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Case Study 1: Genetics and Hyperlipidemia

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

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<div>Her Anthropometry and Biochemical Values</div>

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<div style="line-height: 1.5;">Weight 67.5 kg (stable for the past year)</div>

<div style="line-height: 1.5;">Height 1.65 m</div>

<div style="line-height: 1.5;">Waist circumference 83 cm</div>

<div style="line-height: 1.5;">Fasting glucose 5.2 mmol/L</div>

<div style="line-height: 1.5;">Fasting lipids</div>

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

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

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

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

<div style="line-height: 1.5;">Liver function tests</div>

<div style="line-height: 1.5;">Albumin 36 g/L</div>

<div style="line-height: 1.5;">Protein 82 g/L</div>

<div style="line-height: 1.5;">Total bilirubin 5 ?mol/L</div>

<div style="line-height: 1.5;">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

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) 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

´clair (65 g) or</div>

<div style="line-height: 1.5;">cake slice (35 g)</div>

<div style="line-height: 1.5;">Dinner – home-cooked</div>

<div style="line-height: 1.5;">White rice (180 g)</div>

<div style="line-height: 1.5;">Stir-fry (maybe vegetables/ meat/ combination), uses</div>

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

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

<div style="line-height: 1.5;">bowl (180 g)</div>

<div style="line-height: 1.5;">Fruit (e.g. apple) – 1 piece (112 g)</div>

<div style="line-height: 1.5;">Ice cream (95 g)</div>

<div style="line-height: 1.5;">Evening snack</div>

<div style="line-height: 1.5;">Chocolate biscuits (2 × 18 g)</div>

<div style="line-height: 1.5;">Crisps (40 g)</div>

<div style="line-height: 1.5;">Chinese cake (2 × 40 g)</div>

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<div style="line-height: 1.5;">Behavior and Social Life</div>

<div style="line-height: 1.5;">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. 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.</div>

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<div style="line-height: 1.5;">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 who gave the answer.</div>

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<div style="line-height: 1.5;">Question</div>

<li style="text-align: left;">What other potential risk factors or characteristics should you clarify in the assessment?

<li style="text-align: left;">Describe the dietetic intervention.

<div style="line-height: 1.5;">Credit: Judy Lawrence, Pauline Douglas, Joan Gandy</div>

<div style="line-height: 1.5;">By NutriSoft Team</div>

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<div>Try Nutrisoft's free service<br style="color: #0e101a; font-size: 17.5px;" />Ask a nutritionist</div>

<div>Nutrition Calculator</div>

<div>Normal Laboratory Values</div>

<div>Medical Abbreviations</div>