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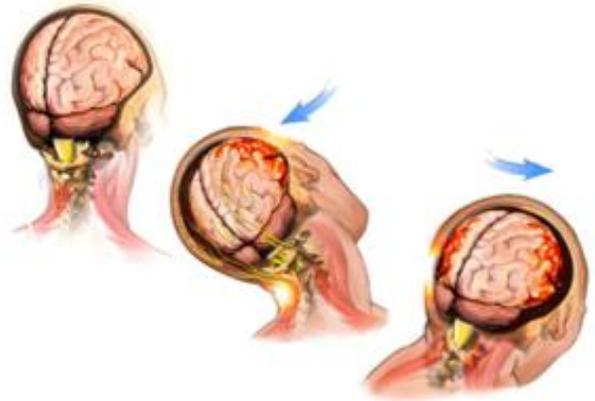
WELL PHYSIOTHERAPY



1. A Strong Neck Is Less Prone to Whiplash Injuries



2. Effective defense against concussive forces



3. Poor posture weighs on neck



The stress in the neck

Whether it from a sudden impact in a motor vehicle accident or in a sports collision or from holding a prolonged position like staring at your computer or smart phone, the neck is subjected to high levels and duration of stress. These forces can lead to injuries like concussion; whiplash associated disorders (WAD) and many cervical injuries or chronic pain.

The neck is the body's natural built-in shock absorber and is designed to mitigate these forces.



WHIPLASH



WHAT IS WHIPLASH?

Whiplash is an acceleration-deceleration mechanism of energy transfer to the neck. It may result from rear-end or side-impact motor vehicle collisions, but can also occur during sport (rugby, AFL) and other types of falls. The impact may result in bony or soft-tissue injuries (whiplash injury), which in turn may lead to a variety of clinical manifestations called Whiplash Associated Disorders (WAD). Most soft tissue injuries will resolve completely within 6 to 8 weeks. However, it is estimated that about 30% of patients who sustain a symptomatic whiplash injury are going to report chronic, and potentially more widespread symptoms, classified as WAD. WAD is a good example of a medical condition where there is often a disconnect between the magnitude of injury (which is often minor) and the magnitude of disability.

WHAT ARE THE SYMPTOMS FOR WHIPLASH?

- Pain, decreased range of motion and tightness in the neck.
- Muscles may feel 'hard' or full of knots
- Pain when moving the head up or down
- Pain or stiffness when moving your head to try and look over each shoulder
- Headaches at the base of the skull that can radiate towards the forehead
- Tenderness over the muscles
- Light headedness
- Shoulder pain, arm pain or upper back pain
- Visual disturbances
- Difficulty concentrating
- Jaw tightness and pain

MOVE WELL PHYSIOTHERAPY TREATMENT FOR CERVICAL WHIPLASH USING THE IRON NECK

The NSW Motor Accident published the “Guidelines for the management of whiplash-associated disorders” in 2009. In this publication the recommended treatment includes “Manual and physical therapies- exercise” and details that range of movement exercises, muscle re-education and low load isometric exercises should be implemented immediately. Joint mobilizations are also recommended and should be commenced within the first 7 days following injury. Recommendations for immediate physiotherapy treatment were included due to a growing research base in the area of cervical whiplash injuries. Treatment should include mobilizations, postural correction exercises, stabilizing muscle exercises, stretching and more general exercises for the upper body by using THE IRON NECK. Education is an important part of treatment.

THE IRON NECK

THE IRON NECK
WAS INVENTED BY:

The Iron Neck is an innovative approach to training and treating the neck by **STRENGTHENING** it, the way it naturally moves. Through rotational and diagonal movements, The Iron Neck gives you the freedom to move your head and neck in a safe and controlled manner, building strength in every position and improving range of motion providing a solution for reducing injuries and improving overall wellness.

Move Well Physiotherapy knows that the neck is one of the most **UNDERTRAINED** and neglected parts of the human body. Your Move Well Physiotherapist will start you off with the 6 foundational movements, as these are the beginning to discovering your necks position. The Iron Neck molds to you and can help you develop strength and mobility based on **YOUR UNIQUE** movements and limitations!

Mike Jolly in 2012, Mike began researching ways to prevent concussions and focused on:

1. Neck training as a pro- active measure to reduce concussion risk.
2. Decrease threat of rotational forces on the brain

The Iron Neck was designed to help you achieve your health, safety and endurance goals. That may be on many different fields of completion or simply reducing pain and increasing mobility in every day life. As you become more confident with The Iron Neck, explore it's power to get the very most out of your neck.



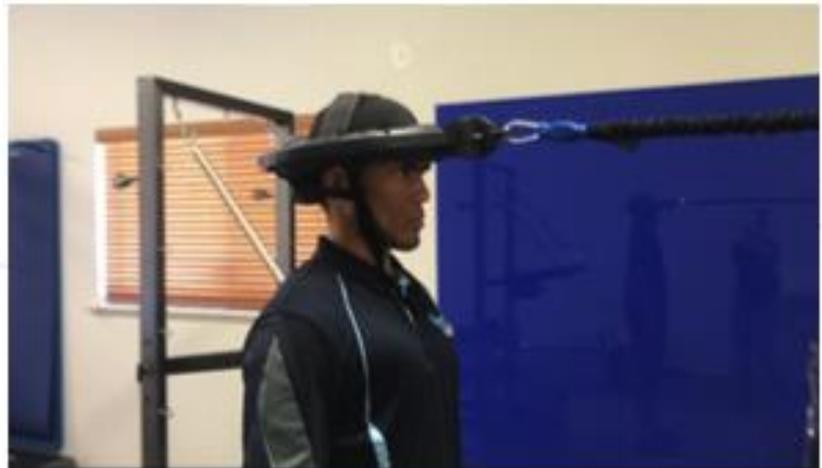
PHASE 3: EXERCISES AND DESCRIPTIONS

PICTURE

1. PROTRACTION-RETRACTION

Your Move Well

Physiotherapist will ensure that the Iron Neck is attached correctly according to your height. Stand upright, keeping back straight with a slight forward trunk lean. With the iron neck resistance cable attached ahead of you, extend your chin forward as far as you can without moving your shoulders. Hold this position for 5 seconds then return neck to retracted position, this counts as 1 rep. Keep the Iron Neck parallel to the floor throughout the exercise. DO 8 reps facing forwards and backwards



2. LEFT-RIGHT

Slowly turn the head to the left then right. You can perform this exercise being seated or standing. Do not turn your shoulders, try and keep them square throughout the exercise. Repeat 8 times on each side.



3. LOWER TRAPEZIUS

Start the exercise by standing sideways to the Iron Neck (so that the Iron Neck is on your left hand side)- now simply pull your shoulders back that it is not rounded. Be very careful not to use your arm to help the movement. Head needs to stay as still as possible with only the body moving. Repeat so that the Iron neck resistance band is on your right hand side.



4. FIGURE OF 8'S

Your Move Well Physiotherapist will draw a side lying figure of 8 on a wall that is in front of you. Begin following the figure of 8 with your nose. Begin with small loops then to larger ones. Complete 8 reps tracing each direction.



5. ADVANCE TO ABC's

Your Move Well Physiotherapist will draw the letters A, B and C. Trace each letter like the above exercise. Progress by trying to increase speed and hold an arm out as you try and do it then progress to standing on a balance disc.



ALL NECKS ARE NOT EQUAL

Anatomically, females have longer, thinner necks. Research shows that weaker necks are more prone to whiplash and is believed to be a primary cause of higher rates of concussion in female athletes

(Schallmo et al 2017)

HEAD
INJURY
SUMMARY

NECK TRAINING
BY ACTIVITY

CONCLUSIONS

MHSAA Head Injury Summary

SPORT	HEAD INJURIES PER 1,000 PARTICIPANTS
Football - 11 player	49
Ice Hockey	38
Football 8-player	34
Girls Soccer	30
Girls Basketball	29
Wrestling	26
Boys Soccer	18
Competitive Cheer	17
Boys Lacrosse	17
Gymnastics	13
Boys Basketball	11
Volleyball	11
Girls Lacrosse	11
Softball	11
Baseball	4

The Michigan High School Athletic Association (MHSAA) 2015-2016 study of head injury reports from 750 (99%) of its members schools revealed a disparity in the number of reported head injuries suffered by girls and boys playing sports. Soccer, basketball and baseball/softball are played under nearly identical rules, and in those sports females suffered significantly more whiplash and

concussion injuries than the males playing the same or similar sport.

NECK TRAINING BY ACTIVITY



MOTOR VEHICLE ACCIDENT:

Many people suffer whiplash injury as a result of a car accident and this injury can be both mild and severe. A severe whiplash injury can result in serious, long term injuries and consequences such as disability and significant medical costs. Having a strong neck will reduce the whiplash risks in people.

RUGBY:

“ We found players with stronger necks had a lower acceleration or whip-lash movement. The stronger you can make the neck the LESS the head accelerates- it controls the brain’s movements against the skull”

CYCLING:

While cycling has a high occurrence of concussion, neck training has tremendous value in building endurance and reducing pain, as cyclists must hold a protracted position for stretches of several hours.

SOCCER:

Neck strength has been shown to improve outcomes from head impacts sustained during heading in soccer. There is significant negative correlation between isometric neck strength and resultant head impact.

ICE HOCKEY:

Neck muscles tension can reduce head acceleration and enhance the ability of the neck muscles to absorb forces which could minimize the risk and severity of concussion and whiplash injuries common to ice hockey.

BOXING/MMA

Over 50% of all KO’s studied were shown to be due to direct blows to the mandible. Furthermore, and rather intuitively, there was a correlation between the heavyweight class and an increased risk of sustaining a KO. More force generating ability, when applied correctly, equals more opponents stretched out on the canvas.

CONCLUSION

The Iron Neck is an innovative approach to training and treating the neck by strengthening it, the way it naturally moves. The Iron Neck gives you the freedom to move your head and neck in a safe and controlled manner, building strength in every position and improving range of motion providing a solution for reducing injuries and improving overall wellness.

Some suggestions why you should be training with the Iron Neck

- Following a whiplash injury to rehabilitate the neck
- All contact sports
- It is important to train the neck muscles if the use of computers and smart phones gives you neck pain or headache, as through range of movement strengthening of these muscles will support you better and they are less likely to fatigue.