to health.
To develop a human rights-based health policy development.
Institutional profiles:

International Organizations aim at:

- Negotiation, adoption, and monitoring of normative rules among countries.
- Institutions create norms, mobilize resources, guide multiple stakeholders to work collaboratively, and ensure accountability for results.

1) World Health Organization (WHO) -most important institution for negotiating international health agreements.

WHO has the authority to negotiate and monitor normative instruments —both treaties and soft law, such as recommendations.

World Health Assembly, supreme decision-making body for WHO.

- WHO has three primary ways of creating “laws” or norms:
    - WHA formal regulations
    - WHO action plans (endorsed by WHA)
    - Treaty-making powers

No authority to enforce compliance: it relies on State implementation through domestic law and policy.

2) World Trade Organization and Global Health

- Trade affects health in multiple ways, both directly and indirectly.
- Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) is an international
- Agreement administered by the World Trade Organization (1994)
- TRIPS require member countries to protect and enforce intellectual property rights to promote
- Technological innovation and transfer and dissemination of technology.
- HIV crisis and generic ARTs.

Activity 2

Economic and policy framework of obesity and promotion of the healthy lifestyles

Obesity and nutrition in general are connected to our choices and solutions. While there could be a general level of awareness about food and ingredients that could actually contribute to weight gain, actual actions in everyday life could not always apply the rules given by such awareness.

The activity consists in a brain storming game in which calories need to be counted as well as money spending.

Please, answer to each of these questions:

- You have a very busy schedule, what would you cook for lunch?
    - Every participant should declare his recipe and give a general count of calories and spending.
- You just have 3 € for your dinner. What would you buy from the grocery?
    - Every participant should declare his purchase and give a general count of calories and spending.
- How much of your moving/commuting could actually be done by foot/bicycle, etc.?
    - Every participant should give a general count of calories and saving.

Answers with brief description, calories and money spending/savings should be reported on the screen/blackboard.

The participants are invited, with the help of the instructor, to comment the results.

Most likely, spending and food choices in rush situations are not always good for diet, while they could be good for money.

Often, obesity and income are inversely related. The grocery purchase example could prove such a statement.

A last brainstorming of the session is about policy. Each participant should propose a policy to reduce obesity and discuss it with the rest of the audience.

In particular the discussion should consider the following statements:

a) The policy guarantees free trade?
b) The policy guaranties equality among people?
c) The policy impacts free choice of people?
d) The policy is expensive to apply on citizen?

After the brainstorming session, the instructor concludes with some final remarks highlighting the importance of information policies over the others (fat tax and so on).

MODULE 3 – Prevention strategies

GENERAL GOAL(S):	**Mindful eating group therapy, Training skills on young people's overweight**
OBJECTIVES:	By the end of the module, participants will be able to: • Know guidelines of mindful eating • Recognize the symptoms of emotional eating • Use and practice mindful eating principles in everyday life • Give a session of mindful eating meditation • Teach to personally define problems of overweight • Teach to personally define reasons and consequences of overweight • Teach to personally find solutions to avoid overweight • Design Mind Map – tree "Healthy Youth"
METHODS	Meditation, role play, case study, group discussion, guidelines of self-care, Brainstorming, Discussion, Mind Map
DURATION:	**4 hours**
RESOURCES NEEDED:	Paper, writing board, chocolate, bread, multimedia, coloured paper (brown, green, grey and gold), markers.
SECTION 3.1	**USE AND PRACTICE MINDFUL EATING PRINCIPLES IN EVERYDAY LIFE**
ORDER OF ACTIVITIES:	**Activity 1 (30 min.)** **Emotional eating** • Divide members in to groups (4 - 6 persons in each). Give to each group questionnaire and ask them to fill it and discus about it in group. ✓ *Questionnaire about eating habits* ✓ *Do you eat more (than usual) when you're feeling stressed?* ✓ *Do you eat when you're not hungry?* ✓ *Do you eat to feel better (to calm yourself when you're, anxious, sad, mad, bored)?* ✓ *Do you reward yourself with food?* ✓ *Does food make you feel safe?* ✓ *Do you feel powerless or out of control around food?*
	Activity 2 (30 min.) • All group members are sitting around. All members receive a piece of chocolate. Closes their eyes and listens to the lecturer's (20 min) • The main goal of meditation is to make participants aware of the principles of nutrition, discuss it with the participants of the group (10 min)
	Activity 3 (30 min.) **Principles of mindful eating** All group members are sitting around. Listens to the lecturer about principles of mindful eating (**20 min**): • Allowing yourself to become aware of the positive and nurturing opportunities that are available through food selection and preparation by respecting your own inner wisdom • Using all your senses in choosing to eat food that is both satisfying to you and nourishing to your body • Acknowledging responses to food (likes, dislikes or neutral) without judgment • Becoming aware of physical hunger and satiety cues to guide your decisions to begin and end eating

	• discusses and give questions (**10 min**)
	Activity 4 (1 hour) Divide members in to groups (4 - 6 persons in each). Give to each group a story about a person with emotional eating disorder (10 min) Members have to plan (steps) how to help x person, using the material from the lesson, guidelines (30 min): • Food quality • Eating rhythm • Emotional eating • Excessive snoring • Eating something in action Each group will present plans to other groups (20 min) Trainer asks participants to complete the test (10 min): What are strategies and activities that fit to you best?
SECTION 3.2	**GROUP COUNSELLING AND THERAPY - OVERWEIGHT PROBLEM IN YOUNG PEOPLE (2 hours)**
ORDER OF ACTIVITIES:	**Activity 1 (10 min)** • BRAINSTORMING about overweight problems **Activity 2: (40 min)** • GROUP WORK discussion about obesity reasons and consequences. **Activity3: (70 min)** • GROUP DISCUSISON and mind map about solutions to overweight problems Trainer will propose some self-evaluation questions:. Why are overweight problems important to know for you? Do you need to change your personal behaviour to avoid overweight?
KEEPING LEARNERS SAFE:	• Ensure enough resources and materials for everyone • Ensure large enough room to allow mobility for all learners.
EVALUATION OF THE MODULE:	Test and self-evaluation questions
REFERENCES	https://www.cdc.gov/obesity/childhood/causes.html https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4408699/ Project *Correct it* material Jon Kabat-Zinn, (2007) Mindfulness for Beginners Free mindful Eating Meditations: https://www.thecenterformindfuleating.org/FREE-Meditations Ruth, Baer, et all (), University of Kentuck Mindfulness-Based Cognitive (2007) *Therapy Applied to Binge Eating: A Case Study*

SECTION 3.1 MINDFUL EATING GROUP THERAPY

INTRODUCTION: What is Mindful Eating?

Mindful eating involves paying full attention to the experience of eating and drinking, both inside and outside the body. We pay attention to the colours, smells, textures, flavours, temperatures, and even the sounds (crunch!) of our food. We pay attention to the experience of the body. Where in the body do, we feel hunger? Where do we feel satisfaction? What does half-full feel like, or three quarters full?

We also pay attention to the mind. While avoiding judgement or criticism, we watch when the mind gets distracted, pulling away from full attention to what we are eating or drinking. We watch the impulses that arise after we've taken a few sips or bites: to grab a book, to turn on the TV, to call someone on our cell phone, or to do web search on some interesting subject. We notice the impulse and return to just eating.

We notice how eating affects our mood and how our emotions like anxiety influence our eating. Gradually we regain the sense of ease and freedom with eating that we had in childhood. It is our natural birth right.

The old habits of eating and not paying attention are not easy to change. Don't try to make drastic changes. Lasting change takes time, and is built on many small changes. We start simply.

Activity 1

Emotional eating

Aim - Recognize the symptoms of emotional eating
Proceeds:
Divide members in to groups (4 - 6 persons in each). Give to each group questionnaire and ask them to fill it and discus about it in group.

Questionnaire about eating habits

- *Do you eat more (than usual) when you're feeling stressed?*
- *Do you eat when you're not hungry?*
- *Do you eat to feel better (to calm yourself when you're, anxious, sad, mad, bored)?*
- *Do you reward yourself with food?*
- *Does food make you feel safe?*
- *Do you feel powerless or out of control around food?*

Activity 2

Meditation session

Aim – To feel the benefits of mindful eating
Proceeds:
All group members are sitting around. All members receive by piece of chocolate. Closes their eyes and listens to the lecturer's.

Activity 3

Principles of mindful eating

Aim – Introduce with the basic principles of mindful eating
Proceeds:
All group members are sitting around. Listens to the lecturer, discusses and give a question.
Mindful Eating is:

- **Allowing yourself to become aware of the positive and nurturing opportunities that are available through food selection and preparation by respecting your own inner wisdom (***Bring all your senses to the meal. When you're cooking, serving, and eating your food, be attentive to colour, texture, aroma, and even the sounds different foods make as you prepare them. As you chew your food, try identifying all the ingredients, especially seasonings.)*
- **Using all your senses in choosing to eat food that is both satisfying to you and nourishing to your body**. *(Begin with your shopping list. Consider the health value of every item you add to your list and stick to it to avoid impulse buying when you're shopping. Fill most of your cart in the produce section and avoid the centre aisles—which are heavy with processed food (chips and candy).)*
- **Acknowledging responses to food (likes, dislikes or neutral) without judgment**. *(Appreciate your food. Pause for a minute or two before you begin eating to contemplate everything and everyone it took to bring the meal to your table. Silently express your gratitude for the opportunity to enjoy delicious food and the companions you're enjoying it with).*
- **Becoming aware of physical hunger and satiety cues to guide your decisions to begin and end eating (***Chew thoroughly. Chew well until you can taste the essence of the food. (You may have to chew each mouthful 20 to 40 times, depending on the food.) You may be surprised at all the flavours that are released.)*

Activity 4

STOP Emotional eating

Aim – To create a plan to refrain from emotional eating

Proceeds:

Divide members in to groups (4 - 6 persons in each). Give to each group a story about a person with emotional eating disorder. Members have to do a plan (steps) how to help that person, using the material from the lesson.

Sometimes during the day, it takes about a few minutes of mindfulness to improve your well-being, tighten your stress, make yourself more resistant to daily stress and better manage your negative emotions…

Additional reading:

1. Mindful Eating: A Guide to Rediscovering a Healthy and Joyful Relationship with Food, by Jan Chozen Bays, with an introduction by Jon Kabat-Zinn, released February 3, 2009 by Shambhala Publishing. (Includes a CD of 14 mindful eating exercises and meditations.)

2. Mindless Eating: Why We Eat More Than We Think, by Brian Wansink, published 2006 by Bantam Books. (A very funny look at very interesting research about how we all eat mindlessly.)

SECTION 3. 2 - GROUP COUNSELLING AND THERAPY - OVERWEIGHT PROBLEM IN YOUNG PEOPLE

Activity 1

Trainer asks participants to brainstorm:
what problems can overweight young people face?

Activity2

Trainer explains young people's obesity reasons and consequences.
Trainer asks participants divided into two groups to discuss behaviour (group one) and consequences (group 2) of young people with examples/cases.
Participants give 3-4 main cases as a result of the discussion.

Activity 3

Trainer gives background on solutions for young people's obesity.
Trainer asks participants divided into smaller groups (3-5) to discuss solutions to young people's overweight and then provide their ideas and collect them using mind-mapping method:
Brown (tree trunk) - what is good for young people?
Green (leaves) – what are the new ideas based on needs to prevent overweight? what could be done differently?
Gray (leaves) – what are the barriers which need to be "regreened"?
Gold (fruit) – what are the gems?
Trainees need to use coloured paper to make up a tree of "Healthy Youth", trainer guides participants during the activity.

MODULE 4 – Physical activity

GENERAL GOAL:	**To equip the Correct IT professionals (teachers) with the necessary knowledge, skills and competences to better introduce training in the concept of Obesity prevention and healthy lifestyle.**
OBJECTIVES	By the end of the module, participants will be able to: • Refer to the International guidelines for the promotion of physical activity • Give a definition of physical activity, physical exercise and sedentary behavior By the end of the module, participants will be able to connect **physical activity** and: • Excess calorie expenditure • Reduction of body weight • Effects on blood pressure • The lipoprotein profile, C-reactive protein and biological markers of coronary disease; • Insulin sensitivity & efficiency • Positive effects on mental health
METHODS	Face to face lecturing, group activity in the classroom
DURATION:	**4 hours**
RESOURCES NEEDED:	Laptop, projector, Blackboard or whiteboard with pencils
SECTION 4.1	**Understanding connection between physical activity and healthy lifestyle (2 hours)**
ORDER OF ACTIVITIES:	Activity 1 - Brief presentation **(10 min.)** Activity 2 – Lecture - PPT presentation: **(30 min.)** Activity 3 – Watching video: **(10 min.)** Activity 4 - Class workgroup **(40 min.)** Activity 5 - Brainstorming game **(30 min.)**
SECTION 4.2	**Advantages of physical activity (2 hours)**
ORDER OF ACTIVITIES:	Activity 1 – Short Presentation (**10 min**.). Activity 2 – Lecture The trainer will give the theoretical presentation. Participants can ask clarifying questions **(60 min.).** Activity 3 – Discussion Group Trainer starts a short discussion about the advantages of physical activity **(20 min.)**. Activity 4 - Class workgroup **(30 min.).**
KEEPING LEARNERS SAFE:	• Ensure that access to the activity available for all; • Ensure room large enough to allow some physical exercises for all learners; Wear sports clothing and comfortable shoes
EVALUATION OF THE MODULE:	Teacher evaluation of student's activity Group discussion
REFERENCES	- Correct IT- Intellectual output 2. Obesity prevention and healthy lifestyle curricula - Correct IT- Intellectual output 3. ICT materials for the online blended-learning Obesity prevention and healthy lifestyle skills - *Durstine, J., Gordon, B. Wang, Z. & Luo, X. (2013). Chronic disease and the link to physical activity. Journal of Sport and Health Science, 2, 3-11. Retrieved form https://www.sciencedirect.com/science/article/pii/S2095254612000701* - *Fonseca, D., Sala, P., Ferreira, B., Reis, J., Torrinhas, R., Bendavid, I. & Waitzberg, D. (2018). Body weight control and energy expenditure. Clinical Nutrition Experimental, 20, 55-59. Retrieved from*

https://www.sciencedirect.com/science/article/pii/S2352939318300083

- http://apps.who.int/iris/bitstream/handle/10665/272721/WHO-NMH-PND-18.5-eng.pdf
- https://www.dgs.pt/programa-nacional-para-a-promocao-da-atvidade-fisica/materiais-de-divulgacao/recursos.aspx
- https://www.sedentarybehaviour.org/sbrn-terminology-consensus-project/
- https://www.who.int/dietphysicalactivity/factsheet_recommendations/en/
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- *U.S. Department of Health and Human Services (2018). Physical Activity Guidelines for Americans (2nd edition). [Washington, DC]: U.S. Department of Health and Human Services. Retrieved form https://health.gov/paguidelines/second-edition/pdf/Physical_Activity_Guidelines_2nd_edition.pdf*

SECTION 4. 1 UNDERSTANDING CONNECTION BETWEEN PHYSICAL ACTIVITY AND HEALTHY LIFESTYLE

Activity 1 – short presentation of the section

Activity 2 – Lecture (Presentation)

Understanding connection between physical activity and healthy lifestyle

Physical inactivity is regarded as one of the main risk factors for non-communicable diseases. Taking into account the importance of this public health issue, the World Health Organization (WHO) recommends the adoption of strategic tools within this sector, which make it easier to organize services, train professionals and allocate resources for the promotion of physical activity.

WHO also recommends the creation of conditions for the presence of environments that promote physical activity in the places where people work and live and for people to recognize the advantages of having a more active lifestyle, thus decreasing sedentary behavior.

Physical Activity vs. Exercise: What's the Difference?

- Physical activity is any bodily movement, produced by the skeletal muscle that results in a small caloric rise above rest, for example, we can classify as a physical activity a short walk to the bus stop or to the bakery, that walk that we do for ourselves from one place to another.
- Physical exercise is a type of activity that consists of programmed, structured and systematically repetitive body movements that aim to improve physical conditioning.

Recommended levels of physical activity for children aged 5 - 17 years

For children and young people, physical activity includes play, games, sports, transportation, chores, recreation, physical education, or planned exercise, in the context of family, school, and community activities.

In order to improve cardiorespiratory and muscular fitness, bone health, and cardiovascular and metabolic health biomarkers:

- Children and youth aged 5–17 should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily.
- Amounts of physical activity greater than 60 minutes provide additional health benefits.

- Most of the daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week.

Recommended levels of physical activity for adults aged 18 - 64 years

In adults aged 18–64, physical activity includes leisure time physical activity (for example: walking, dancing, gardening, hiking, swimming), transportation (e.g. walking or cycling), occupational (i.e. work), household chores, play, games, sports or planned exercise, in the context of daily, family, and community activities.

- Adults aged 18–64 should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity.
- Aerobic activity should be performed in bouts of at least 10 minutes duration
- For additional health benefits, adults should increase their moderate-intensity aerobic physical activity to 300 minutes per week, or engage in 150 minutes of vigorous-intensity aerobic physical activity per week, or an equivalent combination of moderate- and vigorous-intensity activity.
- Muscle-strengthening activities should be done involving major muscle groups on 2 or more days a week.

Recommended levels of physical activity for adults aged 65 and above

In adults aged 65 years and above, physical activity includes leisure time physical activity (for example: walking, dancing, gardening, hiking, swimming), transportation (e.g. walking or cycling), occupational (if the individual is still engaged in work), household chores, play, games, sports or planned exercise, in the context of daily, family, and community activities.

- Older adults should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity.
- Aerobic activity should be performed in bouts of at least 10 minutes duration.
- For additional health benefits, older adults should increase their moderate-intensity aerobic physical activity to 300 minutes per week, or engage in 150 minutes of vigorous-intensity aerobic physical activity per week, or an equivalent combination of moderate- and vigorous-intensity activity.

- Older adults, with poor mobility, should perform physical activity to enhance balance and prevent falls on 3 or more days per week.

When older adults cannot do the recommended amounts of physical activity due to health conditions, they should be as physically active as their abilities and conditions allow.

Sedentary behavior

- Sedentary behavior is any waking behavior characterized by an energy expenditure ≤1.5 metabolic equivalents (METs), while in a sitting, reclining or lying posture

Examples:

- **Infants (<1 year or pre-walking):** Lying awake in the bed with minimal movement; sitting in a baby chair/high chair/stroller/car seat with minimal movement; being carried/held/cuddled by someone
- **Toddlers and preschoolers (1-4 years):** Use of electronic devices (e.g., television, computer, tablet, phone) while sitting, reclining or lying; reading/drawing/painting while sitting; sitting in stroller; sitting in baby chair or couch while eating a meal; sitting in a bus, car or train.
- **Children and youth (5-17 years):** Use of electronic devices (e.g., television, computer, tablet, phone) while sitting, reclining or lying; reading/writing/drawing/painting while sitting; homework while sitting; sitting at school; sitting in a bus, car or train.
- **Adults (≥ 18 years):** Use of electronic devices (e.g., television, computer, tablet, phone) while sitting, reclining or lying; reading/writing/talking while sitting; sitting in a bus, car or train.

Physical Inactivity

- An insufficient physical activity level to meet present physical activity recommendations.

Examples:

- **Toddlers and preschoolers (1-4 years):** Not achieving 180 minutes of physical activity of any intensity per day.
- **Children and youth (5-17 years):** Not achieving 60 minutes of *moderate- to vigorous-intensity* physical activity per day.
- **Adults (≥ 18 years):** Not achieving 150 minutes of moderate-to-vigorous-intensity physical activity per week or 75 minutes of *vigorous-intensity* physical activity per week or an equivalent combination of moderate- and vigorous-intensity activity.

Activity 3

Watching video : https://www.youtube.com/watch?v=CKlSFlnmDcY

Activity 4

Class workgroup

- Divide your class in groups of 5 students
- Give students 15 minutes to discuss the following tasks

  - What's the difference between Physical Activity vs. Exercise?
  - They should give examples of physical activity according to the following age groups: 5-17….18-64…..+65

Activity 5

Brainstorming game

- *Each group should stage an activity (physical activity, physical exercise, sedentary behaviour) and other groups should guess what type of activity is.*

SECTION 4.2 ADVANTAGES OF PHYSICAL ACTIVITY

Step 1

Short Presentation of the section

Step 2

Lecture

The trainer will give the theoretical presentation. Participants can ask clarifying questions.

Regular physical activity is proven to help prevent and treat non-communicable diseases (NCDs) such as heart disease, stroke, diabetes and breast and colon cancer. It also helps prevent hypertension, overweight and obesity and can improve mental health, quality of life and well-being. Yet, much of the world is becoming less active. As countries develop economically, levels of inactivity increase. In some countries, these levels can be as high as 70%, due to changing transport patterns, increased use of technology, cultural values and urbanization.

ADVANTAGES:

The human body, as a consequence of regular physical activity, undergoes morphological and functional changes, which can prevent or delay the onset of certain diseases and improve our ability for physical effort.

There is now sufficient evidence to demonstrate that people who have a physically active can achieve a number of health benefits, including the following:

> Reducing the risk of cardiovascular disease;

> Prevention and / or delay in the development of hypertension, and greater control of blood pressure in individuals suffering from high blood pressure;

> Good cardiopulmonary functioning;

> Control of metabolic functions and low incidence of type 2 diabetes;

> Increased fat intake, which can help control weight and decrease the risk of obesity;

> Reducing the risk of incidence of some types of cancer, in particular breast cancers, breast cancer, prostate and colon;

> Increased bone mineralization at younger ages, contributing to the prevention of osteoporosis and fractures in more advanced ages;

> Better digestion and regulation of intestinal transit;

> Maintenance and improvement of muscle strength and endurance, resulting in improved functional to carry out day-to-day activities;

> Maintenance of motor functions, including force and balance

>Maintaining cognitive functions, and reducing the risk of depression and dementia;

> Decreased levels of stress and improved sleep quality;

> Improved self-image and self-esteem, and increased enthusiasm and optimism;

> Decrease in work absenteeism (sick leave);

> In older adults, less risk of falls and prevention, or retardation of chronic diseases associated with aging

Cardiovascular disease and blood pressure

Physical activity strongly reduces both the risk of dying from cardiovascular disease and the risk of developing cardiovascular disease, including heart attack, stroke, and heart failure. Regularly active adults have lower rates of heart disease and stroke and have lower blood pressure, better blood lipid profiles, and better physical fitness. Significant reductions in risk of cardiovascular disease occur at activity levels equivalent to 150 minutes a week of moderate-intensity physical activity. As with all-cause mortality, benefits begin with less than 150 minutes a week, and strong evidence shows that greater amounts of physical activity result in even further reductions in risk of cardiovascular disease.

Regular physical activity can greatly affect blood pressure, and effects can be immediate. People who have normal blood pressure benefit because the risk of developing hypertension is reduced. People who have hypertension also benefit because systolic and diastolic blood pressure are lowered.

Cardiovascular and Metabolic diseases

Cardiometabolic health is a term that encompasses cardiovascular diseases and metabolic diseases, such as type 2 diabetes. Cardiovascular disease and metabolic disease share a number of risk factors, and reducing risk of one can reduce risk for the other. *Cardiometabolic health* and weight status are also closely related issues and are often considered together.

Regular physical activity strongly reduces the risk of developing type 2 diabetes in people of all body sizes. Physical activity can have an additive benefit for reducing risk of type 2 diabetes because physical activity reduces the risk of excessive weight gain, an independent risk factor for type 2 diabetes.

Physical activity improves *cardiometabolic health* in children and adolescents, as well as in adults. Specifically, regular physical activity contributes to lower plasma triglycerides and insulin levels and may also play a role in improving high-density lipoprotein (HDL) cholesterol and blood pressure.

Energy expenditure and body weight

Body composition has great importance in the value of energy expenditure. Reduced energy expenditure plays an important role in the development of obesity by decreasing resting energy expenditure, energy activity, diet-induced thermogenesis, or a combination of all of these components. It thus contributes to positive energy balance and subsequent weight gain. Obesity, therefore, can be considered, among other aspects, the consequence of an energy imbalance; that is, energy intake greater than that spent in a certain period. In order to have stability of body weight and body composition it would be necessary for energy intake to correspond to energy expenditure.

Most of the benefits of physical activity have been studied with moderate- or vigorous-intensity aerobic activity. High-Intensity Interval Training (HIIT) may provide similar reductions in cardiovascular disease risk factors as those observed with continuous moderate-intensity physical activity. HIIT is a form of interval training that consists of alternating short periods of maximal-effort exercise with less intense recovery periods. This type of exercise can improve insulin sensitivity, blood pressure, and body composition in adults. Interestingly, adults with overweight or obesity and those at higher risk of cardiovascular disease and type 2 diabetes tend to have greater cardiovascular benefits when doing HIIT compared to normal-weight or healthy adults.

Physical activity and caloric intake both must be considered when trying to control body weight. Because of its role in energy balance, physical activity is a critical factor in determining whether a person can maintain a healthy body weight, lose excess body weight, or maintain successful weight loss.

Effects on mental health issues

Physical activity also lowers the risk of developing cognitive impairment, such as dementia, including Alzheimer's disease. These improvements from physical activity are present for people who have normal as well as impaired cognitive health, including conditions such as attention deficit hyperactivity disorder (ADHD), schizophrenia, multiple sclerosis, Parkinson's disease, and stroke.

Healthy older adults, even in the absence of dementia, often show evidence of cognitive decline, especially on measures of processing speed, memory, and executive function. Physical activity may be an effective approach for improving cognitive function in older adults.

Anxiety and anxiety disorders are the most prevalent mental disorders. Participating in moderate-to-vigorous physical activity over longer durations (weeks or months of regular physical activity) reduces symptoms of anxiety in adults and older adults.

Depression is one of the most common mental disorders, particularly in the United States and is a leading cause of disability for middle-aged adults. Engaging in regular physical activity reduces the risk of developing depression can improve many of the symptoms experienced by people with depression.

Step 3

Discussion Group: Trainer starts a short discussion about the advantages of physical activity.

Step 4

Class workgroup: Trainer split the group into 4 groups and distributes to participants sheets of paper corresponding to one step of the advantages of physical activity, according to the name of the group:

- G1 Cardiovascular disease and blood pressure
- G2 Cardiovascular and Metabolic diseases
- G3 Energy expenditure and body weight
- G4 Effects on mental health issues

- Inside each group learners read and explain to each other the advantages of physical activity

as many examples as possible.

MODULE 5 – Lifestyle and mental health

GENERAL GOAL(S):	***To equip the Correct IT professionals with the necessary knowledge, skills and competences to better introduce training in the concept of Obesity prevention and healthy lifestyle.***
OBJECTIVES:	By the end of the training, participants will be able to: • Teach about the causes and prevention strategies of stress • Run intervention projects on positive self-talk, building positive relationships • Understand how trends influence health related issues
METHODS:	Teacher talks, handouts, reflections
DURATION:	**4 hours**
RESOURCES NEEDED:	Handouts and pen for all 3 sections of this module
SECTION 5.1	**OPTIMISM & POSITIVE SELF-TALK (2 hours)**
ORDER OF ACTIVITIES:	**Activity 1: (10 min.)** • **Introduction:** Teacher briefly introduces the meaning of self-confidence
	Activity 2: (40 min). • Optimism & positive self-talk **brainstorming** (20 min.). • Teacher facilitates a brief, **whole-class discussion** on each group's list (10 min.) • Teacher facilitates a whole-class discussion on the notion of positive self-talk (10 min.).
	Activity 3 (60 min.) • Students individually complete the '**Making it happen' worksheet (**10 min.) • In small groups, students complete the '**Nothing ventured, nothing gained' worksheet** (20 min.) • Using the '**Being a "Yes" person' sheets**, the teacher facilitates a whole-class discussion (20 min.) • In pairs, students work out from their response on the 'Being a "Yes" person' sheet (10 min.)
	Activity 4 (10 min.) • Evaluation of Optimism & positive self-talk theme.
SECTION 5.2	**BUILDING HEALTHY RELATIONSHIPS 1 hour, 10 min.)**
ORDER OF ACTIVITIES:	**Activity 1: (10 min.)** • Introduction to healthy relationships
	Activity 2: (45 min.) • In groups perform the „matching activities" game (30 min.). • Individually do the „rate my relationship skills" task (15 min.).
	Activity 3: (15 min.) • Evaluation and reflection of the tasks usable for your teaching.

SECTION 5.3	STRESS AND CONSEQUENCES OF STRESS (50 min.)
	Activity 1: (10 min.) • Introduction to stress (5 min.) **Acrivity 2: (35 min.)** • Perform the stress test individually (10 min.). • Teacher talks about effects of stress 5 min.). • Students go in groups of 3 and discuss situations that make them experience stress (15 min.). • Do activity „coping with stress" (5 min.). **Activity 3: (10 min.)** • Evaluation and summing up.
KEEPING LEARNERS SAFE:	• Follow local HSEQ rules
EVALUATION OF THE MODULE:	• Tutor asks participants to complete the test/quiz
REFERENCES	*Clarke, C & Cooper, C. (2001). Psychosocial rehabilitation after disfiguring injury or disease: investigating the training needs of specialist nurses. Journal of Advanced Nursing Volume 34, Issue 1, April* *Dahl, O, Wickman, M & Wengstrøm, Y. (2012). Adapting to life after burn injury - Reflections on care, Journal of Burn Care & Research, 33, 5, 595–605.* *Konradsen, H., Kirkevold and, M. & Zoffmann, V. (2009). Surgical facial cancer treatment: the silencing of disfigurement in nurse–patient interactions, Journal of Advanced Nursing, 65, 11, 2409-2418.* *Moi, A.L. & Gjengedal, E. (2008). Life after burn injury: Striving for regained freedom, Qualitative Health Research, 18, 12, 1621-30.* *Persson M, Rumsey N, Spalding H, Partridge J.(2008). Bridging the gap between current care provision & the psychological standards of burn care: Staff perceptions of current psycho-social care provision and the way forward. Report for NHS* *Rumsey N, Clarke A, White P, Wyn-Williams M, Garlick W.J. (2004). Altered body image: appearance-related concerns of people with visible disfigurement. Adv Nurs 48(5):443-53.* *Amos A, Bostock Y. Young people, smoking and gender—a qualitative exploration. Health education research. 2007;22(6):770-81.* *Austin SB, Field AE, Wiecha J, Peterson KE, Gortmaker SL. T impact of a school-based obesity prevention trial on disordered weight-control behaviors in early adolescent girls. Archives of pediatrics & adolescent medicine. 2005;159(3):225-30.* *Yanover T, Thompson JK. Self-reported interference with academic functioning and eating disordered symptoms: associations with multiple dimensions of body image. Body image. 2008;5(3):326-8.* *Lovegrove E, Rumsey N. Ignoring it doesn't make it stop: adolescents, appearance, and bullying. The Cleft palatecraniofacial journal: official publication of the American Cleft Palate-Craniofacial Association. 2005;42(1):33-44.* *Neumark-Sztainer D, Wall M, Eisenberg ME, Story M, Hannan PJ. Overweight status and weight control behaviors in adolescents: longitudinal and secular trends from 1999 to 2004.Preventive medicine. 2006;43(1):52-9.*

SECTION 5.1: OPTIMISM AND POSITIVE SELF-TALK

Outcome: Apply positive self-talk as a means of developing self-confidence.

Rationale: An important strategy for success is to develop an understanding of the way that our attitudes and thoughts influence - for better or worse – our feelings and behavior.

When students learn to recognize the negative and irrational attitudes that lead to self-defeating behaviors, they can change them to more positive and rational attitudes through positive self-talk.

By thinking about and challenging the messages that they are giving themselves and substituting positive messages for those that are negative, students can develop the self-confidence to overcome obstacles to success.

Task description and Local Standards

Some examples of positive self-talk:

- 'I can do it.'
- 'I'm good enough.'
- 'If I want to, I can.'
- 'It doesn't matter if I make a mistake.' 'I can make it happen.'
- If I try hard, I'll get there.'

1. Teacher briefly introduces the meaning of self-confidence to the class.
2. In small groups, students brainstorm a range of skills and activities that require confidence and an acceptance of mistake before success (playing an instrument, bike riding, skate boarding) on paper. Each group then posts its list on the wall for a whole-class discussion.
3. Teacher facilitates a brief, whole-class discussion on each group's list, and links the skills listed with academic achievements.
4. Teacher facilitates a whole-class discussion on the notion of positive self-talk, explaining the difference between positive and negative self-talk and the effects of each.
5. Students individually complete the 'Making it happen' worksheet.
6. In small groups, students complete the 'Nothing ventured, nothing gained' worksheet. Students should discuss the importance of taking risks and being prepared to make mistakes.
7. Using the 'Being a "Yes" person' sheets, the teacher facilitates a whole-class discussion of the meanings and key concepts of a person's 'inner' and 'outer' worlds.
8. In pairs, students work out from their response on the 'Being a "Yes" person' sheet whether they are 'Yes', 'No', or 'I don't know' type people.

Suggested resources

- paper and felt-tipped pens
- Copies of 'Making it happen', 'Nothing ventured, nothing gained', 'Being a "Yes" person' and 'The inner voice' worksheets

Positive Self-Talk Worksheet: Making It Happen

A little voice in our head gives us messages. Sometimes the messages say that we are clever and doing well. At other times they say that we are 'stupid' or that we can't do anything.

Write down how you feel when the messages are negative as well as how you feel when they are positive. The first has been done as an example.

You can also add some other situations to the list.

Situation	Negative self-talk	Positive self-talk
Example: Speaking to someone new	I'm dull. They won't want to talk to me.	I'm interesting. Maybe I'll make a new friend.
Feelings	*Frightened*	*Excited*
1. Trying a new problem	I'll make a mistake.	The more I try the better I'll get.
Feelings		
2. Giving a talk to the class	They'll laugh and tease me.	I can do it.
Feelings		
3. Asking if you can join a game	They don't like me.	This will be fun.
Feelings		
4. Asking to borrow something special	They'll say no.	They'll say yes.
Feelings		
5. Giving an opinion	They'll all laugh.	They'll think I'm smart.
Feelings		
6. Making a speech	I'll make a fool of myself.	I'll do a pretty good job.
Feelings		

Other situations

Situation	Negative self-talk	Positive self-talk
7.		
Feelings		
8.		
Feelings		
9.		
Feelings		
10.		
Feelings		
11.		
Feelings		

Positive Self-Talk Worksheet: Nothing Ventured, Nothing Gained

Some people don't try new things because they're scared.

1. What would be the worst thing that could happen if you didn't do as well as you would like at:

Learning pottery?

_____

Reading aloud?

_____

Surfing?

_____

Trying a new hairstyle?

_____

Introducing yourself to someone new?

_____

Learning the piano?

_____

2. List some additional activities you could try and give the worst and best things that could happen.

I should try	The worst that could happen	The best that could happen

3. The messages we give ourselves are called 'self-talk'. Give four examples of negative self-talk that could make you feel frightened of trying something new.
4. Now give the positive self-talk that should replace these negative messages

I CAN MANAGE!!

Positive Self-Talk Worksheet: The Inner Voice

- Being a positive learner is about the language you use when you talk to yourself.
- We have three internal voices – the YES voice, the NO voice, and the I DON'T KNOW voice.
- As a human being, you have an inner world and an outer world.
- Your inner world is made up from your thoughts and your feelings (plus a lot of physical things, like your spinal cord, heart, intestines, lungs, etc.).
- Your outer world is made up of the other things – other people, buildings, circumstances, family, the weather, your outer environment.
- Within your inner world there is a voice – this is your Inner Voice of thought.
- Our Inner Voices talk to us in certain ways. Sometimes they talk to us in a YES voice, sometimes in a NO voice and sometimes in an I DON'T KNOW voice.
- The great news for learning and living is that we can program our Inner Voice and become the voice and the person we wish to be. What we say with our Inner Voice will show up as 'living' to the Outer World people.
- This is great news, because it means our Inner Voice is powerful.
- It means you are powerful.
- The more you choose to program a YES voice, the more powerful you will be!

Positive Self-Talk Worksheet 4: Being A 'Yes' Person

What makes a 'Yes' person?

Yes	**No**	**I don't know**
I've got this task to do: *YES*	No, I can't do it!	I don't know.
I will be able to do this.	This is silly, this is stupid.	I'm not sure
There is a solution and I'll find it.	I can't do this: it's too hard.	I think I'll try!
I'll do it now!	I'll do it tomorrow (next week).	I could do it tomorrow.
Sounds good, I'll give it a go.	I'm hopeless. This is impossible: I'm not even going to try!	I don't know about that. Maybe I'll wait and see.
I can do it, it may take time and effort but I can do it!	I'm dumb.	I could but I've got a cold.
Yes, I made that mistake and I can learn from the experience.	It's not my fault, don't blame me (it is their fault ... teachers, parents,	Don't ask me!
That person has some really good points.	I don't like that person.	I'm not sure. I'll wait to see how they match up.
I'm good at ... (math, reading).	I'm hopeless at ...	I'm not really good at anything.
I am a learner.	They'll laugh at me.	I'm tired.
I am good value.	I'm no good.	I am not sure of myself.

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So, what makes a YES person?

YES people have a YES physiology. A YES body language is confident and happy.

A YES face is open and smiles a lot.

YES people look for possibilities and not restrictions.

YES people see problems as learning and seek solutions rather than being stuck in the problem.

YES people celebrate themselves and others.

YES people program their Inner Voices for YES living.

YES people communicate clearly and openly.

YES people stretch their thinking and train their brains.

SECTION 5.2 BUILDING HEALTHY RELATIONSHIPS

Introduction

Healthy Relationships take time to get right! This resource focuses on developing positive relationships with friends, family members, neighbors & any other people you may encounter in your life. The kit contains interactive activities that encourage children & youth to discuss the key elements that help make a healthy relationship.

What makes a Healthy Relationship?

Respect - Respect each person as an individual. A healthy partnership means learning about the other person & valuing what's important to them.

Trust - Means that you feel that you can count on each other & that the other person will be there for you. Trust needs to be earned over time & can be lost with a broken promise.
Be Honest about thoughts & feelings. It is the "real me" that our partner wants to get to know.
Communication - Is how we show our respect, trust & honesty. It requires listening & sharing thoughts & feelings.

Healthy Relationships	Unhealthy Relationships
You feel good about yourself when you're around the other person.	You feel sad, angry, scared or worried.
You do not try to control each other. There is equal amount of give & take. Communication, Sharing & Trust. You feel safe & trust to share secrets. This requires listening.	You feel you give more attention than they give to you. You feel controlled. You do not communicate, share or trust.
You like to spend time together but also enjoy doing things apart.	You feel pressured to spend time together & feel guilty when apart. You feel the need to be someone or something that you're not.
It's easy to be yourself when you're with them. You Respect each other's opinion. You listen & try to understand their point of view even if you don't agree.	You feel there's no respect for you or your opinion. You're not able to disagree

Characteristics of a Healthy or Unhealthy Relationship – Matching Activity

Purpose: To explore characteristics of healthy and unhealthy relationships.

Materials:

2 Heading Cards (Healthy Relationships/Unhealthy Relationships) 32 Characteristics of a Healthy or Unhealthy Relationship Cards

Instructions:

- Divide participants into groups and share the Characteristics of a Healthy or Unhealthy Relationship cards evenly among the groups.
- Put the headings Healthy Relationship and Unhealthy Relationship on the Wall.
- Instruct the groups to read the cards and decide if it is a characteristic of a healthy relationship or a characteristic of an unhealthy relationship.
- Have teams put each characteristic on the wall under the corresponding heading.

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Healthy Relationships

Unhealthy Relationships

Characteristic of a Healthy or Unhealthy Relationship **Uses alcohol or drugs as an excuse for hurtful behavior**	**Characteristic of a Healthy or Unhealthy Relationship** **Acts controlling or possessive – like you own your partner**
Characteristic of a Healthy or Unhealthy Relationship **Goes back on promises**	**Characteristic of a Healthy or Unhealthy Relationship** **Tries to make the other feel crazy or plays mind games**
Characteristic of a Healthy or Unhealthy Relationship **Makes all the decisions about what the two of you do**	**Characteristic of a Healthy or Unhealthy Relationship** **Tries to keep the other from having a job or furthering his/her education**
Characteristic of a Healthy or Unhealthy Relationship **Smashes, throws or destroys things**	**Characteristic of a Healthy or Unhealthy Relationship** **Embarrasses or humiliates the other**
Characteristic of a Healthy or Unhealthy Relationship **Has ever threatened to hurt the other or commit suicide if they leave**	**Characteristic of a Healthy or Unhealthy Relationship** **Pressures the other for sex, or makes sex hurt or feel humiliating**
Characteristic of a Healthy or Unhealthy Relationship **Frequently criticizes the other's friends or family**	**Characteristic of a Healthy or Unhealthy Relationship** **Yells at and treats the other like a child**

Characteristic of a Healthy or Unhealthy Relationship **Puts the other down by calling names, cursing or making the other feel bad about him or herself**	**Characteristic of a Healthy or Unhealthy Relationship** **Gets extremely jealous or accuses the other of cheating**
Characteristic of a Healthy or Unhealthy Relationship **Communicate about sex, if your relationship is sexual**	**Characteristic of a Healthy or Unhealthy Relationship** **Never feel like you're being pressured for sex**
Characteristic of a Healthy or Unhealthy Relationship **Have close friends and family who like the other person and are happy about your relationship**	**Characteristic of a Healthy or Unhealthy Relationship** **Have some privacy – your letters, diary, personal phone calls are respected as your own**
Characteristic of a Healthy or Unhealthy Relationship **Encourage each other's interests – like sports and extracurricular activities**	**Characteristic of a Healthy or Unhealthy Relationship** **Have equal decision-making power about what you do in your relationship**
Characteristic of a Healthy or Unhealthy Relationship **Both apologize when you're wrong**	**Characteristic of a Healthy or Unhealthy Relationship** **Both accept responsibility for your actions**

Characteristic of a Healthy or Unhealthy Relationship **Solve conflicts without putting each other down, cursing at each other or making threats**	**Characteristic of a Healthy or Unhealthy Relationship** **Respect each other's opinions, even when they are different**
Characteristic of a Healthy or Unhealthy Relationship **Support each other's individual goals in life, like getting a job or going to college**	**Characteristic of a Healthy or Unhealthy Relationship** **Trust each other**
Characteristic of a Healthy or Unhealthy Relationship **Always feel safe with each other**	**Characteristic of a Healthy or Unhealthy Relationship** **Each enjoy spending time separately, with your own friends, as well as with each other's friends**
Characteristic of a Healthy or Unhealthy Relationship **Have fun together, more often than not**	**Characteristic of a Healthy or Unhealthy Relationship** **Has ever grabbed, pushed, hit, or physically hurt the other**
Characteristic of a Healthy or Unhealthy Relationship **Always treat each other with respect**	**Characteristic of a Healthy or Unhealthy Relationship** **Tells the other how to dress**

Rate My Relationship Skills

Rate each quality using the scale MOST OF THE TIME, SOMETIMES, RARELY

Ingredients of a Healthy Relationship	With my Friends	With my Family Members
Honesty	Most of the time	Sometimes

Qualities I would like to improve in myself that support healthy relationships:

_____

_____

_____

Changes I would like to make to my relationships:

_____

_____

SECTION 5.3 CONSEQUENCES OF STRESS

Introduction

Whether it is neglecting our diet, taking on more than we are able to do, feeling irritable and anxious, having difficulty making decisions and even experiencing stomach upset and increased heart rate, we all find ourselves falling victim to unmanaged stress. These experiences are an extension of the fight or flight response—an adaptive feature of our bodies that helps us deal with a threat. While being fueled by adrenaline and having an increased heart and breathing rate, and other ways that our body becomes physically ready, are very good in the short term for threats to our immediate physical danger, a prolonged and unmanaged response can lead to
long-term health repercussions. Part of dealing with stress and anxiety is the ability to recognize stress and implement strategies to deal with it before it becomes an overwhelming problem.

Activity 1: Stress Test (10 minutes)- see below

1. Hand out Activity 1 Handout—Stress Test.
2. Instruct students to complete the stress test by choosing a number between 1 and 4 to indicate how often they experience each symptom.

1 = Never or Seldom 2 = Sometimes 3 = Often 4 = Always

Students can keep a running tally at the bottom of the survey if they don't want to record their responses beside the individual items.

3. Have students add up the numbers on the stress test, then write the following scoring guide on the board:

Under 20—Low Stress 21 to 30—Medium Stress 31 and up—High Stress 12

4. Let students know that

stress is a normal reaction to the demands of life;

when your brain perceives a threat, your body releases a burst of hormones to fuel your fight/flight/freeze response; and when the threat is gone, your body returns to normal.

Activity 2:

Effects of Stress (15 minutes)

1. Separate students into groups of three to five and ask them to briefly discuss some of the situations that make them experience stress. Allow them three to four minutes to discuss.

2. Ask the students to think about how and what they feel when they are feeling stress.

3. Have the students brainstorm and list on the chart paper different effects that they feel when they are stressed. Encourage them to think about the following types of symptoms:

   Emotional (feelings) Physical

   Mental (thoughts)

4. Allow the groups four to five minutes to compile a list.

5. Ask one member of each group to share their list of effects of stress and talk about the different symptoms that come up commonly.

6. Share any items from Activity 2 Resource—Effects of Stress that have not been mentioned.

Activity 3:

Coping with Stress (5 minutes)

1. Hand out Activity 3 Handout— Coping with Stress.

2. Inform students that there are healthy and unhealthy ways of

   dealing with stress. The healthy ways help to reduce stress and relieve symptoms. Unhealthy ways of dealing with stress actually mask the symptoms and causes of stress, may introduce new stressors and may increase the effects of stress in the future.

3. Have students think about how they manage their own stress and how they can incorporate healthy stress management into their lives.

Activity 1 Handout

Rate each of the following statements on a scale of 1 to 4

1 = Never or Seldom

2 = Sometimes

Stress Test

1 I have problems falling asleep or staying	
2 I am uptight and cannot seem to	
3 I get angry if things do not go my	
4 I have difficulty	
5 I have a hard time finding fun things to	
6 I feel tired during the	
7 I worry a lot about things going on in my	
8 I have had health problems because I work too hard.	
9 I use alcohol, cigarettes, caffeine or drugs to cope with stress.	
10. I laugh or smile less than I used to.	
11 I feel sad or disappointed	
12. I like to be in	
13 I don't have enough time for all the things in my life.	
14 I have a habit of clenching my fists, cracking my knuckles, twirling my hair or tapping my fingers.	

Activity 2 Resource

Effects of Stress

Fight or Flight	*Relaxed State*
↑ Heart rate	↓ Heart rate
↑ Pulse	↓ Pulse
↑ Blood pressure	↓ Blood pressure
↑ Muscle contraction/tension	↓ Muscle contraction/tension
↑ Shallow chest breathing	↑ Deep abdominal breathing
↓ Blood vessel size	↑ Blood vessel size
↓ Digestive action	↑ Digestive action
↑ Body temperature	↓ Body temperature

Emotional	***Physical***	***Mental***
✓ Overwhelmed	✓ Trouble breathing	✓ Exaggerating things
✓ Nervous Anxious	✓ Trouble sleeping	✓ Having bad thoughts
✓ Frustrated	✓ Stomach aches	✓ Having too much to think about
✓ Unhappy/depressed	✓ Dizziness	✓ Can't make a decision
✓ Uncomfortable	✓ Eating more or less	✓ Overthinking
✓ Freaking out	✓ Headache	✓ Negative thinking
✓ Out of control		✓ Can't concentrate
		✓ Blanking out

Activity 3 Handout - Coping with Stress

Healthy Strategies

- ✓ Get plenty of rest
- ✓ Set time for yourself
- ✓ Favorite childhood activity
- ✓ Breathing exercises
- ✓ Exercise Work out
- ✓ Play video games
- ✓ Listen to music
- ✓ Eat healthy food
- ✓ Drink water Talk to friends
- ✓ Meditate
- ✓ Watch a movie
- ✓ Spend time with a pet
- ✓ Take a bath or shower
- ✓ Focus on the good things
- ✓ Use a positive affirmation
- ✓ Watch a funny video
- ✓ Set realistic expectations
- ✓ Ask for help
- ✓ Leave the situation
- ✓ Manage your time
- ✓ Be organized
- ✓ Spend time with others

Unhealthy Strategies

- – Drugs or alcohol
- – Unhealthy food
- – Caffeine
- – Smoking
- – Venting
- – Bottling up your emotions
- – Physical violence
- – Taking it out on others
- – Not being able to say no

MODULE 6 – Attitude change and media influence

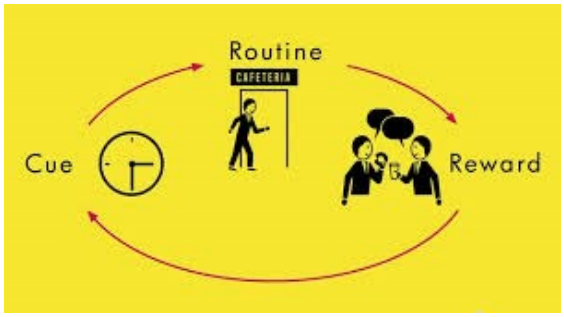
GENERAL GOAL(S):	**To equip the Correct IT professionals with the necessary knowledge, skills and competences to enhance obesity prevention positive behaviour change and prevent discrimination, segregation and bullying on obesity basis among children**
OBJECTIVES:	By the end of the module, participants will be able to: • Describe ``The Power of habit`` behaviour change model for obesity prevention, apply a plan of behaviour change for obesity prevention for children and parents; • Be aware, identify and strengthen the success factors in a behaviour change plan; • Be aware, identify prevention measures and offer counselling and support in applying prevention for discrimination, segregation and bullying on obesity basis among children in specific cases.
METHODS:	Interactive presentation, capacity-building training exercise, group discussions, case studies, simulations
DURATION:	**4 hours**
RESOURCES NEEDED:	PC, video projector/multimedia, flipchart, pens, paper, hand-outs
SECTION 6.1	**"THE POWER OF HABIT`` - BEHAVIOUR CHANGE MODEL FOR OBESITY PREVENTING IN 4 STEPS (1 hour 10 min.)**
ORDER OF ACTIVITIES:	**Activity 1 (15 min.)** • The trainer will give the theoretical presentation of the "The Power of habit" - behaviour change model – **theoretical materials** section 6.1. • Participants can ask clarifying questions.
	Activity 2: (15 min.) • The trainer distributes the Habit Change **Worksheet** to each participant and asks them to think about a habit they want to change, then to identify and fill in the work sheet the cue, the reward and the new routine.
	Activity 3: (20 min.) • The trainer split the group into 3 groups and distributes to participants sheets of paper corresponding to one step of the change process –, according to the name of the group: G1 Preparing for change G2 Breaking your habits G3 Making a lasting change • Inside each group learners read and explain to each other the phases of their step-in behavior change, trying to provide as many examples as possible. • Each small group chooses a representative who presents to the whole class their step of the process. • Learners discuss the application of the process with their beneficiaries: children and parents.
	Activity 4 (20 min.) • The trainer asks learners to make their own plan of changing their personal habit using the Habit Change **Worksheet (see activity 2)**

	• Then, the trainer initiates a group discussion based on the following questions: ✓ How did you feel while making the plan? ✓ What was the most difficult part? ✓ How determined are you to follow the plan?
SECTION 6.2	**SUCCESS FACTORS IN BEHAVIOUR CHANGE (50 min.)**
ORDER OF ACTIVITIES:	activity 1 (**15 min.**) • The trainer will give the **theoretical presentation** • Participants can ask clarifying questions.
	Activity 2: (**20 min.**) • Trainer asks participants to work in pairs according to their profession, nurses, teachers and social workers separately. • Nurses will practice **motivational interview** • Teachers and social workers will practice **self-monitoring counseling** with children
	Activity 3: (**15 min.**) • After 20 min. trainer starts a short discussion about the success factors in behavior change.
SECTION 6.3	**PREVENT DISCRIMINATION, SEGREGATION AND BULLYING ON OBESITY BASIS AMONG CHILDREN**
ORDER OF ACTIVITIES:	Activity 1: (**15 min.**) • The trainer will give the **theoretical presentation** • Participants can ask clarifying questions.
	Activity 2: (**30 min.**) • Trainer splits participants into small groups (3-5 learners) according to their profession, nurses separately, teachers and social workers can work together of insufficient number. • The trainer provides to the nurses groups copies with **activity 2 a materials**. Motivational Interviewing for nurses referring weight bias in schools (task for nurses) asks learners to read it carefully, then simulate a motivational interview with a student, based on the provided model. They can work in pairs and take the role of observer, on turns. • Afterwards, trainer provides to the nurses groups copies with **activity 2 b materials.** Words that hurt (task for teachers/social workers), asks learners to read it carefully, then simulate class activity/extra-school activity with students, based on the provided model.
	Activity 3: (**15 min.**) • Afterwards, the trainer starts a short discussion about the importance of preventing discrimination, segregation and bullying on obesity basis among children.
KEEPING LEARNERS SAFE:	• Ensure that access to the activity available for all • Ensure room large enough to allow mobility for all learners

EVALUATION OF THE MODULE:	Group discussion
REFERENCES	- Bevans KB, Sanchez B, Teneralli R, Forrest CB (2011) Children's eating behavior: The importance of nutrition standards for foods in schools. J Sch Health 81: 424-429. - Budge, M, Deahl, C, Dewhurst, M, Donajgrodzki, S and Wood, F (2009) Communications and behaviour change. Central Office of Information. - Byker CJ, Pinard CA, Yaroch AL, Serrano EL (2013) New NSLP guidelines: Challenges and opportunities for nutrition education practitioners and researchers. J Nutr Educ Behav 45: 683-689. - Deliens T, Clarys P, De Bourdeaudhuij I, Deforche B (2014) Determinants of eating behavior in university students: a qualitative study using focus group discussions. BMC Public Health 14: 53. - Duhigg, C (2014) Power of Habit: Why We Do What We Do in Life and Business. New York: Random House Trade Paperback. - Fishbein M, Bandura A, Triandis HC, Kanfer FH, Becker MH, Middlestadt SE, & Eichler A (1992) Factors Influencing Behavior and Behavior Change. Final Report-Theorist 's Workshop. Bethesda: NIMH. - Krueger RA (2009) Focus groups: a practical guide for applied research. (4thedn). Thousand Oaks, CA: Sage Publications. - Switzler, Al. (2012) Change Anything! Use Skillpower Over Willpower. Ted X. Fremont. Speech. - http://www.uconnruddcenter.org - http://simplywellcoaching.com - https://www.wikihow.com - http://healthyweight.health.gov.au - http://listen.animusassociation.org

Section 6.1 ``THE POWER OF HABIT`` - BEHAVIOUR CHANGE MODEL

Activity 1



In the book ***The Power of Habit***, Charles Duhigg's, breaks down how habits work by detailing the "habit loop".

A habit has 3 components: **Cue**, **Routine, Reward**. Let's look at the common habit of brushing your teeth before bed: your cue is getting ready for bed (more specifically, maybe it's washing your face, or changing into sleep wear), your routine – or, habit – is brushing your teeth, and your reward is the clean mouth feel and taste. By adulthood this habit has become so ingrained in your routine you hardly think about it. It's just what you do.

Changing a habit focuses on only changing one thing: **THE ROUTINE**. Big changes start with small changes. Try to change the cue, routine and reward at one time and you'll end up overwhelmed and unsure of why the new habit didn't stick. Was it the cue that didn't work or the reward or was the routine too complicated? By focusing on one small change you can master it.

Duhigg outlines the framework of changing a habit towards the end of the book:

1.Identify the routine

2. Experiment with rewards

3. Isolate the cue

4. Have a plan

Identify the Routine

The behavior of eating handfuls of sugary cereal after lunch is the habit I want to change. I know I'm not hungry as I fix a satisfying lunch, one that fills me up and I enjoy eating. I resolve to not do it the next day, yet the next day I'll put my dishes in the sink and go for a handful. But what's my reward?

Why do I need to snack on something? Am I not eating enough as my meal? Do I need something sweet? Am I not ready to get back to work yet?

Experiment with rewards

Duhigg explains that rewards satisfy cravings, but that we often don't know exactly *what* we're craving. To figure out what you're actually craving, you get to play scientist and test out different rewards/behaviors until you find one that leaves you satisfied. When the urge arises, I will test a new routine. Instead of grabbing cereal, I'll get an apple then get back to work. The next day I'll make some tea. The next day I'll do a few minutes of yoga. The next day I'll walk the dog. The next day I'll browse one of my favorite blogs. The purpose is to find something to replace this mindless munching with the same reward of satisfaction to get back to my day. If it's that I'm hungry, an apple will do the trick. If it's a need to be up and about, yoga will help. If it's a change of scenery, walking the dog will satisfy me.

I'll probably need to try a few different approaches over a few days so I will keep a pad of paper (or the worksheet following this post!) nearby and *jot down my first thoughts* – just a few words; full, refreshed, calm – after the experimental routine. This will bring me into the present moment and connect me to my feelings.

Next, Duhigg suggests *setting an alarm for 15 minutes.* When the alarm sounds, I'm to *reflect if I feel the urge* to get cereal. If I ate an apple and 15 minutes later, I still want some Lucky Charms, I must be craving the reward of sugar. If 15 minutes after reading a favorite blog, I feel ready to move on with my day, my craving must be some downtime for my brain before delving into another thing on my to-do list. With my handy notes I can remember exactly how I felt after each experiment which helps pinpoint what I enjoyed – or didn't enjoy – about my theorized craving.

Isolate the Cue

For many habits the cue isn't obvious and will take digging to find. To find my cue I'll need to take a few more notes by noting the five categories nearly all habitual cues fall into: location, time, emotional state, other people, immediately preceding action. When my urge hits to grab a handful of cereal I will fill in all the categories which could look like this:

Location: Kitchen
Time: 1:15
Emotional state: Content

Other people? No one around
Immediately preceding action: Grabbed client binder

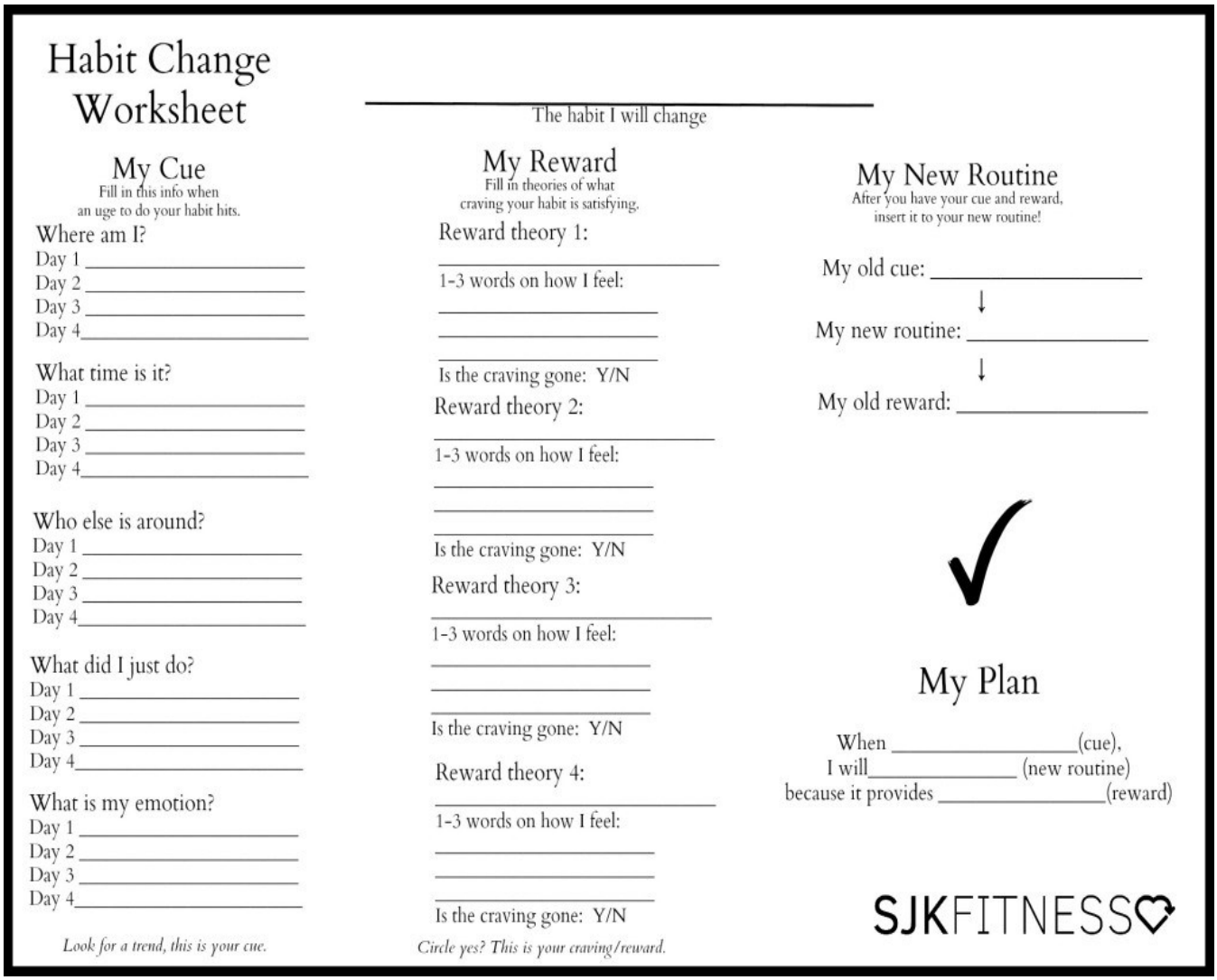
The next day may be this:
Location: Desk
Time: 1:40
Emotional state: Bored
Other people? Husband (worked from home, too)
Immediately preceding action: Started writing blog-post

And the next:
Location: Desk
Time: 1:30
Emotional state: Little stressed
Other people? No one around
Immediately preceding action: Opened email that need immediate response
While my timeframe is consistent with lunch, I know from my experiments that I'm not hungry for food since the apple didn't satisfy me. The other constant is that I'm starting to work on something that needs my attention. My habit is triggered in a post-lunch slump by delving immediately back into work. I apparently need to give my mind more of a break before getting back to work since I'm eating out of avoidance.

Have a plan
To break my habit, I need to come up with a plan *before* the habit loop starts. Since I need a mental refresher to avoid mindless munching, I have many options. My plan is to set an alarm for 15 minutes immediately after I finish lunch and do one of 2 things, I found through my experiment that left me satisfied: Yoga and/or browsing my favorite blogs/sites.
Source: Duhigg, Charles author. Power Of Habit: Why We Do What We Do in Life and Business. New York: Random House Trade Paperbacks, 2014. Print.

Activity 2

Habit change worksheet



Habit Change Worksheet

_____
The habit I will change

My Cue
Fill in this info when an uge to do your habit hits.

Where am I?
Day 1 _____
Day 2 _____
Day 3 _____
Day 4 _____

What time is it?
Day 1 _____
Day 2 _____
Day 3 _____
Day 4 _____

Who else is around?
Day 1 _____
Day 2 _____
Day 3 _____
Day 4 _____

What did I just do?
Day 1 _____
Day 2 _____
Day 3 _____
Day 4 _____

What is my emotion?
Day 1 _____
Day 2 _____
Day 3 _____
Day 4 _____

Look for a trend, this is your cue.

My Reward
Fill in theories of what craving your habit is satisfying.

Reward theory 1:
_____
1-3 words on how I feel:
_____
_____
_____
Is the craving gone: Y/N

Reward theory 2:
_____
1-3 words on how I feel:
_____
_____
_____
Is the craving gone: Y/N

Reward theory 3:
_____
1-3 words on how I feel:
_____
_____
_____
Is the craving gone: Y/N

Reward theory 4:
_____
1-3 words on how I feel:
_____
_____
_____
Is the craving gone: Y/N

Circle yes? This is your craving/reward.

My New Routine
After you have your cue and reward, insert it to your new routine!

My old cue: _____
↓
My new routine: _____
↓
My old reward: _____

✓

My Plan

When _____(cue),
I will_____ (new routine)
because it provides _____(reward)

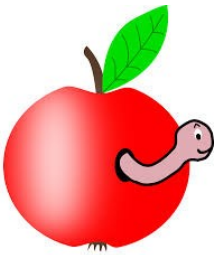
SJKFITNESS

Source: http://simplywellcoaching.com

Activity 3

How to change a habit

G1 Preparing for change



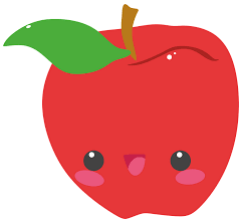
- Recognize your undesirable habit. Before you can actually change any aspect of yourself, you'll need to acknowledge that something needs to change and identify the habit you wish to break. Think about all the undesirable situations currently in your life. Do you have some health issues like obesity or smoker's cough? Give yourself an honest assessment and identify areas of your life that are causing you problems. Once you've identified the undesired situations in your life, take a step back and analyze your behavior and your actions to determine what you're doing that is causing/creating those situations. Perhaps weight problems are caused by poor diet or lack of exercise?

- Determine your motivating factors Now that you recognize what it is that's causing your problems, think about why you engage in that behavior. Every habit gives you something that you enjoy, even if that "reward" is simply avoiding something unpleasant that you don't want to do. Are your bad behaviors reinforced by others, or just by your own needs? Think about why your motivators (like attention, validation, etc.) are important to you. What do you get out of feeling that way?

- Identify your triggers. Sometimes recognizing your motivation will help you recognize your triggers. For example, you might be seeking excitement because of boredom, or seeking pleasure/gratification because you're stressed out. But other times your triggers might be less obvious. Before you can actually break your habit, you'll need to learn to recognize situations and scenarios that tend to precede your undesirable behavior.

- Commit to change. Studies show that commitment to change is a vital part of the transformation process. Without deep personal commitment, most people cannot change themselves or their habits. You may be able to get support from friends/relatives, but you'll need to believe in yourself first and foremost. Making the commitment to transform your own behavior will help motivate you to work hard and break your undesirable habits.

Breaking your habits



- Set SMART goals. In order for you to succeed, you'll need to create goals that are specific and attainable. Many experts recommend that when you create goals for yourself, you should follow the guidelines of S.M.A.R.T. goals: Specific, Measurable, Achievable, Results-focused, and Time-bound.

- Write out your goals. Studies have shown that writing out your goals can help you stay on track and provide additional motivation on your path to transformation. You may even want to keep a written copy of your goals posted in a place you will see everyday when you wake up. Then write your milestones on a calendar so you will know how much time is left before you should have completed some part of your process.

- Put barriers in place. Sometimes it may be incredibly difficult to stop yourself from falling back into your old habit. One of the best ways to prevent this from happening is to self-impose barriers that will make it difficult for you to revert back to your old behavioral habits. If you are trying to break a behavioral habit, you might try making it unpleasant or otherwise difficult to engage in that habit. This could mean avoiding the thing you want to stop doing, or it could mean modifying some aspect of the behavior to make it undesirable.

- Distract yourself. Distractions are not necessarily helpful in the long-term, as continued distractions help cover for whatever it is, you're avoiding. But when you're first starting out on the road towards personal transformation, distractions can help you avoid engaging in your bad habit by keeping your mind and body occupied with something else. Healthy, productive distractions should be constructive, not destructive.
  A healthy distraction should require your full attention.

- Expose whatever you're covering for. Many habits develop as a way of coping with unpleasant emotions or situations. For example, you might develop a habit of overeating because it is comforting when you are sad or stressed. Whatever your habit is helping you avoid, challenge yourself to be exposed to that emotion or situation without the aid of your habit.

- Push yourself in small increments. Expose yourself a little at a time, perhaps having a trusted friend with you at first until you become comfortable. Then, little by little, expose yourself to your source of stress in increasingly-longer sessions until you can experience whatever it is you feared alone and for prolonged periods.

Making a lasting change

- Replace bad habits with good ones. Many people find it difficult to kick a long-term habit because the body and brain become accustomed to engaging in that activity. That's why many former smokers continue to have oral fixations (like chewing on a toothpick) long after they quit. Changing yourself for the better is a two-part process. Getting rid of a bad habit comes first, but staying away from that habit in the future requires you to find a new habit to replace it.

- Develop a keystone habit. The best new habit to develop is what experts call a keystone habit. This is the one habit that breaks all the other undesirable patterns in your life. For example, if you're trying to lose weight, developing a daily exercise regimen can motivate you to eat better, be more productive, and think more positively about yourself. Keystone habits give you a sense of satisfaction from a series of small, minor victories. It should be something that gives you immediate results, and it should be manageable no matter what level of change you're at.

- Accept support. Some people may find that self-motivation is sufficient, and ultimately the goal is to be able to keep yourself motivated and committed. But as stressful situations arise, you might find that your own motivation is not enough to keep you from reverting back to bad habits. One way to help ensure success on your road to transformation is to let your friends/relatives know that you're trying to break a bad habit, and ask them for their support.

- Avoid temptation. Many bad habits become a recurring issue when you are faced with temptation. No matter how strong your will and your commitment to change, being around whatever, you used to engage in could cause you to revert back to that habit. No matter how far along in your attempt to change, it's best to completely avoid any temptations that could cause you to falter.

Source: https://www.wikihow.com

SECTION 6.2 SUCCES FACTORS IN BEHAVIOUR CHANGE

Activity 1

Human behavior is experienced throughout an individual's entire lifetime. It includes the way they act based on different factors such as genetics, social norms, core faith, and attitude. Behavior is impacted by certain traits each individual has. The traits vary from person to person and can produce different actions or behavior from each person.

The factors influencing behavior can be divided into three broad levels: personal, social and environmental.

✓ Personal factors are intrinsic to the individual. It includes their belief in their ability to change their behavior.

✓ Social factors are the influence of other people on their behavior.

✓ Environmental factors are those that individuals can't control such as the economy or technology.

Each of these factors needs to be addressed to develop an effective campaign. Seeking to understand and influence behavior by addressing one set of factors alone is unlikely to be effective (Budge et al, 2009). Social norms exert a strong influence on people's attitudes and behavior. They reflect real or perceived majority opinion and the behavior that is considered normal in a given situation (CommGap, No date). Therefore, even in situations where behavior change may be beneficial to an individual or organization, prevailing attitudes of those around them may prevent them adopting the change.

Personal factors that might influence a person's behavior:

- Constitution – This refers to the person's physical state, for example do they have any allergies, chronic illnesses or a sensory impairment? It includes any mental health needs the person is experiencing and also whether any drugs they are taking might be affecting their behavior. Is the person in pain and unable to explain this? Under this heading, think about any syndrome, disorder or condition the person may have and its impact on their behavior.
- Personality and character – Is the person an extrovert or introvert, moody or laid back, easily aroused and frustrated or quiet and withdrawn? How does their personality affect their behavior?
- Sense of self – Does the person have a positive or negative self-image? Low or high self-esteem? How much self-knowledge does the person have? Are their cultural and religious needs

understood and addressed? Communication skills – This includes the person's ability to understand and act on the communication of others and to communicate their own thoughts, feelings and needs to those they are with.

- Psychological state – Has the person recently experienced any changes, loss or bereavement in their life? Has he or she been a victim of abuse (sexual, physical, hate crime, etc.)? Is the person anxious, lonely or feeling excluded?

Environmental factors that may influence a person's behavior

- The quality of the physical environment – This includes lighting, noise, amount of personal space, heat, humidity, colour, smells, etc.
- The quality of the social environment – Is the person bored and under stimulated? Or is it too busy with too many other people? What is the quality of the person's relationships? Are the key people in their life hostile and cold or emotionally close and supportive? Does the person have a chance to spend time with the important people in their life such as family or friends? Is the person lonely?
- Power and choice – Can the person make choices in their daily life? Or do they have very little control? Is the person supported to make choices? Do the people supporting the person stress conformity and make them comply with their wishes? Or are the person's choices and decisions respected and acted on? Is there access to advocacy support?

Unpredictable occurrences

Is the person startled or unsure about what is happening to them and in their environment? Do events happen to the person without them being prepared or without considering their needs and wishes? Can the person influence their daily routine?

The way an individual address a situation single-handedly or say in a group is influenced by many factors. The key factors influencing an individual's attitude in personal as well as social life are

- Abilities- Abilities are the traits a person learns from the environment around as well as the traits a person is gifted with by birth
- Gender- Research proves that men and women both stand equal in terms of job performance and mental abilities; however, society still emphasizes differences between the two genders
- Race and culture- Race is a group of people sharing similar physical features. It is used to define types of persons according to perceived traits
- Attribution- Attribution is the course of observing behavior followed by determining its cause based on individual's personality or situation.

- Perception- It is the process of interpreting something that we see or hear in our mind and use it later to judge and give a verdict on a situation, person, group, etc.
- Attitude- Attitude is the abstract learnt reaction or say response of a person's entire cognitive process over a time span

CHALLENGES

In planning behavior change, we encounter three major challenges:

1) the correct identification of the change objectives (and thereby the evaluation outcomes)
2) the selection and application of appropriate behavior change methods in an intervention
3) adequate implementation of the intervention.

As a consequence, the most frequent intervention failures include:

- incorrect identification of change objectives,
- inappropriate choice of methods or applications,
- inadequate implementation in terms of completeness and fidelity of the program being delivered.

Source: Fishbein M, Bandura A, Triandis HC, Kanfer FH, Becker MH, Middlestadt SE, & Eichler A (1992) Factors Influencing Behavior and Behavior Change. Final Report-Theorist 's Workshop. Bethesda: NIMH.

Activity 2

Motivational interviewing (task for nurses)

1. **Assess and personalize patient's risk status**

- "Based on your BMI, WC, labs, physical exam, family history and symptoms, I am concerned about the following: _____, _____, and _____."
- "I want to talk to you about how your weight may be affecting your health."

2. **Stages of change evaluation**

- "How do *you* feel about your weight?"
- "What concerns do *you* have about health risks?"
- "Are you considering/planning weight loss now?"
- "Do the pros of changing outweigh the cons?"

3. **Educate: risks and advise: weight goal**

- Educate: Medical Consequences Tip Sheet (longevity and quality of life)
- Advise: Establish a reasonable goal for weight loss using a clear statement.
- "A 5-10% weight loss over 6 months for a total loss of ____ to ___ pounds."

4. **Assess patient's understanding and concerns**

- "How do you feel about what I've said?"
- "On a scale of 1 – 10, with 10 being100% ready to take action, how ready are you to lose weight?"

5. **Facilitate motivation depending the patient's level of contemplation**

An answer between 1 - 4 means the patient has very little intention to lose weight.

	Facilitate Motivation for *PRE-CONTEMPLATORS*	
	1. Validate the patient's experience.	
	2. Acknowledge the patient's control of the decision.	
	3.In a simple, direct statement, give your opinion on the medical benefits of weight loss for this patient.	
	4. Explore potential concerns.	
	5. Acknowledge possible feelings of being pressured.	

	6. Validate that they are not ready.	
	7. Restate your position that the decision to lose weight is up to them.	
	8. Encourage reframing of current state of change *as the potential beginning of a change - rather than a decision to* never *change.*	

GOAL: Move patient from" NO!" to "I'll think about it."

An answer between 5 – 7 means the patient is ambivalent about taking action to lose weight.

Facilitate Motivation for *CONTEMPLATORS*		
	1. Validate the patient's experience.	
	2. Acknowledge patient's control of the decision.	
	3. Clarify patient's perceptions of the pros and cons of attempted weight loss.	
	4. Encourage further self-exploration.	
	5. Restate your position that it is up to them.	
	6. Leave the door open for moving to preparation.	

An answer between 8 – 10 means the patient is very willing to take action about their weight.

Facilitate Motivation for those in *PREPARATION*		
	1. Praise the decision to change behavior.	
	2. Prioritize behavior change opportunities.	
	3. Identify and assist in problem solving re: obstacles.	
	4. Encourage small, initial steps.	
	5. Assist patient in identifying social supports.	

GOAL: Provide direction and support

Schedule follow-up

- Tell patient when you would like to see them again.

Give patient a referral (to a dietitian / exercise specialist / therapist/ etc) if appropriate.

Sources: http://www.cellinteractive.com/ucla/physcian_ed/interview_alg.html

https://www.medscape.com/viewarticle/737775_3

activity 2

Self-monitoring activities (tasks for teachers/social worker)

Student self-monitoring is an effective tool for behavior change. Self-monitoring has two components, measurement and evaluation (Loftin, Gibb, & Skiba, 2005): That is: the student measures and records his or her own behavior (measurement) and compares that recorded behavior to a pre-determined standard (evaluation)

Self-monitoring can take many forms. One student may use a paper form to rate her study skills at the end of each class period, for example, while another student might verbally rate his social behaviors when approached by his teacher at random times across the school day

Self-monitoring is a useful way to keep yourself on track with healthy eating and exercise habits. The goal is to help you become more aware of the behaviors that are holding you back from better health. Some common ways to self-monitor include: Food diaries, Exercise logs, Regular self-weighing, Equipment such as pedometers.

Why is self-monitoring so important?

Eating becomes habit. This means that we don't have to think too much about it. We just do what we usually do. Recording what you eat provides you with information about your habits. It will make you more aware of what you are eating and why. This will help you change because you will know what needs changing. People who use self-monitoring are usually the most successful.

- **TASK: *Write* your weekly food diary**

Keeping a food diary involves writing down everything you eat and drink as soon as you consume them. *"If you bite it, you write it!"* It can also be helpful to include the location, how you are feeling and anything that may have triggered you to eat even though you weren't hungry.

My Weekly Food Diary

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
BREAKFAST							
LUNCH							
DINNER							
SNACKS							
DRINKS							

For a quick and convenient way to keep track of your daily food intake, web sites and phone apps are available:

- Easy Diet Diary – The Australian Calorie Counter by Xyris Software (App) /Calorie Counter
- and diet Tracker by MyFitnessPal (App) /ControlMyWeight – Calorie Counter by Calorie King (App) /www.my-calorie-counter.com /
- www.myfitnesspal.com

➢ ***Write* your weekly *physical activity***

Keeping a **physical activity diary** is a simple way to keep track of how active you are. You can record all your physical activity, not just gym and sport sessions. So, write down how many flights of stairs you climbed, how many minutes you spent walking to the bus and how long you spent gardening. At the end of each week, look back over your activity diary. You'll see that even several short sessions of physical activity have added up, and that activity that's part of your day– just moving while you are doing other things – can add up.

If there has been a reason that has stopped you being as active as you had hoped, think about how you can resolve it – maybe by getting some support or by blocking out some time for you to take that walk, or go for that swim. Once you have started, try to increase the amount of physical activity you do each week. Take things gradually, adding to your routine when you can. You might choose to make

the activity more challenging rather than doing it for longer if you are short of time. Maybe you can jog some of the way around the park rather than walking all the way around it.

Name_____ Date_____

Physical Activity Diary

Use this diary to record any physical activity you do in a week – this includes things like walking, using the stairs instead of the lift as well a sports and going to the gym. Write down how long you spend doing these activities, adults should aim for at least 30 minutes, 5 times a week.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Morning							
Afternoon							
Evening							

Tips for Self-Monitoring

Be as accurate as you can.

- The more accurate your diary, the more it will tell you about your eating behaviors to better guide the changes to make

- Fill in your diary straight away after you eat, rather than trying to remember everything at the end of the day.

- Carry your diary with you wherever you go.

Be honest with yourself.

- Fill in all the columns.

- Try not to be selective in what you write. You may feel tempted to not write down foods or behaviors you feel guilty about. Remember, this diary is for you. Not being honest with yourself will only limit your progress.

Source: http://healthyweight.health.gov.au

SECTION 6.3 PREVENT DISCRIMINATION, SEGREGATION AND BULLYING ON OBESITY BASIS AMONG CHILDREN

Activity 1

The definition of bullying is when an individual or a group of people with more power, repeatedly and intentionally cause hurt or harm to another person or group of people who feel helpless to respond. Bullying can continue over time, is often hidden from adults, and will probably continue if no action is taken.

Types of bullying

- **Physical bullying** includes hitting, kicking, tripping, pinching and pushing or damaging property. Physical bullying causes both short term and long-term damage.
- **Verbal bullying** includes name calling, insults, teasing, intimidation, homophobic or racist remarks, or verbal abuse. While verbal bullying can start off harmless, it can escalate to levels which start affecting the individual target
- **Social bullying**, sometimes referred to as covert bullying, is often harder to recognize and can be carried out behind the bullied person's back. It is designed to harm someone's social reputation and/or cause humiliation. Social bullying includes: lying and spreading rumors, playing nasty jokes to embarrass and humiliate, encouraging others to socially exclude someone
- **Cyber bullying** can be overt or covert bullying behaviors using digital technologies, including hardware such as computers and smartphones, and software such as social media, instant messaging, texts, websites and other online platforms. Cyber bullying can include: abusive or hurtful texts emails or posts, images or videos, deliberately excluding others online, nasty gossip or rumors.

Risk factors include: Lack of supervision/Lack of attachment/Negative, critical relationships/ lack of discipline/consequences/Support for violence

Weight bias is the most widespread form of prejudice in most cultures – more widespread than racial or religious bias. There is generally very little sympathy for the overweight, and damaging stereotypes are pervasive. According to studies, the weight stigma begins as early as age three, because adults instill this negative attitude in their kids. *Lazy, ugly, stupid,* and *disgusting* are just a few of the hurtful epithets familiar to the obese. Parents of overweight kids may believe that

criticism will motivate them to lose weight, but the opposite is true: Too many disparaging remarks can drive kids to binge eating and avoidance of exercise.

The effects of weight bias on our obese children are especially harmful. They endure physical abuse and social exclusion from their peers, and verbal abuse from both their peers and adults. By high school, they may actually be victims of group aggression and mobbing. Some who have been bullied become bullies in self-defense. Many suffer from loneliness, depression, anxiety, low self-esteem, and poor body image. Suicidal thoughts and behaviors are not uncommon.

The school experience for fat students is "one of ongoing prejudice, unnoticed discrimination, and almost constant harassment. From nursery school through college, fat students experience ostracism, discouragement, and sometimes violence." Negative attitudes from teachers, combined with teasing and social exclusion by peers, make overweight youth more vulnerable to depression and more likely to miss days of school than their non-obese peers. And shockingly, obese students are significantly less likely to be accepted for admission to college, despite comparable academic performance.

How professionals and parents can help

You can stop adding to the hurt your obese child is suffering by changing your own negative attitude and providing concrete help:

- Educate yourself about the causes of obesity and the failure rate of most diets.
- Avoid "fat talk" (e.g., "I feel so fat today"), which places undue importance on thinness.
- Be an advocate for weight tolerance, along with racial and religious tolerance, and identify positive role models with diverse body types for your child.
- Remind your child often of all his strengths as a person, and reinforce his right not to be treated badly by anyone.
- Keep the lines of communication open, so your child will feel comfortable coming to you with problems.
- If you suspect that your child is being teased, ask specific questions about his day: "What did you do during recess today?" Try to retain a neutral stance when your child tells you about a difficult situation.
- You might tell your child about your own childhood experiences with being teased, and describe how it made you feel and how you handled it.
- Try role playing an incident with your child to help him practice nonaggressive ways of handling it.

- Teach him helpful tactics such as reporting aggressive or abusive behavior, and staying near friends or adult supervisors.
- Stand up for your child if you witness any teasing or negative comments, and recognize when to intervene.

If teasing has gotten out of hand or your child has been physically attacked, it's time to meet with the school counselor. You should also encourage school officials to adopt and enforce policies prohibiting harassment, intimidation, or bullying on school property

Source: https://www.ncab.org.au

https://www.familyeducation.com/life/childhood-obesity/overweight-kids-discrimination

Activity 2a

Motivational interviewing for nurses reffering weight bias in schools (task for nurses)

I: When the patient is in a pre-contemplation stage (*when the patient is not considering change – "Weight is not a concern for me")*

Goals: *Help patient develop a reason for changing /Validate the patient's experience /Encourage further self-exploration / Leave the door open for future conversations*

1**.** Validate the patient's experience: "I can understand why you feel that way"

2. Acknowledge the patient's control of the decision: "It's up to you to decide if and when you are ready to make lifestyle changes."

3. Repeat a simple, direct statement about your stand on the medical benefits of weight loss for this patient: "I believe that your extra weight is putting you at risk for heart disease. Making some lifestyle changes could help you lose weight, and improve your health substantially."

4. Explore potential concerns: "Has your weight created difficulties in your life?" "Can you imagine how your weight might cause problems in the future?"

5. Acknowledge possible feelings of being pressured: “It can be hard to initiate changes in your life when you feel pressured by others. I want to thank you for talking with me about this today.”

6. Validate that they are not ready: “I hear you saying that you are not ready to lose weight right now.”

7. Restate your position that it is up to them: “It’s totally up to you to decide if this is right for you right now.”

8. Encourage reframing of current state of change–the potential beginning of a change rather than a decision never to change: “Everyone who’s ever lost weight starts right where you are now; they start by seeing the reasons where they might want to lose weight. And that’s what I’ve been talking to you about.”

II: When the patient is in a contemplation stage *(**when the patient is ambivalent about change - "Yes my weight is a concern for me, but I’m not willing or able to begin losing weight within the next month.")***

Goals: *Validate the patient’s experience/ Clarify the patient’s perceptions of the pros and cons of attempted weight loss /Encourage further self-exploration / Leave the door open for moving to preparation*

1. Validate the patient’s experience: “I’m hearing that you are thinking about losing weight but you’re definitely not ready to take action right now.”

2. Acknowledge patient’s control of the decision: “It’s up to you to decide if and when you are ready to make lifestyle changes.”

3. Clarify patient’s perceptions of the pros and cons of attempted weight loss: “What is one benefit of losing weight? What is one drawback of losing weight?”

4. Encourage further self-exploration: “Would you be willing to think about this further and talk to me about it at our next visit?”

5. Restate your position that it is up to them: “It’s totally up to you to decide if this is right for you right now. Whatever you choose, I’m here to support you.”

6. Leave the door open for moving to preparation: "After talking about this, and doing the exercise, if you feel you would like to make some changes, the next step won't be jumping into action – we can begin with some preparation work.

III: When the patient is in a preparation stage ***(****when the patient is preparing to change and begins making small changes to prepare for a larger life change – "My weight is a concern for me; I'm clear that the benefits of attempting weight loss outweigh the drawbacks, and I'm planning to start within the next month.")*

Goals: *Reinforce the decision to change behavior/ Prioritize behavior change opportunities/ Identify and assist in problem solving re: obstacles/ Encourage small initial steps / Encourage identification of social supports*

1. Reinforce the decision to change behavior: "It's great that you feel good about your decision to make some lifestyle changes; you are taking important steps to improve your health."

2. Prioritize behavior change opportunities: "Looking at your eating habits, I think the biggest benefits would come from switching from whole milk dairy products to fat-free dairy products. What do you think?"

3. Identify and assist in problem solving re: obstacles: "Have you ever attempted weight loss before? What was helpful? What kinds of problems would you expect in making those changes now? How do you think you could deal with them?"

4. Encourage small, initial steps: "So, the initial goal is to try nonfat milk instead of whole milk every time you have cereal this week."

5. Assist patient in identifying social support: "Which family members or friends could support you as you make this change? How could they support you? Is there anything else I can do to help?

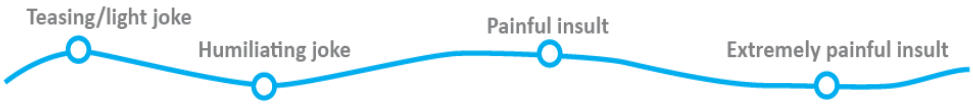
Source: http://www.uconnruddcenter.org

Activity 2b

Words that hurt (task for teachers/social workers)

1. Give sticky notes and a pen to every student.

2. Ask everybody to write abusive, rude comments or insulting nicknames they have heard about other students on the sticky notes (without indicating any names).
3. Put paper scotch tape on the floor across the room, marking the following scale-grid:



4. Ask the students to stick their notes on the scale, considering the most appropriate spot according to them. Ask them not to talk to each other and comment on their notes while doing it.
5. Let everyone take a close look at the scale. Usually there are repeating words, usually placed in different positions on the scale by different students.

REFLECTION

When all students are back on their seats, ask them what they have observed about the scale, while guiding their analysis and discussion with the following questions:

1. Did you see some words on more than one place on the scale?

2. Why do you think some of you have decided that a certain word is not/less offensive, while others consider it painful or humiliating?

3. Does it make any difference how the word has been used or by whom?

4. Why do people use words like these?

5. Is causing pain to others by using such words a form of bullying or not? Why?

6. Ask everyone if they can see any similarities between the words on the sticky notes. Are there, for example words related to physical appearance, mental abilities, ethnicity, gender etc.

7. Are there words used only for girls, and other words only for boys?

8. In which group or topic are the most offensive words placed? 9. Which category/topic received the stickiest notes? How can you explain this?

Source: http://listen.animusassociation.org

EVALUATION QUESTIONNAIRE

VET blended-learning training in obesity prevention and healthy lifestyle skills

Face to face course

DATE	
LOCATION OF THE TRAINING	

INSTRUCTIONS: Please indicate your impressions of the items listed below:

MODULE I. Causes of obesity and health risks					
ITEMS	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
The objectives of the module were clearly defined					
The topics covered were relevant to me					
The content was organized and easy to follow					
The information received in training was useful					
The materials delivered were helpful					
The trainer was well prepared					
The time for the training-module was sufficient					
The aims of the module were met					

MODULE II. Nutrition education					
ITEMS	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
The objectives of the module were clearly defined					
The topics covered were relevant to me					
The content was organized and easy to follow					
The information received in training was useful					
The materials delivered were helpful					
The trainer was well prepared					
The time for the training-module was sufficient					
The aims of the module were met					

MODULE III. Prevention strategies					
ITEMS	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
The objectives of the module were clearly defined					
The topics covered were relevant to me					
The content was organized and easy to follow					
The information received in training was useful					
The materials delivered were helpful					
The trainer was well prepared					
The time for the training-module was sufficient					
The aims of the module were met					

MODULE IV. Physical activity					
ITEMS	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
The objectives of the module were clearly defined					
The topics covered were relevant to me					
The content was organized and easy to follow					
The information received in training was useful					
The materials delivered were helpful					
The trainer was well prepared					
The time for the training-module was sufficient					
The aims of the module were met					

MODULE V. Lifestyle and mental health					
ITEMS	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
The objectives of the module were clearly defined					
The topics covered were relevant to me					
The content was organized and easy to follow					
The information received in training was useful					
The materials delivered were helpful					
The trainer was well prepared					
The time for the training-module was sufficient					
The aims of the module were met					

MODULE VI. Attitude change and media influence					
ITEMS	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
The objectives of the module were clearly defined					
The topics covered were relevant to me					
The content was organized and easy to follow					
The information received in training was useful					
The materials delivered were helpful					
The trainer was well prepared					
The time for the training-module was sufficient					
The aims of the module were met					

Open-ended comments

Was this training appropriate for your level of experience? / if you said no please explain
What did you most like about the training?
What aspects of the trainings could be improved?