



# YMCA Awards

Level 3 Nutrition to support  
physical activity

2018

# Level 3 Nutrition to support physical activity

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## **The influence of nutrition on health**

## Learning outcomes

By the end of this session you will be able to:

- Explain the relationship between nutrition, physical activity, body composition and health including:
- Research health and performance implications of diets that encourage severe energy restriction
- Identify clients at risk of nutritional deficiencies
- Explain the importance of communicating the health risks associated with current weight-loss fads and popular diets to clients

## Learning outcomes

By the end of this session you will be able to:

- Explain how nutritional intake can influence the actions of certain metabolic hormones
- Explain how nutritional intake can influence the actions of certain metabolic hormones
- Explain how cultural and religious dietary practices can influence nutritional advice
- Describe safety, effectiveness and contraindications relating to protein and vitamin supplementation

## Learning outcomes

By the end of this session you will be able to:

- Explain how to recognise the signs and symptoms of disordered eating
- Explain why detailed or complex dietary analysis that incorporates major dietary change should always be referred to a Registered Dietician

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## Links to disease

- Obesity is closely linked to deprivation levels (Public Health England)
- The association is especially strong with children and children in poor communities are far more likely to be obese
- Income, social deprivation and ethnicity have an important impact on the likelihood of becoming obese e.g. women and children in lower socioeconomic groups are more likely to be obese than those who are wealthier



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Poor diet and physical inactivity may lead to obesity which, in turn, increases the risk of developing health problems including:

- Heart disease
- Type 2 diabetes
- Certain cancers
- High blood pressure
- High cholesterol
- Stroke
- Sleep apnoea
- Diseases of the liver and gallbladder
- Osteoarthritis

# Cholesterol

- Cholesterol is a waxy substance which is made in the body by the liver but is also found in some foods
- It plays a vital role in how every cell works and is also needed to make Vitamin D, some hormones and bile for digestion
- Too much cholesterol in the blood can increase the risk of getting heart and circulatory diseases

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## **Coronary heart disease (CHD) and cholesterol**

- Strong association with high fat diets
- High saturated fat diets lead to increase levels of cholesterol circulating in blood (plasma lipoproteins)
- High levels of plasma lipoproteins are associated with the development of atherosclerosis ('furring of the arteries') and CHD

# Cholesterol

**‘Bad cholesterol’** - Increased levels of low-density lipoproteins (LDLs) particularly associated in the pathogenesis of atherosclerosis

**‘Good cholesterol’** - Increased levels of high-density lipoproteins (HDLs) appear to be protective in relation to CHD risk

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## Low Density Lipoproteins (LDL)

- Cells take up LDL from the blood to remove the required fat and cholesterol
- When they have enough they stop removing them
- LDLs can accumulate in the bloodstream and can easily settle down on the artery wall
- Damage can occur on the artery wall, leading to the development of fatty fibrous plaque
- Atherosclerosis is when plaque builds up to an such extent that the blood flow is blocked through the arteries

## High Density Lipoproteins (HDL)

- High levels of HDL can protect against CHD
- Scavenge free cholesterol and fat and return it to the liver
- Exercise and diets rich in monounsaturated fat are linked to favourable HDL levels

## **Guidelines to reduce blood cholesterol level**

- Perform regular physical activity
- If overweight, reduce weight to a healthy level
- Decrease the intake of saturated fats and replace them with moderate amounts of unsaturated fats
- Ensure the diet provides a good supply of omega-3 fatty acids

