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## Case Study 1: Genetics and Hyperlipidemia

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<div style="line-height: 1.5;"><span style="font-size: 18pt;">Hannah is a 30-year-old single mother with two young children. She is of Chinese&nbsp;descent and moved to the United Kingdom 6 years ago; she has a good level of English.&nbsp;Recently, her mother suffered a heart attack, which prompted Hannah&rsquo;s first visit to&nbsp;the general practitioner (GP). Meanwhile, Hannah performed a predictive genetic&nbsp;test independently through an online company, which showed an increased risk of&nbsp;developing cardiovascular disease (CVD); she has the ?4 variant of the APOE gene.&nbsp;The company has recommended a daily supplement as well as dietary changes. Blood&nbsp;tests showed raised blood lipids and her GP referred Hannah to a dietitian for lifestyle&nbsp;management. Hannah is very concerned and anxious about her health.</span></div>

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<div><a href="https://bit.ly/3lgXYwF" target="\_blank" rel="noopener">Her Anthropometry and Biochemical Values</a></div>

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<div style="line-height: 1.5;"><span style="font-size: 18pt;">Weight 67.5 kg (stable for past year)</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Height 1.65 m</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Waist circumference 83 cm</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Fasting glucose 5.2 mmol/L</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Fasting lipids</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Total cholesterol (TC) 6.9 mmol/L</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Low density lipoproteins (LDL) cholesterol 5.4 mmol/L</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">High density lipoproteins (HDL) cholesterol 1.5 mmol/L</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Triglycerides (TG) 2.2 mmol/L</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Liver function tests</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Albumin 36 g/L</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Protein 82 g/L</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Total bilirubin 5 ?mol/L</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Gamma glutamyl transpeptidase

(GGT) 60 U/L

Alkaline phosphatase (ALP) 160 U/L

Alanine aminotransferase (ALT) 60 U/L

Aspartate aminotransferase (AST) 40 U/L

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Clinical and Dietary

Past medical history

Medication/supplementation

Blood pressure (BP) 145/80 mmHg

Diet history

Breakfast

Chinese rice porridge made with soya milk (200 g)

Chinese bun (plain wheat flour) (40 g)

Pickled vegetables (75 g)

Mid-morning

Ryvita crackers (2 × 20 g)

Kaya (coconut jam) (15 g)

Fruit juice (190 mL)

Lunch (at local cafe)

Meat pie (150 g) or pasty (145 g) or battered fish

(170 g)

Chips (200 g)

Strawberry milk shake (300 mL)

Afternoon snack

Biscuits (e.g. oat based or shortbread) (3 × 13 g) or

cake, for example, chocolate/cream

&acute;clair (65 g) or</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">cake slice (35 g)</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Dinner &ndash; home  
cooked</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">White rice (180 g)</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Stir-fry (may be vegetables/ meat/  
combination), uses</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">oyster sauce and Chinese spices (360  
g)</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Soup (mainly stock-based with  
tomatoes and egg) 1</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">bowl (180 g)</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Fruit (e.g. apple) &ndash; 1 piece (112  
g)</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Ice cream (95 g)</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Evening snack</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Chocolate biscuits (2 &times; 18  
g)</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Crisps (40 g)</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Chinese cake (2 &times; 40  
g)</span></div>

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<div><span style="font-size: 16.7px;">You may like :&nbsp;</span><a style="background-color:  
#ffffff; font-size: 16.7px;" href="https://bit.ly/2Vs3kKK" target="\_blank" rel="noopener">Vitamin K,  
Uses and Health Benefit</a></div>

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<div style="line-height: 1.5;"><span style="font-size: 18pt;">Behaviour and Social  
Life</span></div>

<div style="line-height: 1.5;"><span style="font-size: 18pt;">Chinese culture influences her  
cooking, shopping and food beliefs Her mother lives with her and helps in caring for her children.  
She attends Yum Cha once a week with her family.&nbsp;<span style="font-size: 18pt;">This is a popular Chinese style of eating  
brunch or morning/afternoon tea, which is composed of various small dishes of foods (similar to  
tapas or mezze) Yoga 3 times per week.</span></div>

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<div style="line-height: 1.5;"><span style="font-size: 18pt;">Comment your answers in the  
comment box. The best answers will be selected and added to the post as an update with the  
name and email of the person that give the answer.</span></div>

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<div style="line-height: 1.5;"><span style="font-size: 18pt;">Question</span></div>

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<li style="text-align: left;"><span style="font-size: 18pt;">What other potential risk factors or

characteristics should you clarify in the assessment?

Describe the dietetic intervention?

Credit: Judy Lawrence, Pauline Douglas, Joan Gandy

By NutriSoft Team

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