



## **LTI Injury to Biceps – S703 – Nov 30 2007**

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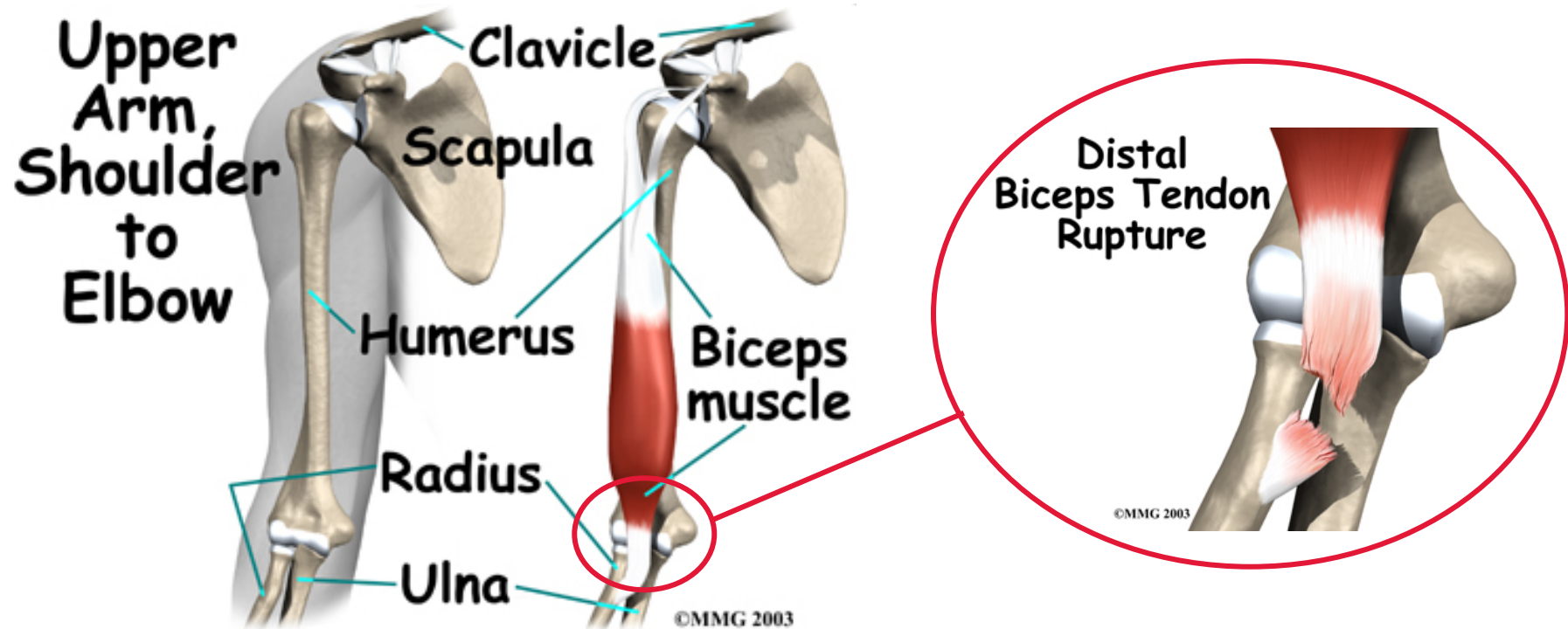
## The Event



At 13:10 on 30 November 2007, an incident occurred on the drill-floor of the MODU Sedco 703. A contractor, involved in assisting the running of 4 ½" production tubing into the Torosa-4 well-bore sustained an injury to the right bicep. The IP was assisting Transocean rig floor personnel in the setting of slips.

- The IP worked a 6:00 am to 6:00 pm shift. The floormen and other drill crew work a 12:00 am to 12:00 pm shift. The incident occurred at 13:10 hrs, 7 hrs 10 minutes into the IP's shift. The IP was 5 days into his roster.
- The equipment involved in the incident were tubing slips that weigh approximately 90 kg. All other tubing running equipment was correctly stowed.
- The temperature was around 33 degrees C, with high humidity and sunshine. Accessibility was good, with no obvious obstructions or hazards for the workers. The rig floor on Sedco 703 has good and clear open access.
- The only operations involved at the time were running tubing.

## The Injury



**The tendon that connects the Biceps muscle to the Ulna below the elbow ruptured. This must be reconnected using surgery.**

**Six to Eight weeks of intensive post operative physiotherapy are followed by a further four months of gradually increasing workload before full functionality is restored.**

## Sequence of Events

- Driller lowering 4 ½” tubing into hole.
- Rig floor personnel positioned to take slips. IP between floormen performing function of guiding in slips. (Not full load bearing function for IP).
- IP and floormen brace for taking load of slips as per training.
- Floormen take majority of weight of slips as all three pick up slips.
- Lowering of slips into slip bowl as tubing comes to rest at appropriate slip bite point.
- **During arm extension / lifting motion by IP it is assumed that IP took extra load in manner that led to tendon rupture.**
- Slips set. IP in distress – moves away from rotary table.
- Co-workers move to offer assistance and investigate.
- Job shut down to investigate while IP seeks medical assistance.
- No immediate findings – job recommences.

# Root Causes & Actions



Basic Cause Category	Near root cause	Root cause & explanation	Corrective Actions
<b>Training</b>	<b>No Training.</b> Manual handling Training does not cover this type of injury.	The injury involved is rare. Therefore training does not cover this aspect – training focuses on back and shoulder injuries.	Revise and modify training to raise awareness of this injury. Disseminate with Bulletin to all WEL TPCs and installations.
<b>Work Direction</b>	<b>Preparation.</b>	The pre-job think plan did not identify the specific injury risk associated with the lift involved.	Revise and modify Task specific Think Procedures.
	<b>Selection of Worker.</b> Not Qualified	Training Inadequate. (The IP not to blame for this – see comments above.)	Revise and modify training to raise awareness of this injury.
	<b>Supervision During Work.</b> Crew teamwork	Communication breakdown. IP exposed to load at critical moment.	Revise and modify Task specific Think Procedures to clarify communication responsibilities.

## Lessons Learned

- While the incidence of this particular injury is very rare, the routine operation of setting slips exposes personnel involved to this risk. Risk is greatly increased if the slips are “thrown in”, where one of the persons involved in the lift may experience the combination of forces in their arm that led to this injury.
- Communication between members of teams setting slips must be consistent and clear. The team involved had made 19 identical manipulations prior to the manipulation that led to the injury.
- Manual lifting courses should specify this potential injury to raise general awareness.
- The findings of this incident have implications for other Woodside Facilities. Actions are recommended for implementation where:
  - Co-ordinated team manual lifting operations are unavoidable.
  - Ensure an understanding where there is risk of the load profile changing during the lift.