Reduce

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The first thing to consider is the degree of displacement of the fracture fragments. It is useful to ask the following question: if the bone were to heal in this position, would it be compatible with optimum function in the short and long term? In general, fractures involving the articular joint surface - need to be reduced perfectly back to their original anatom - ical position, to restore normal joint movement in the short term and avoid degenerative joint disease in the long term – intra-articular fracture = anatomical reduction . /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF Fractures that do not involve the joint surface generally require restoration of mechanical alignment of the joints above and below . The fracture fragments do not need to be reduced perfectly . Focus on acceptable alignment, length and rotation – extra-articular fracture = mechanical alignment In children an extra-articular fracture has the ability to remodel, and therefore an increased degree of displacement can be accepted. If a fracture requires reduction, it can be reduced open or closed. A closed reduction is wher e the bones are manipulated and moved without exposing the bone. Often the best way to reduce a fracture is to reverse the sequence of injur y , without tearing or further damaging the intact soft tissues and perios teum. On occasion this may mean exaggerating the deformity (Figure 32.13). Open reduction is utilised if an acceptable closed reduction is not achieved or likely to succeed. A combination of closed and open methods can be used to reduce a fracture. Care should be taken during an open r eduction not to unduly devit alise the fracture fragments by stripping intact periosteum. A balance between maintaining a blood supply to the fracture fragments (biolog y) and achieving anatomical reduction needs to be maintained. Adequacy of reduction is complex and depends on many factors. If intra-articular, the joint surface in volved needs to be considered. By way of an example, 2 /uni00A0 mm of residual displace ment of the articular surface ma y be acceptable in the patella and tibial plateau and may be acceptable in fractures involving the distal radius, but is not acceptable in the condylar joints of the fingers. In general consider the relativ e thickness of the articular surface involved. On occasion consideration of how you intend to sub sequently hold the fracture may a ff ect the primary form of reduction.

Bene /f_i ts Risks Pain relief Anaesthesia Prevention of infection Introduction of infection Restoration of anatomy Damage to soft tissues and neurovascular structures Early movement of the limb Early movement of the Devitalising bone patient Need for implant removal Improved function Financial cost (cost of treatment) Reduced risk of secondary arthritis Financial cost (time off work)

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