



GROW

How we learn.

Mistakes

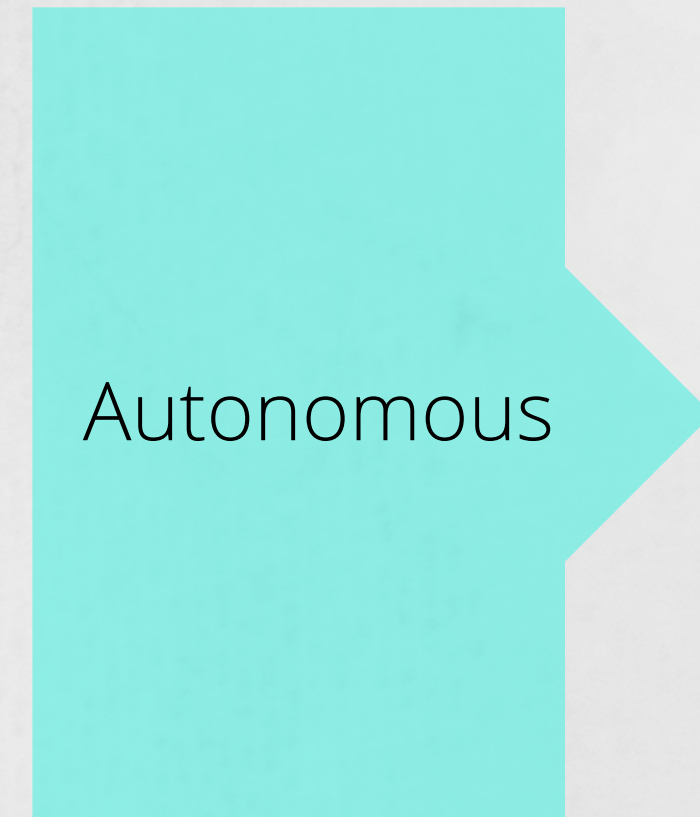
- Using internal cues too early on in the journey
- Too many cues
- Complicated cues
- Programming that doesn't support where or how a person learns

Critical Concepts

- To allow you to understand where the client is at and how your cues affect them on multiple levels.
- Accelerate your cueing and the clients progress
- Generally giving you more to go on than you had before and allowing you to GROW in knowledge and expertise.

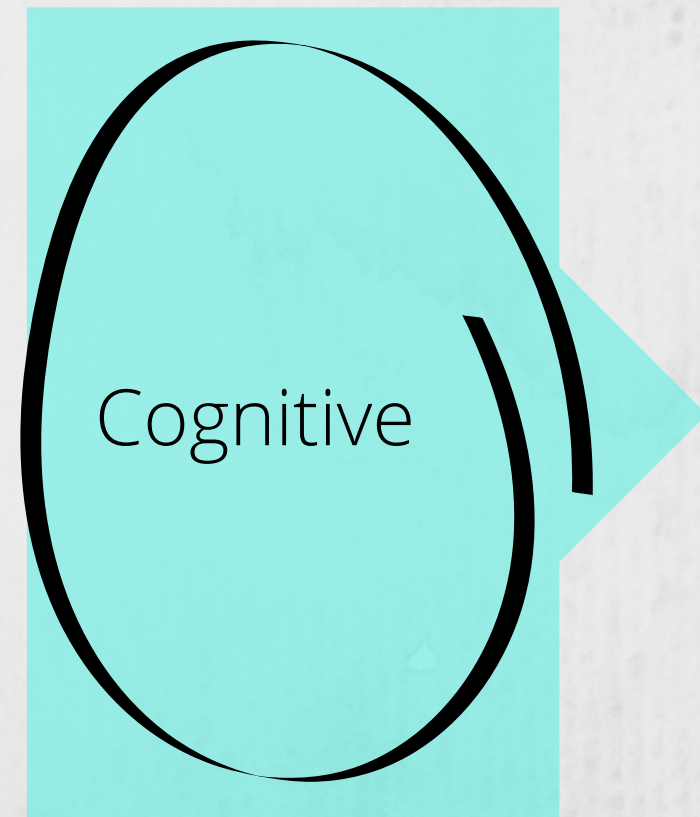
Critical concept #1

Stages of learning



Understanding these concepts allows you to accelerate your cueing and results

1st stage of learning



Movements are:

Inconsistent

Slow

Inefficient

Robotic

Joints and movements controlled consciously

2nd stage of learning



Associative

Movements are:

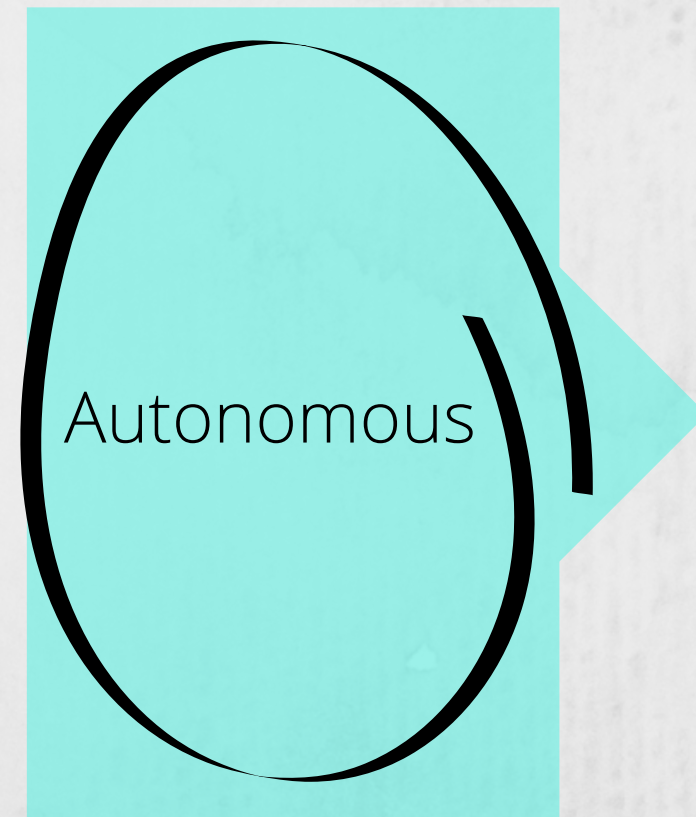
More fluid

Reliable

Efficient

Joints and movements controlled more subconsciously

3rd stage of learning



Movements are:

Consistent

Efficient

Accurate

Fluid

Looks easy

Joints and movements controlled largely
subconsciously

Cognitive stage



Takes alot of thought and effort to perform each movement

Based off:
visual motion analysis

Spacial awareness

Hand gestures

Movement planning

Cognitive stage



Takes a lot of thought and effort to perform each movement

We have seen someone else round their spine

We know what an 'angry cat' looks like

You know where the mat is when you hear 'drop crown of head'

Associative stage



- To improve your cueing in this phase, the clue is in the title.
- Association begins to form with words, movements, positions, places, etc

Saw exercise is rotation and flexion



Autonomous stage

- Moving fluidly and easily without having to think about the components that go into that process .
- Association has been formed, mistakes have been made, neural pathways have been strengthened

Walking, going to the cinema example of process and components.



Stages of learning



The Pilates learning process

Pilates IT recipe!

Demo

Breath pattern

Sequencing

Muscular emphasis

Final demo

This takes time visual analysis, spacial awareness,
as we practice movements become more fluid, we
recognize the names, the movement patterns and
familiar cues.

"Let's try."

The Pilates learning process

- Day two, we practice the moves learned on day one.
- We add corrections, look at common issues and how to modify.
- Clients are learning new movements to them so they are in the cognitive stage.
- Through repetition they progress through the stages
- Through positive feedback and reinforcement we indicate what's good and what's not

So why do some progress quicker than others?

Physical Ability

Qualities that are innate

Flexibility
Muscular endurance
co-ordination

Physical Skill

Movements that are learned

Kicking a ball
Walking
Cat stretch



Is this Physical Skill
or Ability?

Physical skill , however wouldn't be much good if the gymnast wasn't flexible, which is physical ability, therefore when physical ability and skill are put together, the sky is the limit.

That's how we learned as clients and then instructors , what about our clients?
What about when we cannot or don't want to rely on visual analysis?

SQUAT!

How would you cue a squat to someone with no anatomy
knowledge AND you are not allowed to demo?

CUEING

What sort of cues did you use?

For a novice with little to no anatomy knowledge?

What about proprioception?

Are there any other factors you can think of?

What can we summarize when learning new movements when we are in the cognitive phase?

What sort of cues will be most helpful and why?

What can we summarize when training learned movements when we are in the autonomous phase?

What sort of cues will be most helpful and why?

Critical concept #2

Internal vs external cues

An internal cue focusses on ones own body movements that are associated with the skill. Often isolated movements that fail to take into account the whole movement/skill.

Disrupts autonomy.

External cues focus on the outcome of the movement. The cues utilise all motor systems and encourage self-learning.

Develops autonomy.

Teaching online example.

Critical concept #2

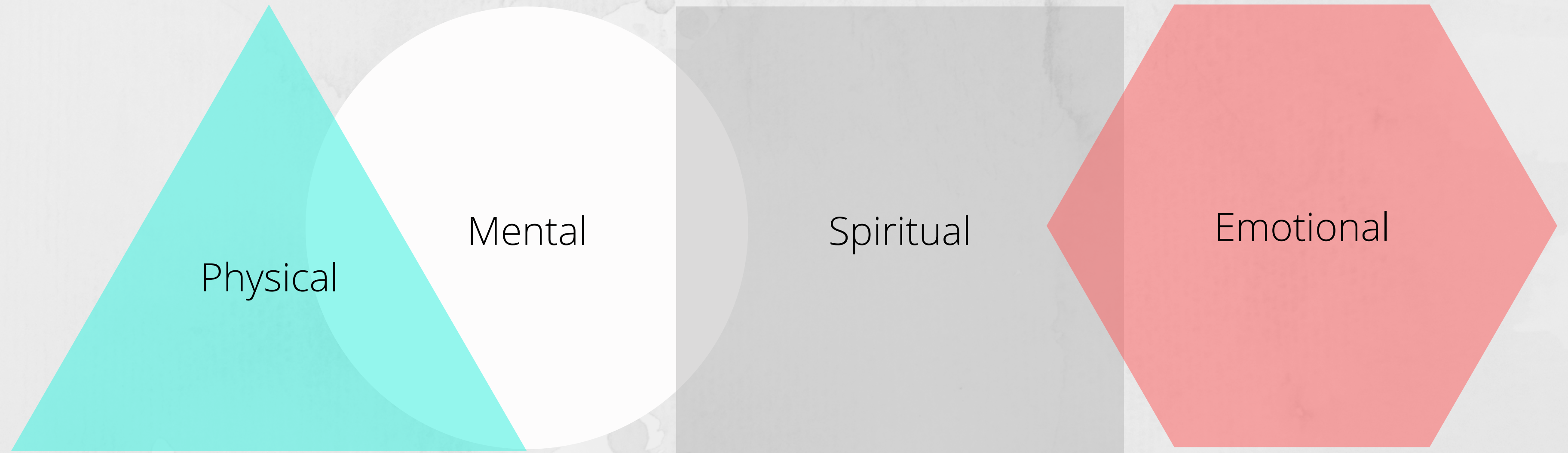
Internal vs external cues

External cues take a holistic approach to learning a new skill, recognising how each body part and each system (next concept) can work together in development.

The external cues are recognised to be more effective when learning new skills due to the athlete not over-thinking specific movements. They are much more outcome focussed and goal oriented.

Critical concept #3

The Four Bodies



How clients learn - layers

The Four Bodies



Physical

The most obvious

This is what most of us think we
work with

learn through repetition and
muscle memory

The Four Bodies



Mental

Does the client understand why they are doing something and what it means for them?

A client shouldn't compartmentalize movement/go through the motions

Are clients just working with you for physical results?

The Four Bodies

Not the most
obvious

may or may not
come into the
equation for most



Spiritual

Do they feel a
connection to the
movement or
journey?

The Four Bodies

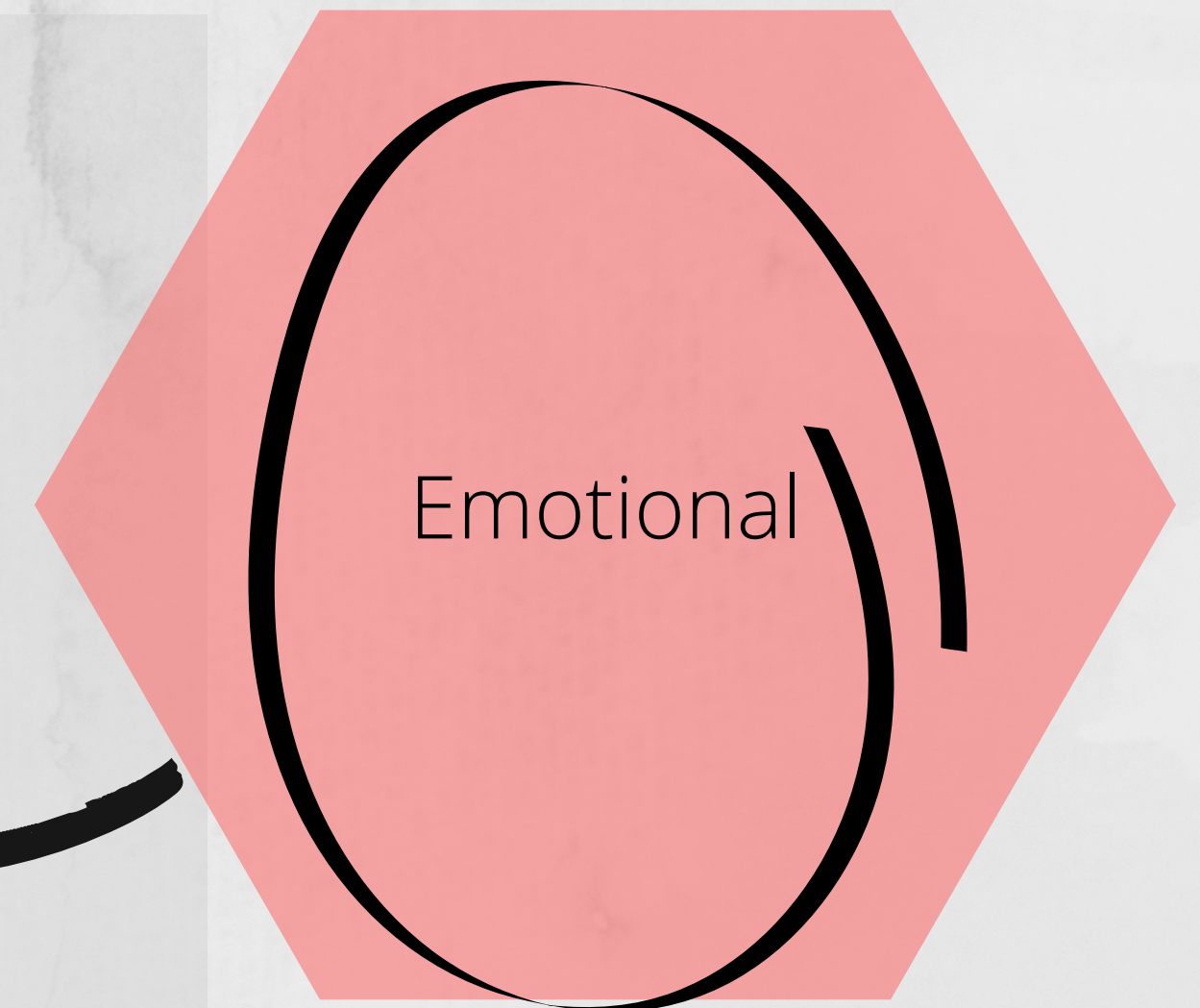
Hugely affect the Physical body

Negative body image

Post natal depression

Complex regional pain syndrome

Emotions have direct correlation with movement and pain, can affect physical ability



The Four Bodies – Practical application

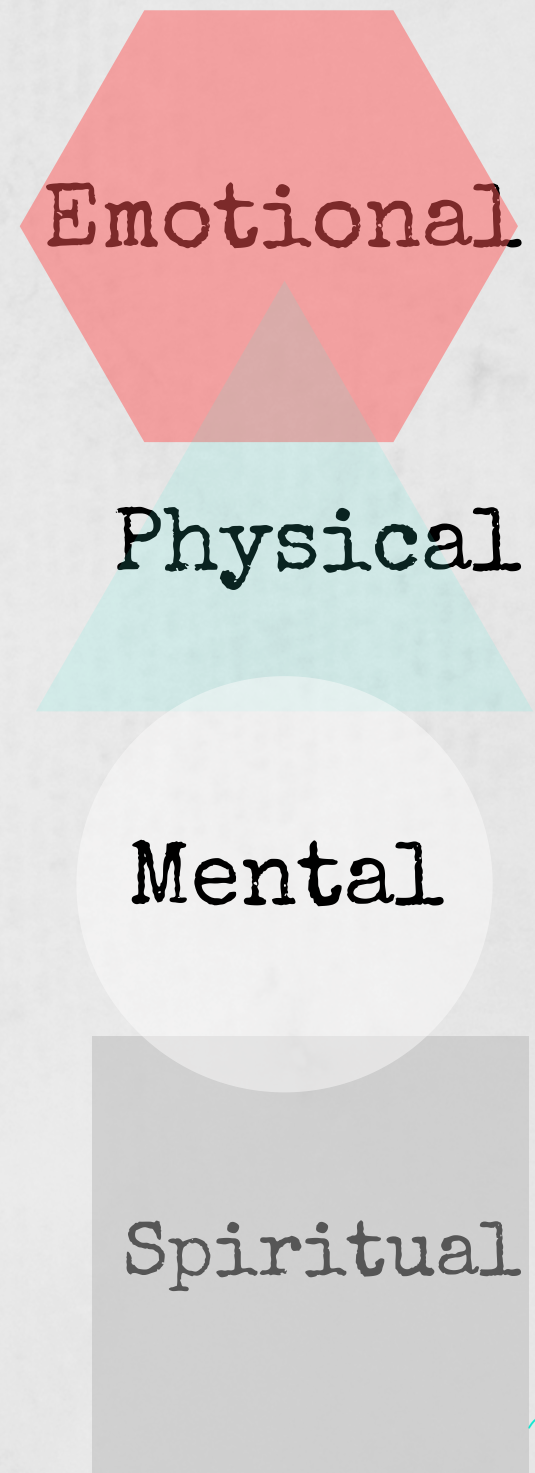
Their 'WHY' might be to get out of pain

They do this through movement

Explaining:

This is just like getting something out of the dishwasher

Movement/exercise/Pilates becomes something they enjoy
and continue it as part of their lifestyle



The Four Bodies – Practical application

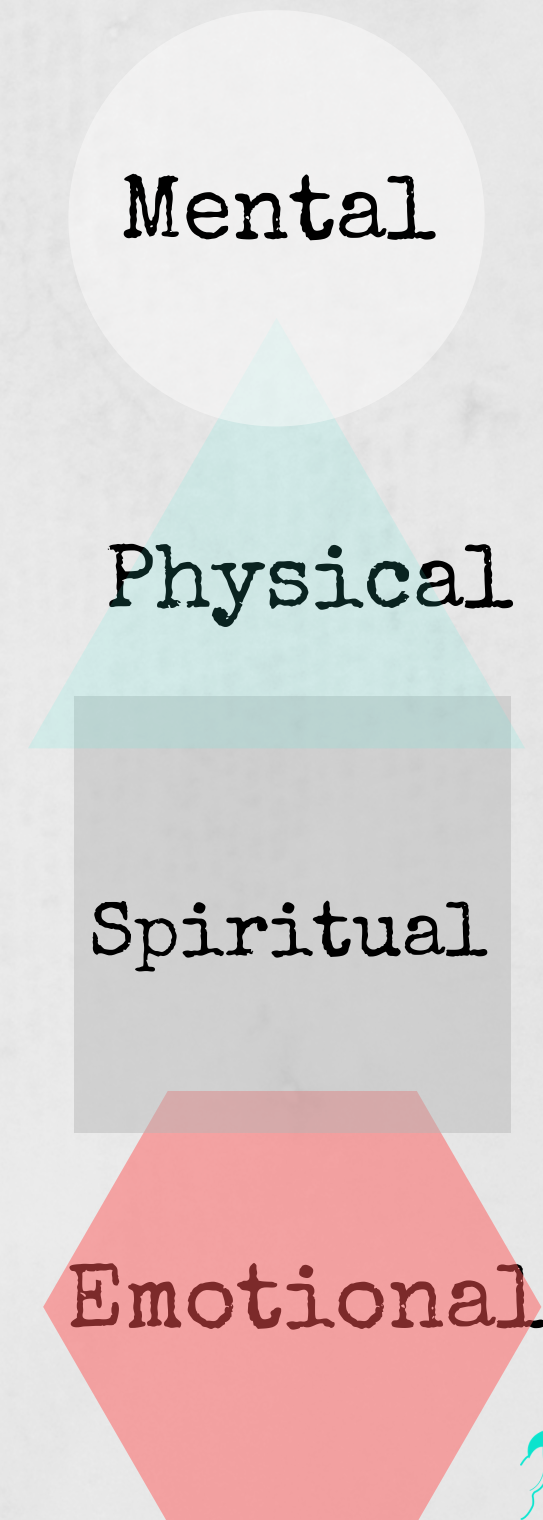
I want to get stronger to be able to lift heavier

They do this through movement

They begin to understand, Pilates and complementary movements can help them get stronger - forming connection

Movement/exercise/Pilates becomes something they enjoy and continue it as part of their lifestyle

They are on board



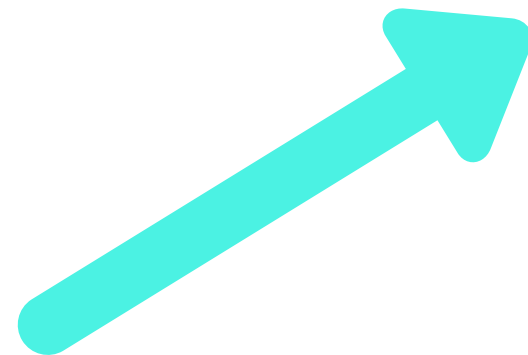
Critical concept #4

Repertoire

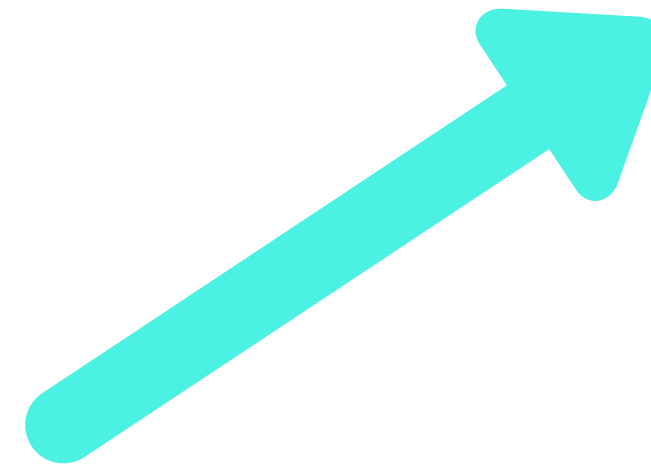


Function

Repertoire



Physiology



Function

Physiology

- There's only so many shapes/movements the spine can make.
 - Flexion
 - Extension
 - LF
 - Rotation
-
- Train movements not muscles (think back to concept #2)
 - Do these movements in all different positions

Practical application

Exercise position

Standing

kneeling

half kneeling

supine

prone

seated

Sports specific

Spinal movement

flexion

extension

LF

Rotation

Practical application

- What do you notice about what the spine is doing?
- We can then apply this concept to the hip joint, shoulder joint, etc etc.....
- EXAMPLE: Shoulder flexion, in all positions, shoulder external rotation in all position etc, etc.

Programming

- Psychology and emotional individualities are often missed or not considered when programming, we only think of 2 /4 bodies!
- Individualized learning and co-ordination tendencies vary through different stage of learning.
- What might some of these variables be?
- A collaborative approach between instructor and client (and psychologist) is superior.
- Programmes should remaining challenging for clients in order to maintain their attention and should probably include physiology as well as repertoire, why?

learning variables to consider

Stage of
learning

Anatomical
knowledge

Physical
ability

Physical
impairment

Physical skill

body
awareness

"When you say something that resonates
with someones architecture and tissue
they will adjust themselves.

It's not up to you it's because of both of
you."

Joanne Avison

Here's what you now know.....

4 critical concepts that should go into cueing and programming.

- 3 Stages of learning
- The 4 bodies
- Internal vs external cues
- Teaching physiology (train movements, not muscles)

What's been your takeaway?

Kim Sungshin, Ogawa Kenji, Lv Jinchu, Schweighofer Nicolas, Imamizu Hiroshi. Neural substrates related to motor memory with multiple timescales in sensorimotor adaptation. PLoS Biol. 2015;13(12): e1002312

The dynamics of expertise acquisition in sport: The role of affective learning design
Headrick et al.

Psychology of Sport and Exercise Volume 16, Part 1, January 2015, Pages 83-90

Fascia, form and functional movement, Joanne Avison.