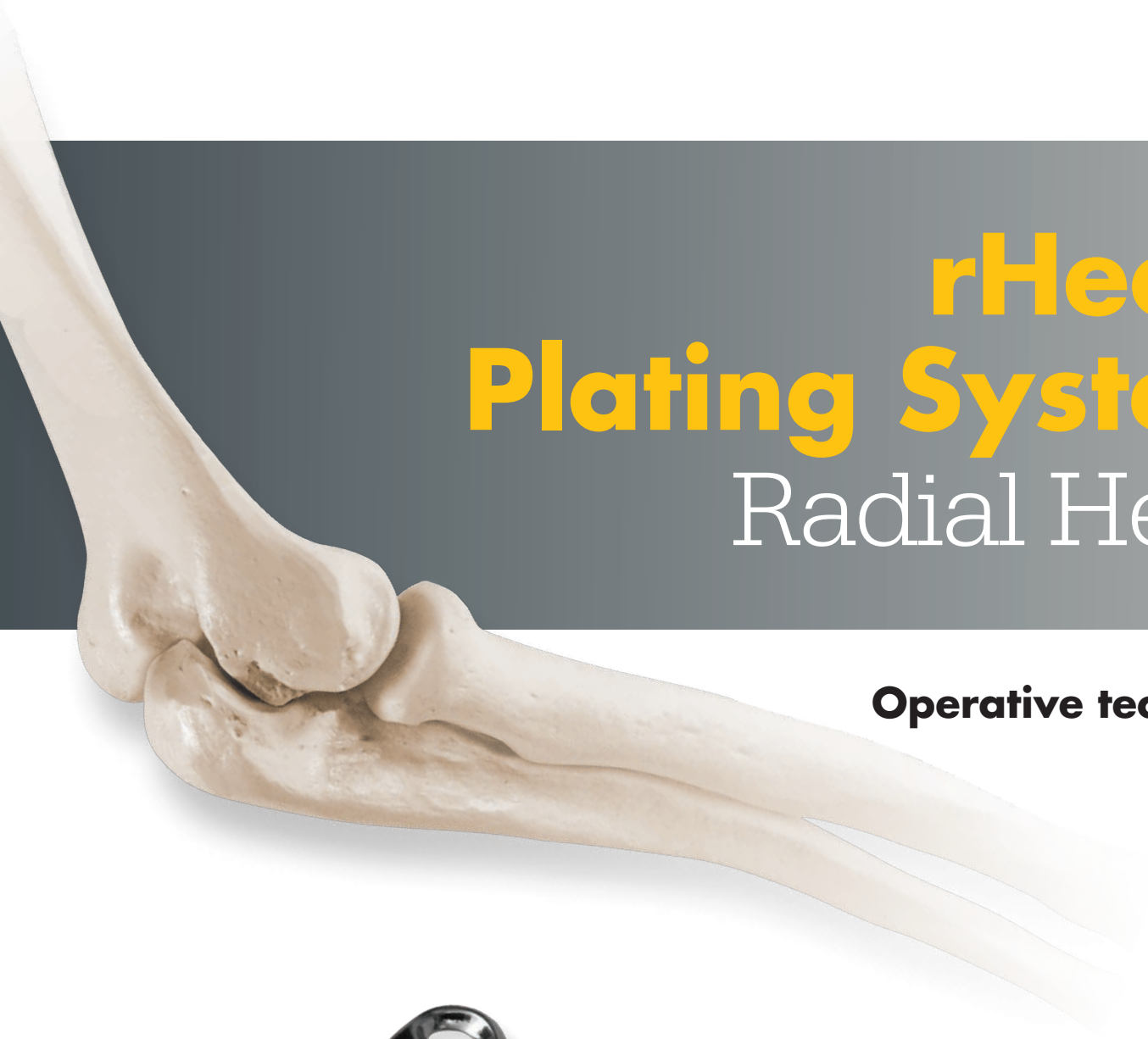


stryker

# rHead™ Plating System

## Radial Head

**Operative technique**



# rHead Plating System

## Radial Head

### Contents

<b>1. Introduction</b>	<b>3</b>
<b>2. Indications and contraindications</b>	<b>4</b>
<b>3. Operative technique</b>	<b>5</b>
The initial incision	5
Capsular exposure	5
Plate sizing	5
Plate preparation	5
Collect and secure fragments.	6
Drilling of holes	6
Measuring hole depth.	6
Screw placement.	7
Post-operative protocol	7

This publication sets forth detailed recommended procedures for using Stryker devices and instruments.

It offers guidance that you should heed, but, as with any such technical guide, each surgeon must consider the particular needs of each patient and make appropriate adjustments when and as required.

A workshop training is recommended prior to performing your first surgery.

All non-sterile devices must be cleaned and sterilized before use. Multicomponent instruments must be disassembled for cleaning. Please refer to the corresponding assembly/ disassembly instructions.

Please remember that the compatibility of different product systems have not been tested unless specified otherwise in the product labeling (Elbow Management Solutions Tray V15137).

See package insert (Instruction for Use V15131) for a complete list of potential adverse reactions (in IFU), contraindications, warnings and precautions. The surgeon must discuss all relevant risks including the finite lifetime of the device with the patient when necessary.

# Introduction

## **rHead Plating System**

The rHead Plating System consists of four different plates with various rim and neck designs to treat radial head fractures. The system offers traditional non-locking, low profile side screws to capture proximal fragments and locking screw options in the shaft of the plate.

The rHead Plating System is part of the Elbow Management Solutions Tray.

# Indications and contraindications

## Indications

The rHead Plating System is indicated for fractures of the proximal radius.

## Contraindications

Do not use the rHead Plating System in cases of:

- Severe osteopenic bone
- Inadequate bone quantity and / or bone quality
- Foreign body sensitivity to implant material
- Acute or chronic systemic or localized infections
- Any medical or surgical condition precluding the potential benefit of surgery
- Dependency on pharmaceutical drugs, drug abuse or alcoholism
- Lack of patient cooperation or mental illness
- Immuno-suppression

## Warnings and precautions

Please see package insert for warnings, precautions, adverse reactions (IFU), and other essential product information.

Stryker Systems have not been evaluated for safety and compatibility in Magnetic Resonance (MR) environment and have not been tested for heating or migration in the MR environment, unless specified otherwise on the product labels.

The safety of rHead Plating System in the MR environment is unknown. Scanning a patient who has this device may result in patient injury.



# Operative technique

## The initial incision

Make an 8 to 10cm incision centered over the radial capitellar joint.

**Care should be taken to avoid all neurovascular structures around the radial neck and head (Fig. 1).**

## Capsular exposure

Use either the extensor splitting approach of Hotchkiss' or lateral Kocher<sup>2</sup> approach through the interval between the anconeus and extensor carpi ulnaris muscles (Fig. 2). Radiographs should be taken to assess the fracture and locate all fragments.



Fig. 1



Fig. 2

## Plate sizing

Four plate sizes are available, (standard rim, small rim, standard long rim, and neck plate). Hold the chosen plate against the radial head to evaluate the proper size and contour (Fig. 3). In most cases, the plate will not need to be bent.

If bending is required for adequate contouring, the Plate Benders in the instrument set may be used for fine contouring.

## Plate preparation

If fragments can be reduced directly (in situ), the rHead plate may be applied directly to the radius and temporarily secured with a K-Wire.

The plate should always be positioned opposite to the proximal radial ulnar joint. The Hotchkiss safe zone is located on the opposite side of the radial tuberosity and is commonly described as an area of 105° on the radial head, free of impingement between the ulnar and radius.

This is centered laterally when the forearm is in neutral rotation.



Fig. 3



# Operative technique

## Collect and secure fragments

If fragments cannot be reduced or stabilized in situ, they should be removed from the surgical site and assembled on the back table (Fig. 4). Reassemble the radial head and secure with screws as needed (Fig. 5). Once the head is assembled, the situation is now simplified such that the head is a unit thus converting a multiple-part fracture into 2 pieces requiring stabilization with the plate.

Attach the correctly sized plate to the assembled radial head. Secure plate and radial head to shaft of radius (Fig. 6). Fix plate to shaft temporarily with a K-Wire (Fig. 7).

A non-locking screw (one of two outboard holes in standard plate) is inserted first into the head.

The head/plate construct is applied to the (rotationally appropriate) portion of the radial diaphysis and secured into the non-locking oblong hole. Radiographs confirming head/shaft reduction and plate placement/overall alignment are obtained prior to placing additional screws.

## Drilling of holes

Use the appropriate drill guide (threaded or non-threaded) in the respective hole (Fig. 8).

## Measuring hole depth

Use depth gauge to determine proper screw length (Fig. 9).



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9

# Operative technique

## Screw placement

Secure the remaining non-locked screws into the head and shaft in the same manner. Now, the locked screw (center hole) is placed into the head (standard plate) using the threaded drill guide and drill (1.8mm for 2.4mm locking screw and 2.0mm for 2.7mm screw).

Finally, the tripod screw (angled locked screw) is inserted into the plate using the appropriate drill guide (Fig. 10).

**It is critical that this be drilled with the aid of both live fluoroscopic imaging and direct inspection (with the aid of forearm rotation) to be absolutely certain that the articular surface is not violated with this screw.**



Fig. 10

The annular ligament and extensor interval is re-approximated when the Hotchkiss-type approach is utilized. In many injuries, the lateral collateral ligament may require repair if this has been traumatically disrupted or if the approach takes this down, it is repaired now. The remainder of the closure is performed in standard fashion.

Bone grafting is sometimes necessary to fill voids left from the original fracture. Depending on the intent of the bone graft, it can be applied early in the procedure or after placement of the plate. If additional structure support of the cortex is needed, bone grafting should be performed early in the procedure.

## Post-operative protocol

Early motion can begin in flexion and extension as well as supination and pronation for isolated fractures of the radial head and neck without ligament injury.

This usually begins within one to two days after the surgery. Ligament disruption or further de-stabilization should be handled more conservatively under the guidance of a trained and experienced therapist with specific protocols to address any Lateral Collateral Ligament (LCL) instability.

## Trauma & Extremities

This document is intended solely for the use of healthcare professionals. A surgeon must always rely on his or her own professional clinical judgment when deciding whether to use a particular product when treating a particular patient. Stryker does not dispense medical advice and recommends that surgeons be trained in the use of any particular product before using it in surgery.

The information presented is intended to demonstrate a Stryker product. A surgeon must always refer to the package insert, product label and/or instructions for use, including the instructions for Cleaning and Sterilization (if applicable), before using any Stryker product. Products may not be available in all markets because product availability is subject to the regulatory and/or medical practices in individual markets. Please contact your Stryker representative if you have questions about the availability of Stryker products in your area.

Stryker Corporation or its divisions or other corporate affiliated entities own, use or have applied for the following trademarks or service marks: rHead, Stryker. All other trademarks are trademarks of their respective owners or holders.

Content ID: RHD-ST-3, Rev 1, 08-2016

Copyright © 2016 Stryker



**Manufacturer:**

Stryker GmbH  
Bohnackerweg 1  
2545 Selzach  
Switzerland

[stryker.com](http://stryker.com)