

Cardiogenic Shock

Management After Blunt Chest Trauma



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พย.ม การพยาบาลผู้ใหญ่ พยาบาลวิชาชีพชำนาญการ
หน่วยงานการพยาบาลผู้ป่วยอุบัติเหตุ-ฉุกเฉิน
โรงพยาบาลมหาราชนครราชสีมา



Thoracic injury can be life-threatening, especially if not promptly identified and treated during the **primary survey**

- Life-Threatening Injuries**
- Potentially Life-Threatening Injuries**

Objective

- Identify and describe treatment of the following life-threatening injuries & potentially during the **Primary survey**
- Identify and describe treatment of the following life-threatening injuries & potentially during the **Secondary survey**



Mechanism

< 10% Blunt

15-30% Penetrating

ที่จำเป็นต้องผ่าตัด

****Assess**

Life Threatening Injury

Life-Threatening Injuries



1. Airway Obstruction
2. Tracheobronchial Tree Injury
3. Tension Pneumothorax
4. Open Pneumothorax
5. Massive Hemothorax
6. Cardiac Tamponade



PRIMARY SURVEY

(A) Airway Obstruction & Stabilizing C-Spine Motion

Assessment

- Rapid response
- Patency of the Airway – Secure Airway?

Treatment: Cricothyroidotomy, Supraglottic Airway Devices, Intubation, Surgical Airway



(B) Breathing & Ventilation

Look: Respiratory Rate, O₂Saturation, Pattern, Effort
if Hypoxia → 100% O₂ Non – Rebreathing Mask ≥ 10 LPM

Listen: Absent/Decrease breath sound, Muffled heart sound

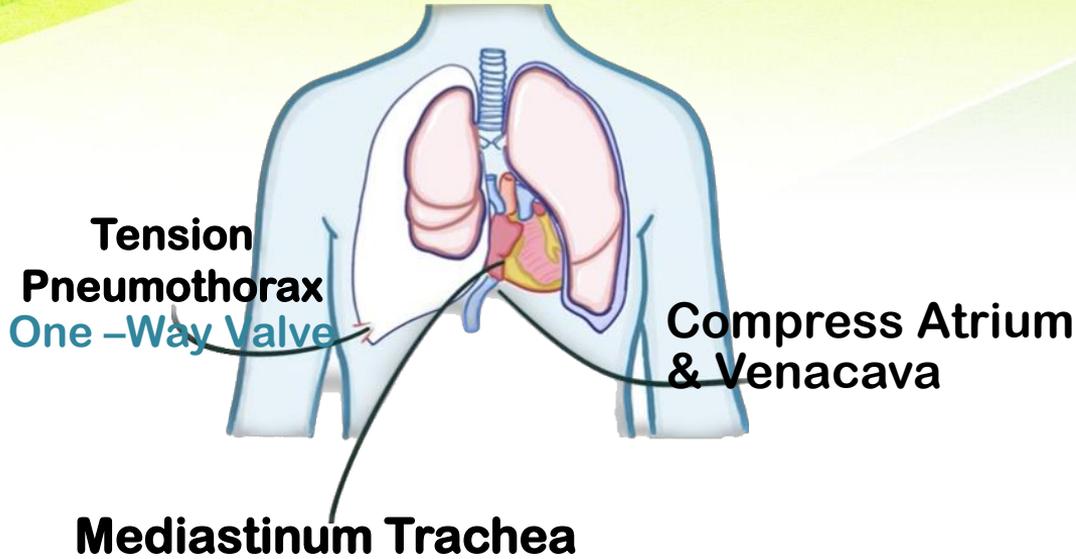
Feel: Tenderness, Crepitus palpation, Subcutaneous Emphysema

Assessment: EtCO₂, O₂Saturation

Treatment: Pericardiocentesis, Thoracocentesis, Intrachest drain (ICD)
CXR

Pneumothorax

Air in Pleural Space



Symptoms **Obstructive Shock**

- Altered Mental Status
- ↑ Jugular vein pressure
- ↓ CO, Hypotension
- Chest discomfort
- Shortness of Breath
- Hypoxia
- ↓ Air Entry

Assessment

- Hyperresonance Percussion
- Absent Breath sound

Open chest wound

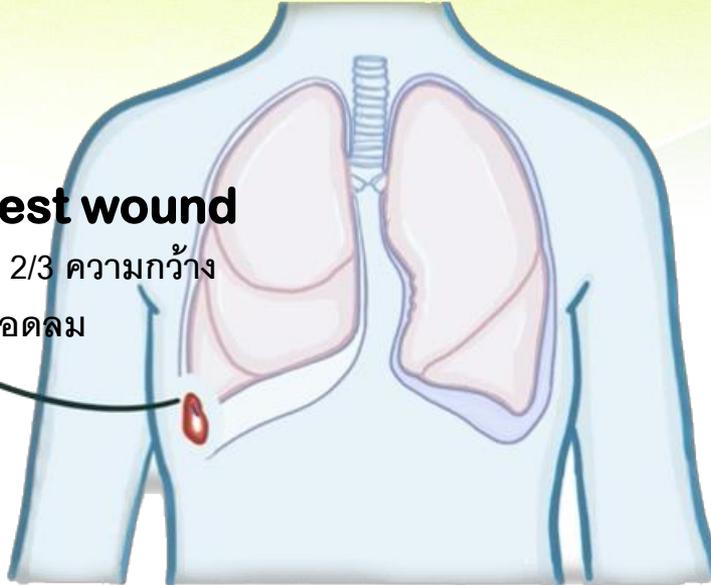
Sucking Chest wound



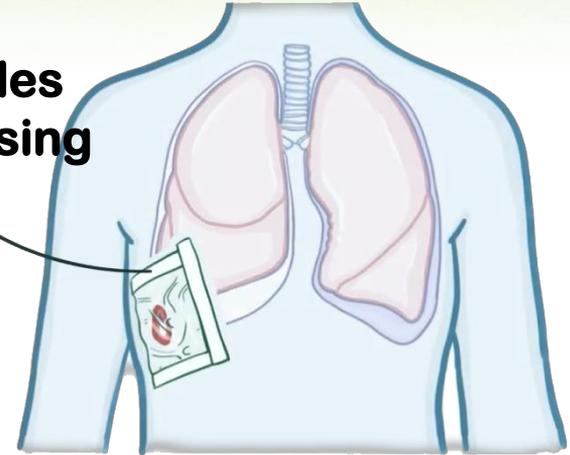
Open chest wound

ขนาดแผล > 2/3 ความกว้าง

หลุดดลม

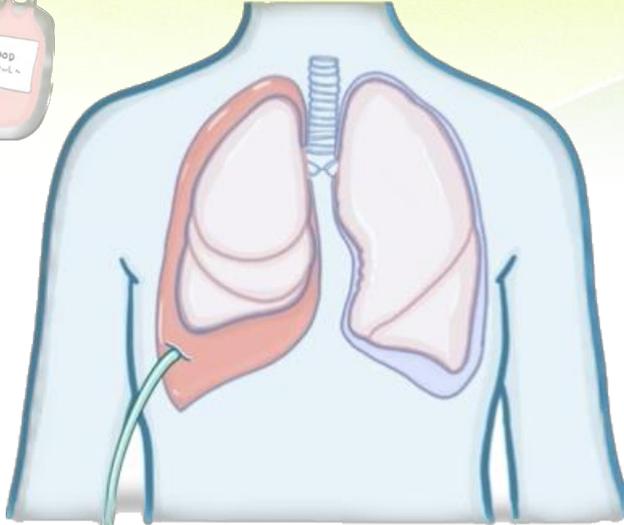


3-sides Dressing



Massive Hemothorax

Blood in Pleural Space



ICD blood drained > 1,500 ml.

200 cc./hr. ต่อเนื่องนาน 2-4 ชม. → Thoracotomy

MTB

Symptoms Obstructive Shock & Hemorrhagic Shock

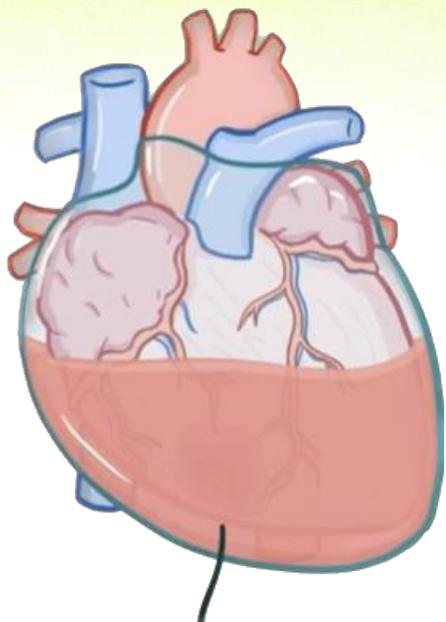
- Altered Mental Status
- ↑ Jugular vein pressure
- ↓ CO, Hypotension
- Chest discomfort
- Shortness of Breath
- Hypoxemia
- ↓ Air Entry

Assessment

- Dullness Percussion
- Absent Breath sound



Cardiac Tamponade



- ✓ Pericardial Effusion
- ✓ Electrical Alternans
- ✓ Jugular vein could be Flat - Hypovolemia

Muffled Heart Sound

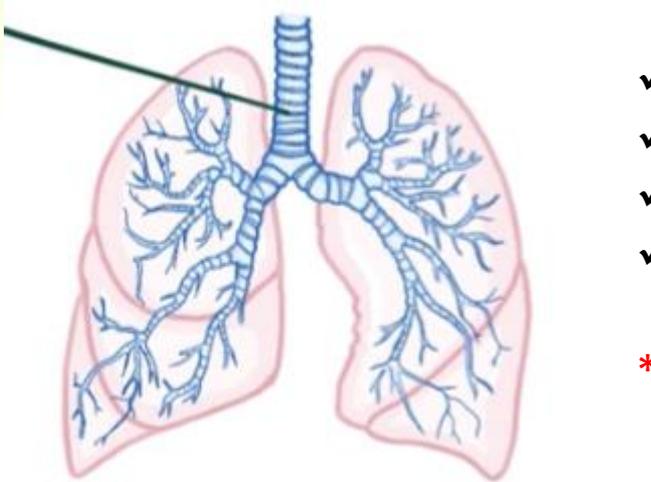
Hypovtension

Jugular vein Flat

Beck's Triad



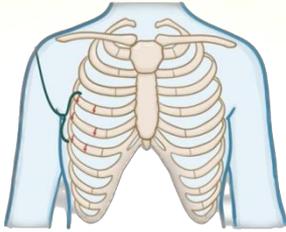
Tracheo Bronchial Tree Injury



- ✓ **Mediastinum**
- ✓ Pneumothorax
- ✓ Subcutaneous Emphysema
- ✓ Hemoptysis

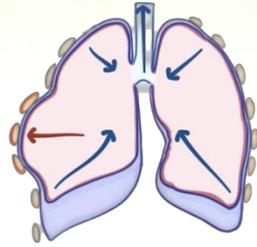
**** ICD, Tracheostomy tube, Repair**

Potentially Life-Threatening Injuries



Flail Chest

- ✓ Pain control
- ✓ Oxygenation & Ventilation
- ✓ Restrict IV Fluid



Paradoxical
movement

Coronary Vessel Dissection

- ✓ Catheterization
- ✓ PCI

Aortic Injury

- ✓ Wide Mediastinum > 8 cms.
- ✓ CT Angiography
- ✓ Surgical Repair (ยกเว้น gr.1)

Diaphragmatic Injury

- ✓ Bowel sound in Thorax

Myocardial Contusion/Concussion/ Rupture



Sudden Arrhythmia

- ✓ Cardiogenic Shock
- ✓ VF
- ✓ Asystole
- ✓ Cardiac arrest



**ACLS
Protocol**



Thoracotomy

MTB



CAUSES

(C) Circulation

Bleeding = Hypovolemia

Obstruction = CO ↓

Inadequate Heart Pumping = CO ↓

Assessment: SBP, Heart rate, O₂Saturation, Signs of Shock, FAST
Sources of Bleeding, Organ perfusion, Mental status

Treatment: 2 Large-Bore IV Lines, Warm Isotonic, ABG, Trauma Lab, G/M,
MTP, UA, Hct., Foley cath, Stop bleeding, Thoracotomy, Stop bleeding Agent

(D) Disability

GCS

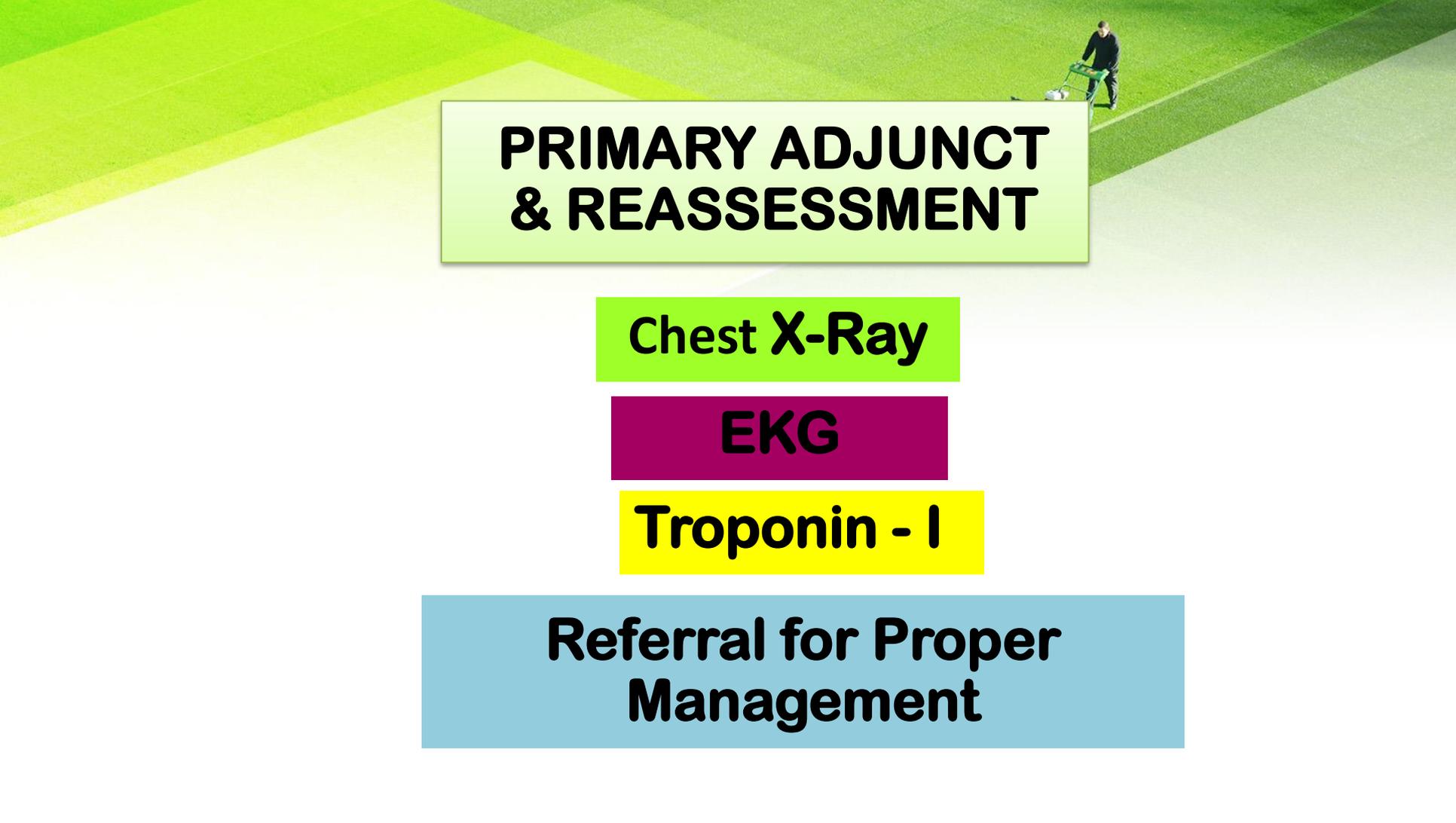
Pupill

Motor Power

(E) Exposure

- Undress & Log rolling
- Assess Body Temperature
- Keep Warm





PRIMARY ADJUNCT & REASSESSMENT

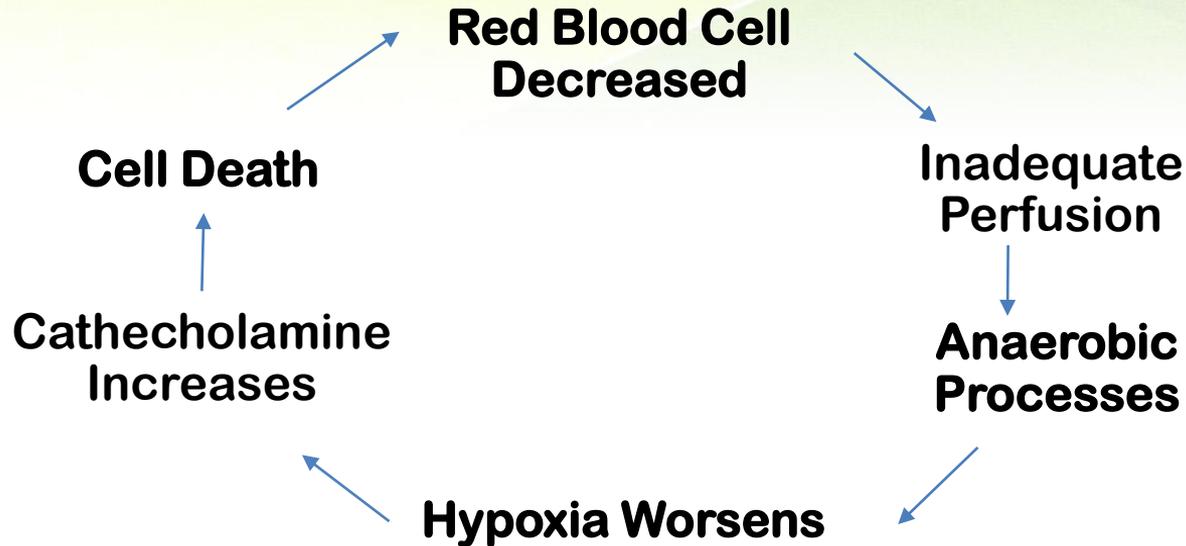
Chest X-Ray

EKG

Troponin - I

**Referral for Proper
Management**

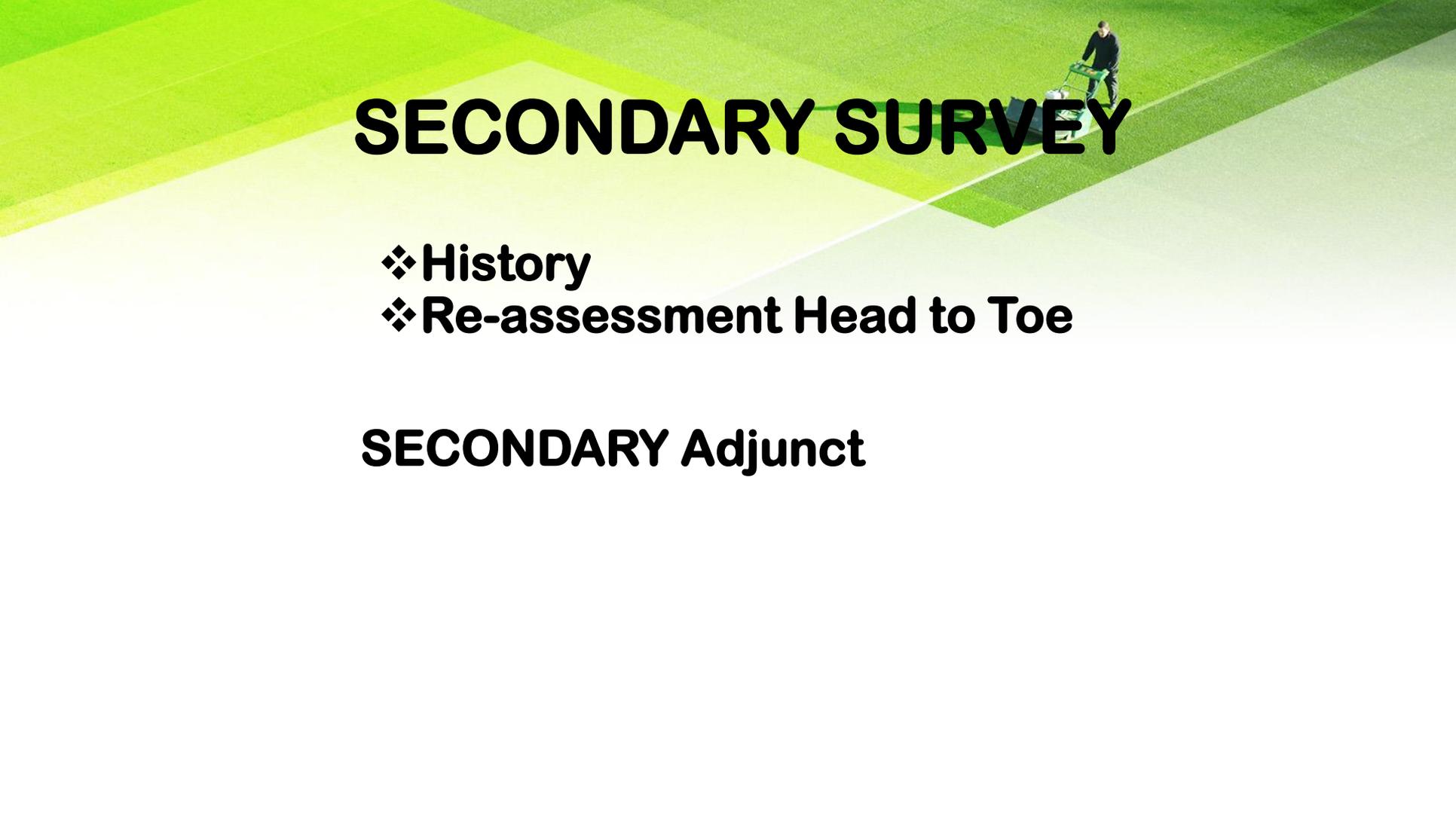
Shock Progression



A high-angle photograph of a person in a dark jacket and pants pushing a green lawnmower across a well-manicured green lawn. The lawn is divided into sections by white lines, and the background shows a clear blue sky.

วิเคราะห์ Scenario





SECONDARY SURVEY

- ❖ **History**

- ❖ **Re-assessment Head to Toe**

SECONDARY Adjunct



ขอบคุณค่ะ