# Skin incisions

Skin incisions

- Skin incisions ( Figure 7.6 ) are made using a scalpel with the blade pressed firmly down at right angles to the skin and then drawn gently across the skin in the desired direction to create a clean incision. It is important not to incise the skin obliquely as such a shearing mechanism can lead to necrosis of - the undercut edge. The incision is facilitated by tension being applied across the line of the incision by the fingers of the non-dominant hand, but the surgeon must ensure that at no time is the scalpel blade directed at their own fingers as any slip may result in a self-inflicted injury . Blades for skin incisions usually have a curved cutting margin, while those used for an arteriotomy , abscess drainage or drain site insertion have a sharp tip ( Figure 7.7 ). Scalpels should at all times be passed in a kidney dish rather than by a direct hand-to-hand process as this can lead to a needle stick-like injury . When planning a skin incision a few factors should be con - - sidered: 1 Skin tension lines and cosmesis . Langer’s lines (representing the orientation of dermal collagen fibres) have been used to guide skin incision placement; however, the clinical relevance of these lines has been questioned. The use of relaxed skin tension lines (RSTLs), which follow - creases formed when the skin is pinched and relaxed, have increasingly been employed to guide skin incision place - ment, especially in the head and neck. In practice, placing - incisions based on natural body creases and wrinkles can reduce tension on the suture line and camouflage scars. Figure 7.6 Figure 7.7 Charles McBurney , 1854–1913, Professor of Surgery , Columbia College of Physicians and Surgeons, New Y ork, NY , USA. In 1889 McBurney published a paper on appendicitis in which he stated ‘I believe that in every case the seat of greatest pain “determined by the pressure of one finger” has been very exactly between an inch and a half and two inches from the anterior spinous process of the ilium on a straight line drawn from that process to the umbilicus.’ Hermann Johann Pfannenstiel , 1862–1909, gynaecologist, Breslau, Germany (now Wroc ł aw , Poland), described this incision in 1900. Emil Theodor Kocher , 1841–1917, Professor of Surgery , Berne, Switzerland. In 1909, he was awarded the Nobel Prize in Physiology or Medicine for his work on the thyroid. 2 Anatomical structure . Incisions should avoid bony prominences and take into consideration underlying structures, such as nerves and vessels. Surface landmarks, previous operations and body habitus also need to be con - sidered. 3 Adequate access for the procedure . The incision must be functionally e ff ective as any compromise purely on cosmetic grounds may render the operation ine ff ective or even dangerous. Occasionally , it may be necessary to excise a circular skin lesion. An elliptical rather than a circular incision is pre - ferred to enhance tension-free, aesthetic tissue approximation, remembering the rule of thumb that ‘an elliptical incision must be at least thr ee times as long as it is wide for the wound to heal without tension’. Occasionally , ‘dog ears’ remain in the corner of elliptical incisions despite adequate care ha ving been

Skin incisions in general surgery. A, sternotomy; B, periareolar; C, inframammary; D, subcostal; E, paramedian; F , transverse; G, /uni00A0 periumbilical; H, McBurney’s; I, Pfannenstiel; J, Kocher’s incision for thyroidectomy; K, clamshell thoracotomy; L, chevron incision; M, midline incision; N, inguinal incision (courtesy of Dr Vinay Timothy Kuruvilla). 15 10 11 23 22 Scalpel blade sizes and shapes. The 22-blade is often used for abdominal incisions, the 11-blade for arteriotomy and abscess drainage and the 15-blade for minor surgical procedures.

Figure 7.8 taken during the formation and primary closure of an elliptical wound. In these situations, it is advisable to pick up the ‘dog ear’ with a skin hook and excise it as shown in Figure 7.8 allows for a satisfactory cosmetic outcome.

X Y X Dealing with a ‘dog ear’ at the corner of an elliptical incision.

Skin incisions

- Skin incisions ( Figure 7.6 ) are made using a scalpel with the blade pressed firmly down at right angles to the skin and then drawn gently across the skin in the desired direction to create a clean incision. It is important not to incise the skin obliquely as such a shearing mechanism can lead to necrosis of - the undercut edge. The incision is facilitated by tension being applied across the line of the incision by the fingers of the non-dominant hand, but the surgeon must ensure that at no time is the scalpel blade directed at their own fingers as any slip may result in a self-inflicted injury . Blades for skin incisions usually have a curved cutting margin, while those used for an arteriotomy , abscess drainage or drain site insertion have a sharp tip ( Figure 7.7 ). Scalpels should at all times be passed in a kidney dish rather than by a direct hand-to-hand process as this can lead to a needle stick-like injury . When planning a skin incision a few factors should be con - - sidered: 1 Skin tension lines and cosmesis . Langer’s lines (representing the orientation of dermal collagen fibres) have been used to guide skin incision placement; however, the clinical relevance of these lines has been questioned. The use of relaxed skin tension lines (RSTLs), which follow - creases formed when the skin is pinched and relaxed, have increasingly been employed to guide skin incision place - ment, especially in the head and neck. In practice, placing - incisions based on natural body creases and wrinkles can reduce tension on the suture line and camouflage scars. Figure 7.6 Figure 7.7 Charles McBurney , 1854–1913, Professor of Surgery , Columbia College of Physicians and Surgeons, New Y ork, NY , USA. In 1889 McBurney published a paper on appendicitis in which he stated ‘I believe that in every case the seat of greatest pain “determined by the pressure of one finger” has been very exactly between an inch and a half and two inches from the anterior spinous process of the ilium on a straight line drawn from that process to the umbilicus.’ Hermann Johann Pfannenstiel , 1862–1909, gynaecologist, Breslau, Germany (now Wroc ł aw , Poland), described this incision in 1900. Emil Theodor Kocher , 1841–1917, Professor of Surgery , Berne, Switzerland. In 1909, he was awarded the Nobel Prize in Physiology or Medicine for his work on the thyroid. 2 Anatomical structure . Incisions should avoid bony prominences and take into consideration underlying structures, such as nerves and vessels. Surface landmarks, previous operations and body habitus also need to be con - sidered. 3 Adequate access for the procedure . The incision must be functionally e ff ective as any compromise purely on cosmetic grounds may

render the operation ine ff ective or even dangerous. Occasionally , it may be necessary to excise a circular skin lesion. An elliptical rather than a circular incision is pre - ferred to enhance tension-free, aesthetic tissue approximation, remembering the rule of thumb that ‘an elliptical incision must be at least thr ee times as long as it is wide for the wound to heal without tension’. Occasionally , ‘dog ears’ remain in the corner of elliptical incisions despite adequate care ha ving been

Skin incisions in general surgery. A, sternotomy; B, periareolar; C, inframammary; D, subcostal; E, paramedian; F , transverse; G, /uni00A0 periumbilical; H, McBurney’s; I, Pfannenstiel; J, Kocher’s incision for thyroidectomy; K, clamshell thoracotomy; L, chevron incision; M, midline incision; N, inguinal incision (courtesy of Dr Vinay Timothy Kuruvilla). 15 10 11 23 22 Scalpel blade sizes and shapes. The 22-blade is often used for abdominal incisions, the 11-blade for arteriotomy and abscess drainage and the 15-blade for minor surgical procedures.

Figure 7.8 taken during the formation and primary closure of an elliptical wound. In these situations, it is advisable to pick up the ‘dog ear’ with a skin hook and excise it as shown in Figure 7.8 allows for a satisfactory cosmetic outcome.

X Y X Dealing with a ‘dog ear’ at the corner of an elliptical incision.

Skin incisions

- Skin incisions ( Figure 7.6 ) are made using a scalpel with the blade pressed firmly down at right angles to the skin and then drawn gently across the skin in the desired direction to create a clean incision. It is important not to incise the skin obliquely as such a shearing mechanism can lead to necrosis of - the undercut edge. The incision is facilitated by tension being applied across the line of the incision by the fingers of the non-dominant hand, but the surgeon must ensure that at no time is the scalpel blade directed at their own fingers as any slip may result in a self-inflicted injury . Blades for skin incisions usually have a curved cutting margin, while those used for an arteriotomy , abscess drainage or drain site insertion have a sharp tip ( Figure 7.7 ). Scalpels should at all times be passed in a kidney dish rather than by a direct hand-to-hand process as this can lead to a needle stick-like injury . When planning a skin incision a few factors should be con - - sidered: 1 Skin tension lines and cosmesis . Langer’s lines (representing the orientation of dermal collagen fibres) have been used to guide skin incision placement; however, the clinical relevance of these lines has been questioned. The use of relaxed skin tension lines (RSTLs), which follow - creases formed when the skin is pinched and relaxed, have increasingly been employed to guide skin incision place - ment, especially in the head and neck. In practice, placing - incisions based on natural body creases and wrinkles can reduce tension on the suture line and camouflage scars. Figure 7.6 Figure 7.7 Charles McBurney , 1854–1913, Professor of Surgery , Columbia College of Physicians and Surgeons, New Y ork, NY , USA. In 1889 McBurney published a paper on appendicitis in which he stated ‘I believe that in every case the seat of greatest pain “determined by the pressure of one finger” has been very exactly between an inch and a half and two inches from the anterior spinous process of the ilium on a straight line drawn from that process to the umbilicus.’ Hermann Johann Pfannenstiel , 1862–1909, gynaecologist, Breslau,

Germany (now Wroc ł aw , Poland), described this incision in 1900. Emil Theodor Kocher , 1841–1917, Professor of Surgery , Berne, Switzerland. In 1909, he was awarded the Nobel Prize in Physiology or Medicine for his work on the thyroid. 2 Anatomical structure . Incisions should avoid bony prominences and take into consideration underlying structures, such as nerves and vessels. Surface landmarks, previous operations and body habitus also need to be con - sidered. 3 Adequate access for the procedure . The incision must be functionally e ff ective as any compromise purely on cosmetic grounds may render the operation ine ff ective or even dangerous. Occasionally , it may be necessary to excise a circular skin lesion. An elliptical rather than a circular incision is pre - ferred to enhance tension-free, aesthetic tissue approximation, remembering the rule of thumb that ‘an elliptical incision must be at least thr ee times as long as it is wide for the wound to heal without tension’. Occasionally , ‘dog ears’ remain in the corner of elliptical incisions despite adequate care ha ving been

Skin incisions in general surgery. A, sternotomy; B, periareolar; C, inframammary; D, subcostal; E, paramedian; F , transverse; G, /uni00A0 periumbilical; H, McBurney’s; I, Pfannenstiel; J, Kocher’s incision for thyroidectomy; K, clamshell thoracotomy; L, chevron incision; M, midline incision; N, inguinal incision (courtesy of Dr Vinay Timothy Kuruvilla). 15 10 11 23 22 Scalpel blade sizes and shapes. The 22-blade is often used for abdominal incisions, the 11-blade for arteriotomy and abscess drainage and the 15-blade for minor surgical procedures.

Figure 7.8 taken during the formation and primary closure of an elliptical wound. In these situations, it is advisable to pick up the ‘dog ear’ with a skin hook and excise it as shown in Figure 7.8 allows for a satisfactory cosmetic outcome.

X Y X Dealing with a ‘dog ear’ at the corner of an elliptical incision.

---

Revision #1
Created 2025-12-31 15:26:04 UTC by Omar Ayman
Updated 2025-12-31 15:26:04 UTC by Omar Ayman