

Sports Injury Rehabilitation: Michelin Star or Too Many Cooks?

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Rehabilitation | Decision Making | Reasoning

Neil DeGrasse Tyson famously said "As the area of our knowledge grows, so too does the perimeter of our ignorance".

Aims of the paper

When you know how to think, it empowers you well beyond those who know only what to think. Most sporting organisations have historically been a very clinically lead approach to rehabilitation. All medically based practitioners will habitually adopt a clinical reasoning approach to all aspects of their day to day working. However, with the number of non-medical practitioners involved in the process multiplying regularly, it is important to move away from a purely medical model of reasoning and move towards a philosophical approach to working and thinking.

Discussion

Standard of care has become too focussed on adhering to rules of a specific model and rule book rather than outcome/effectiveness guided by a clear thought and reasoning process. I think clinicians are losing the ability to vary their approach and trust their intuition. Is this because we are struggling to put objective information on intuition? Why can we not be pragmatic when we are unable to be dogmatic? Science literacy is not so much about what you know but about how your brain is wired for thought.

Clinical reasoning has been defined as 'an inferential process used by practitioners to collect and evaluate data and to make judgements about a diagnosis and management of an injury'. Current research in clinical reasoning suggests that the process of knowledge and skill, integrated with the intuitive ability to vary an examination or treatment is what separates experts from novices. Evidence based practitioners are titled 'current' or delivering the 'gold standard' of care using a methodology that, in my opinion, is vetted through a flawed funnel; i.e. If you cannot 'prove' it through the limited lens and formal process of research, it hasn't got a place. It should be borne in mind that no singular piece of research has the full answer to an injury.

A limitation of clinicians tunnelling their vision in to one way of thinking of formal research i.e. does X directly cause Y or does $A = B$ is an over simplistic mindset of singular causation; yet we acknowledge the body, causation and presentation of an injury is a multi-systemic and complex phenomenon. In dealing with the human body "A influences C but often the research stops at B" Andy MacDonald. This is not to say research is not hugely important, but it cannot be used as $A = B$; it must be used to inform your practise, not change it.

Practical Application

In today's elite sporting environment every person involved with the athlete's journey, especially the athlete, should have equal weighting in the rehabilitation where appropriate. In

making these decisions, all members of the rehab team must rely on conceptual frameworks that include theories of practise, decision making, reasoned arguments and a model of function. The list below is based on Stoic philosophy, which has produced some of the greatest thinkers, scientists and reasoned approaches to problems the world has ever seen. In thinking about any problem you ever encounter, the Stoic approach will provide the most logical and reasoned approach to achieving the goal.

- To be objective
- To control emotions and keep an even keel
- To ignore what disturbs or limits others
- To place things in perspective .
- To revert to the present moment and not recall past events
- To focus on what can be controlled

Doesn't seem to difficult on paper but in person it is much more difficult to achieve. Below is the decision making process of the elite sporting rehabilitation which should take place with each athlete; a process which we feel is partly due to the people involved but mostly due to the reasoned approach and respect of each and every individuals input, regardless of level of experience etc.

Prior to any assessment a lot of decision making has already been made before seeing and speaking with the athlete.

- What are the outcomes required?
- How should they be measured and documented?
- How much time is needed / allowed?
- Any further referrals needed?

Every member of the team is present for a MDT meeting about the athlete at the end of the day on Monday. This meeting is an interplay of knowledge and reasoning, and when broken down is nothing to do with individual experience or how much expertise you have in one area; it is a reasoned approach and questioning of the information which we have acquired over the preceding day. The same attributes appear on each Monday

- Multi-dimensional knowledge
- Collaborative and reflective reasoning
- Constant virtues.

Throughout the week, with the full time staff constantly in the same room it allows for conversations to happen organically. We use the first 30 minutes of our day to reflect on the previous day and the plan for the day ahead. This can be furthered by hypothesising about how the individual will respond to each intervention. Reflection is a necessary skill in learning and metacognition (awareness of ones own learning/thinking processes) aka thinking about thinking will add huge benefit to the athletes journey whilst within the unit.

Conclusions

“As a physio, treatment is never an answer, treatment is always a question and should be looked at in this way”. Gordon Bosworth

It helps either to further support our theory, or to make us question it further. This is similar to any intervention, whether physiology, S&C, soft tissue etc. To extrapolate a theoretical physics framework to rehabilitation; 1/3 is knowing how to do it, 1/3 is actually doing it and 1/3 is knowing how to communicate it. “Your athletes will remember how you coached, more than what you coached”. NickWinkleman

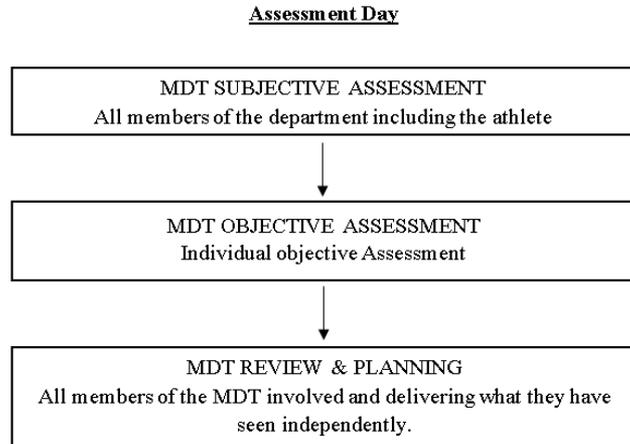


Fig. 1. Assessment day process

- Working hypothesis to test and asses
- Objective Markers provisionally set
- Daily / weekly schedule (subject to change)

Day after MDT

- Explanation of MDT and plan to athlete (understanding and clarity drive intent)

Each day of the rehabilitation/reconditioning process

Monitoring

- Decisions on effectiveness / Previous day intervention
- Daily schedule discussed / altered?
- Hypothesis review – did they respond how we thought. Why could that have happened

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