The Directa Luxator is a new tooth extraction instrument which has the clinical validity for cutting the periodontal ligaments. Luxator is an instrument that is used for the extraction of teeth in a way that differs from traditional extraction methods. Its form is similar to existing elevators but its most significant feature is that the blade tip is very thin and highly rigid, the instrument therefore resembles a periodontal ligament knife that could be used for extractions. The Luxator instruments are provided in 14 different types all of them with there individual purpose for different types of teeth. The Luxator instruments are colour and number coded for guidance which instrument to choose chair side for extraction.
Notes:

The great difference with the Luxator instrument is the mode of action when using the instrument. The Luxator instrument is used for rocking and cutting versus an elevator which is used for lifting and prying. The Luxator instrument avoids placing undue pressure on adjacent teeth. The tip of Luxator is extremely fine and sharp and can easily be damaged if used as an elevator. The tip is not designed for strong elevating forces. The operation is performed with minimum of tissue damage, bleeding and postoperative pain.
Do not use as an elevator!
The tip is extremely fine and sharp
and can be damaged if used as an
elevator. The tip is not designed
for strong elevating forces.

Notes:

Never lever with Luxator extraction
instrument as it is likely that you will
damage the thin cutting edge irreparably.
Luxator extraction instrument is specially
designed surgical cutting instrument, not
levering instrument such as Elevators.
Luxator instrument is specially designed for extractions of teeth. The fine tapering blade compresses the alveolar, cuts the membrane and gently eases the tooth from the alveolar socket. This way the Luxator® instrument will preserve bone integrity and perform less traumatic extractions.
Ergonomic handle:

Designed with optimal tactility and control in focus!

Notes:

The handle is ergonomically designed for optimal tactility and control. This is the reason behind the development of a quite large handle. Place your index finger at the point corresponding the maximum insertion of instrument in alveolar. The index finger also serves as a stop on occlusal surface of adjacent tooth.
Luxation is the loosening of the tooth from the alveolar socket through disruption of the periodontal ligament fibres. Although the traditional types of elevators can be used for cutting off periodontal membrane to a certain degree, it is unable to cut sufficiently because of the blade thickness. The blade of Luxator is made of extremely thin hard metal and when applying the Luxator to the extraction procedures, the tactile cutting experience will be different.
This picture shows how the Luxator is introduced vertically into the periodontal space, in contrast to elevator which are used by applying horizontal forces to rupture the periodontal ligament. Usually compact bone is thickest on buccal side, which contributes to the risk for fractures of the alveolar wall. Therefore first luxate palatally/lingually. This compresses the alveolar bone and creates space for the root to move in a palatal/lingual direction when the instrument is inserted on buccal side.
Luxation is the loosening of the tooth from the alveolar socket through disruption of the periodontal ligament fibres. The blade of Luxator tip is very thin and highly rigid, the instrument therefore resembles a periodontal ligament knife that could be used for extractions.
Notes:

Tooth extraction is rarely a simple procedure. A successful extraction is when the entire tooth is removed with a minimum of trauma to the adjacent, remaining tissues. To achieve this, the best success rate includes knowledge of tooth morphology, correct choice of technique, and the use of appropriate equipment.

Good buccal access even on a 7th molar

Design that only a practising dentist would appreciate!
Notes:

Cutting of the periodontal ligaments with the Luxator instrument can be performed with a minimum invasion of periodontal bone structures. Wound healing at extraction socket is rapid. Less post-extraction pain, swelling and a good prognosis due to the minimum invasion of extraction socket when using the Luxator, surrounding bone tissues can be well preserved.

In cases of implants a well preserved alveolar bone is of great importance. In a Swedish study on bacteremia after tooth extractions suggest that the pumping movements used in dental extraction may play an importance roll in pumping bacteria out into the bloodstream.
With a minimum of tissue damage, healing is quicker and the whole operation is less distressing both for the patient and surgical team alike.

Notes:

When the extraction of a tooth can be smoothly carried out because of unexpectedly speedy luxation it also means that the patient is more satisfied. Several studies have showed that delayed clinical healing significantly increased the prevalence of delayed recovery for lifestyle, oral function, late symptoms, and pain. Dry socket as a complication after extractions is associated with loss of the blood clot from the socket and exposure of the bony surface. It is thought to occur especially if excessive force was used during the extraction.
Notes:

Usually compact bone is thickest on buccal side. Therefore first luxate palatally/lingually. This compresses the alveolar bone and creates space for the root to move in a palatal/lingual direction when the instrument is inserted on buccal side.

- When extracting lower teeth support the mandible with your free hand to prevent excess pressure on the temporo mandibular joint.
- For upper lateral incisors insert in line with the angulation of the palate.
- Multiple-rooted teeth should be sectioned before luxating.

Continue with a slight twisting action to gently drive the tip into the socket. The thin and sharp tip cuts off the periodontal ligament, the alveolar bone is being compressed and the tooth gently removed from the alveolar.

Never lever with Luxator extraction instrument as it is likely that you will damage the thin cutting edge irreparably.

Luxator extraction instrument is specially designed surgical cutting instrument, not levering instrument such as Elevators.

Continue to two-thirds of length of root keeping close to the root wall. Avoid snagging the root.

To minimise trauma and bone damage study x-rays to establish the orientation of the tooth in relation to the patients bone structure. In particular:
- the location of the maxillary sinus in relation to the tooth
- 2nd and 3rd molar in maxilla and risk of fracture of maxillary tuberosities
- nerves and blood vessels in the mandible.

1. Place the tip axially in the periodontal space.
2. Continue with a slight twisting action to gently drive the tip into the socket.
3. Continue to two-thirds of length of root keeping close to the root wall.
4. Result.
Unfortunately, worldwide, tooth extraction is still one of the most common emergency dental treatments. It is therefore important to find methods for making this procedure as minimally invasive and safe as possible.

In this picture the size of the Luxator tips in comparison with a 0,5 mm pencil lead.
Notes:

Tooth extraction is rarely a simple procedure. A successful extraction is when the entire tooth is removed with a minimum of trauma to the adjacent, remaining tissues. To achieve this, the best success rate includes knowledge of tooth morphology, correct choice of technique, and the use of appropriate equipment.

In this picture – comparison with a delicate Gracy scaler.
The latest development in the Luxator series – the Dual Edge introduced to the dental market in the year 2005.

Dual Edge is intended for deep fractured and decayed roots.
The Luxator® instrument seen next to natural sized teeth in an anatomical model used for dental student training.

Notes:

Luxator compared with the sizes of the teeth in an anatomical model
The instrument now inserted into the periodontal space.

Notes:

Luxator compared with the sizes of the teeth in an anatomical model.
Using Luxator, once the periodontal ligaments are broken the tooth is actually “lifted” out of the alveolar pocket with a minimum of damage on the surrounding structures.
Notes:

Again, the fine, delicate and thin instrument inserted into the periodontal space – in this picture the case is a lower first molar.
Published articles:

“Luxator is an indispensable tool which ensures the extraction of tooth in a short time. If it is properly used, Luxator is evaluated as a safe and reliable instrument for tooth extraction.”
Tochimichi Mori, Rie Miyake. The Nippon Dental Review 2004;12 Vol 64/12:746

“Even though the Luxator look like a classical elevator, the mode of action of these two instruments have nothing in common. Luxator enables atraumatic extraction with less discomfort for the patient.”
Liebler M. Dental Practice South Asia Edition 2005; Jan-Feb Vo 4 No 2:14

Notes:

Sterilisation:
Autoclave, Dry Heat 180° C, Chemklav
However steam-sterilisation is recommended since Dry Heat and Chemclave is not included in the European norm EN 13060

Material:
Stainless Steel, PA6.6