

## **Case: Peter Reynolds**

### **Patient Information**

- **Age:** 38 years
- **Gender:** Male
- **Indigenous Status:** Not Aboriginal and/or Torres Strait Islander
- **Year:** 2024
- **ICPC-2 Codes:** T – Endocrine/Metabolic

### **Competency Outcomes:**

#### **1. Communication and Consultation Skills:**

- Demonstrates clear and empathetic communication to gather comprehensive information.
- Provides a clear explanation of the suspected diagnosis and importance of further testing.

#### **2. Clinical Information Gathering and Interpretation:**

- Takes a focused history, including symptoms of fatigue, weight loss, and salt cravings.
- Identifies key physical signs and correlates them with possible adrenal insufficiency.

#### **3. Diagnosis, Decision-Making, and Reasoning:**

- Formulates a differential diagnosis considering adrenal insufficiency and other related conditions.
- Plans appropriate first-line investigations to confirm the diagnosis.

#### **4. Clinical Management and Therapeutic Reasoning:**

- Outlines initial management, including urgent treatment if needed.
- Provides a structured plan for patient education and support.

#### **5. Preventive and Population Health:**

- Discusses the importance of long-term monitoring and management in chronic adrenal insufficiency.
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### Instructions to the Candidate:

- **Review** the patient information and present a focused history-taking approach.
  - **Formulate** an initial differential diagnosis and discuss the necessary investigations.
  - **Outline** an appropriate management plan, including education and safety measures.
  - **You have 15 minutes** for this clinical encounter.
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### Patient Record Summary:

- **Name:** Peter Reynolds
  - **Age:** 38 years
  - **Gender:** Male
  - **Indigenous Status:** Not Aboriginal or Torres Strait Islander
  - **Allergies and Adverse Reactions:** Nil known
  - **Medications:** None.
  - **Past Medical History:**
    - Previously healthy, with no chronic conditions.
  - **Social History:**
    - Works as a project manager in construction.
    - Non-smoker, occasional alcohol use.
    - Enjoys hiking but has felt too fatigued to participate over the past few months.
  - **Family History:**
    - Father: Type 2 diabetes.
    - Mother: Rheumatoid arthritis.
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## Scenario:

Peter Reynolds, a 38-year-old project manager, presents with a 3-month history of **progressive fatigue, unintentional weight loss** (approximately 5 kg), and **occasional nausea**. He reports feeling lightheaded when standing up.

Peter denies recent infections, trauma, or significant stressors beyond his usual job pressures. He has not experienced abdominal pain, but he does mention that he often feels weak and struggles with maintaining energy levels throughout the day.

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## Clinical Examination Findings:

- **General Appearance:** Appears tired, cooperative.
  - **Vital Signs:**
    - BP: 98/62 mmHg (drops to 85/55 mmHg on standing)
    - HR: 88 bpm, regular
    - Temp: 36.5°C
    - RR: 14/min
    - SpO<sub>2</sub>: 98% on room air
  - **Physical Examination:**
    - Hyperpigmentation noted on the knuckles and oral mucosa.
    - No goiter or thyroid nodules.
    - Abdomen soft, non-tender with no organomegaly.
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## Examiner Information:

### Prompts and Suggested Answers:

#### 1. History and Symptom Clarification (Ask):

- **Prompt:** What additional questions would you ask Peter to further assess his condition?
- **Suggested Answer:** I would ask about symptoms such as abdominal pain, joint pain, mood changes (e.g., irritability or depression), or any recent illnesses. I would also inquire about any recent significant life events or stressors and whether he has noticed any changes in appetite or muscle strength.

#### 2. Differential Diagnosis and Red Flags (Assess):

- **Prompt:** What is your initial differential diagnosis, and what are the key signs pointing toward adrenal insufficiency?
- **Suggested Answer:** The main differential diagnosis is **primary adrenal insufficiency (Addison's disease)**, given the fatigue, hyperpigmentation, weight loss, and postural hypotension. Other considerations might include chronic fatigue syndrome or thyroid dysfunction. The hyperpigmentation, salt cravings, and orthostatic hypotension are red flags for Addison's disease.

#### 3. Initial Investigations (Advise):

- **Prompt:** What initial investigations would you order to confirm the diagnosis?
- **Suggested Answer:** I would order:
  - **Serum cortisol and ACTH levels** (early morning sample).
  - **Electrolytes**, specifically looking for hyponatremia and hyperkalaemia.
  - **Renin and aldosterone** levels for adrenal function assessment.
  - **Autoantibody screening** for adrenal antibodies if autoimmune adrenalitis is suspected.

#### 4. Management Plan and Urgent Considerations (Assist):

- **Prompt:** How would you manage Peter's condition if adrenal insufficiency is confirmed?

- **Suggested Answer:** If confirmed, I would start Peter on **glucocorticoid replacement therapy** (e.g., hydrocortisone) and **mineralocorticoid replacement** (e.g., fludrocortisone) if needed. I would educate him about **stress dosing** during illness or surgery and ensure he carries a medical alert bracelet. I would also arrange for follow-up with an endocrinologist for long-term management.

#### 5. Patient Education and Safety (Arrange):

- **Prompt:** How would you educate Peter on living with adrenal insufficiency and handling emergencies?
- **Suggested Answer:** I would explain that adrenal insufficiency is a chronic condition requiring lifelong medication. I would emphasize the importance of adherence and inform him about signs of an adrenal crisis (e.g., severe weakness, confusion, vomiting). I would teach him how to use an emergency **injectable hydrocortisone kit** and advise that he seeks immediate medical help if he experiences symptoms of crisis. Regular follow-ups for monitoring and adjustments to his treatment plan would be essential.

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#### Examination Checklist:

- **Clinical Knowledge and Skills:**
  - Demonstrates an understanding of the signs and symptoms associated with adrenal insufficiency, including fatigue, weight loss, and hyperpigmentation.
  - Identifies key red flags, such as postural hypotension and salt cravings, which support the diagnosis.
  - Outlines appropriate first-line investigations, such as serum cortisol, ACTH levels, and electrolyte testing.
- **Patient Communication:**
  - Engages in clear, empathetic communication, addressing the patient's concerns and explaining the potential diagnosis.
  - Provides information on the importance of the investigations and how they will guide diagnosis and management.
  - Discusses management plans and next steps in a way that is easy for the patient to understand and follow.

- **Evidence-Based Practice:**

- Recommends evidence-based investigations and management plans for suspected adrenal insufficiency.
- Explains the importance of glucocorticoid and mineralocorticoid replacement if the diagnosis is confirmed.
- Educates the patient on crisis management, including stress dosing and the use of emergency hydrocortisone, according to current guidelines.

This case tests the candidate's ability to recognize and manage the first presentation of adrenal insufficiency, emphasizing history-taking, identification of key symptoms, and education on emergency management.