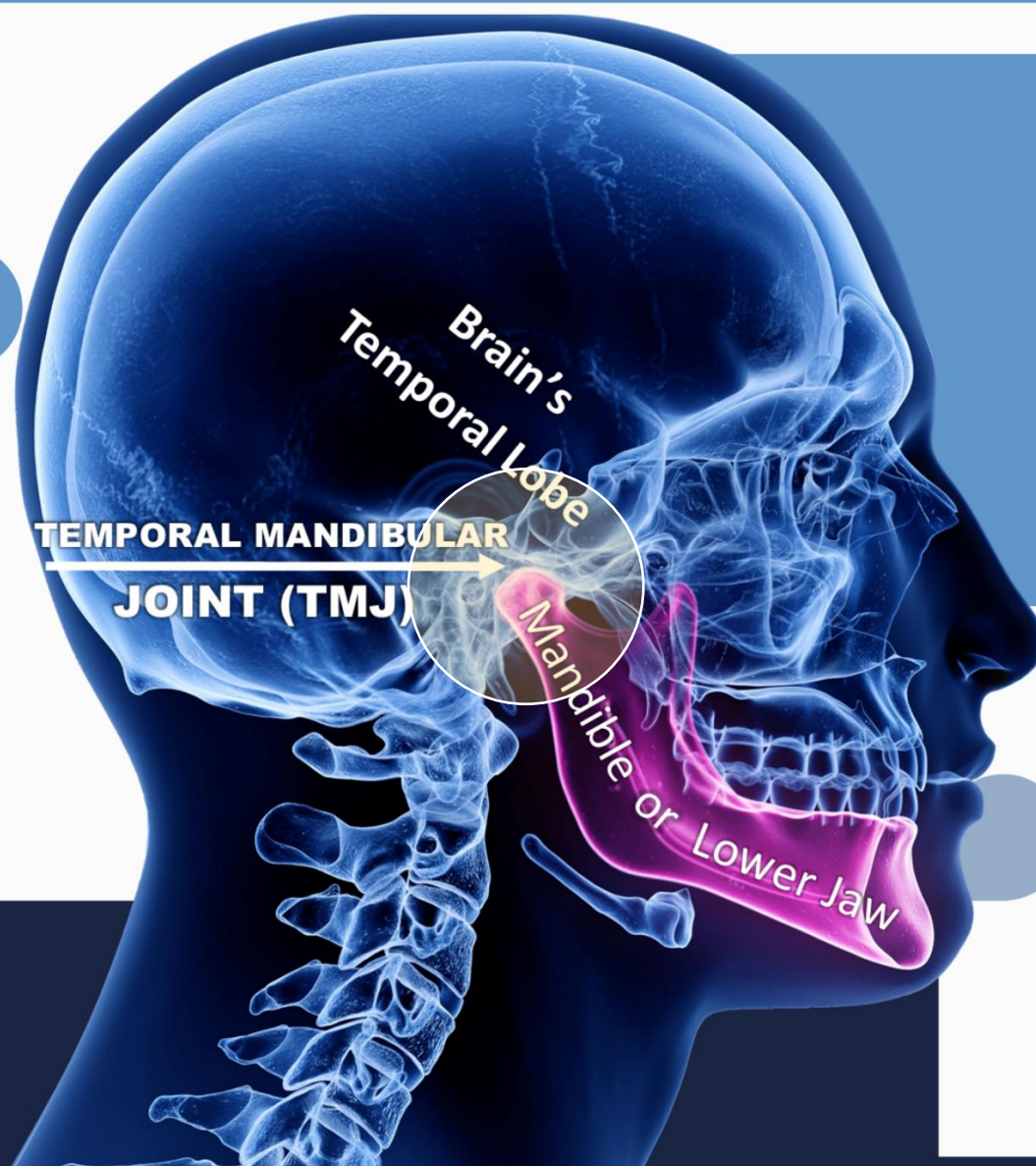


CONCUSSION AND TMJD INFORMATION: BOOKLET



DIAGNOSING, HEALING & PREVENTING CONCUSSIONS & TMJD IN SPORTS

Jaw Joint Science Institute, Inc
Philadelphia, PA | www.jawjointscienceinstitute.org | (215) 242-3141

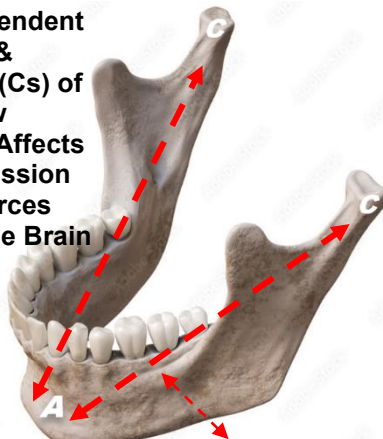
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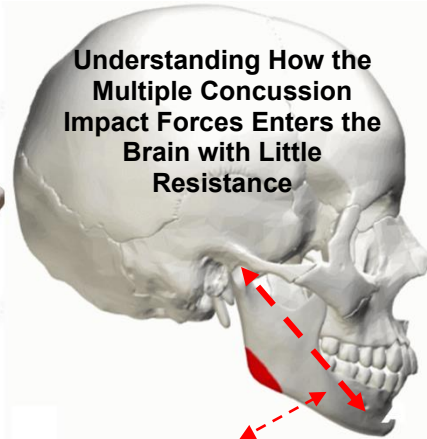
**Dedicated to those suffering from the crippling,
tormenting and recurring symptoms of concussions and
the lives lost to the ideations of suicides.**

ANATOMY OF THE SKULL AND LOWER JAW

The Independent Mandible & Condyles (Cs) of Lower Jaw Precisely Affects the Concussion Impact Forces Against the Brain



BILATERAL IMPACT FORCE LINES: Impacts against (A) the Sweet-Spot or mandibular symphysis) Will Simultaneously Send Two Component of Equal Force Through (Cs) to the Base of the Temporal Lobes Knocking-Out the Recipient the CONCUSSION.



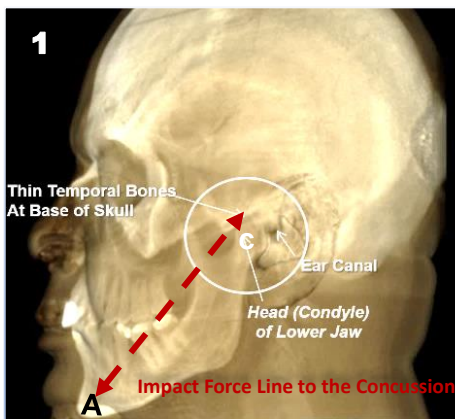
Understanding How the Multiple Concussion Impact Forces Enters the Brain with Little Resistance



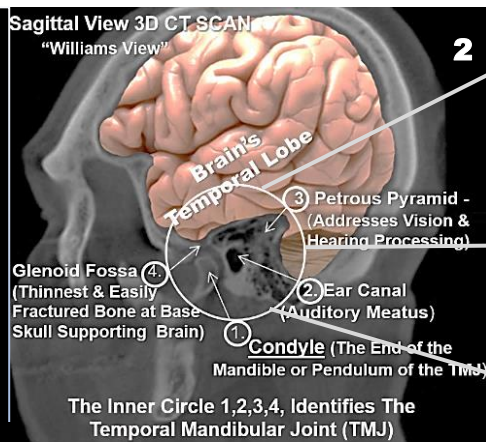
The 25+ yr. Old Automotive Head Impact Test Dummy

There Is Nowhere on This 25+ yr. Headform that Focuses on a realistic Injury Index That Will Asset, Examine, or Prevent the Safety Issues Against Concussions

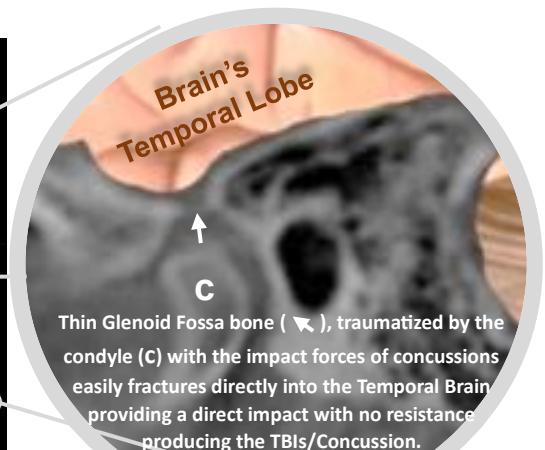
The Concussion's Impact Path of Least Resistance: A New Perspective: The intricately connected bony structures of the skull, including the mandible's condyles that articulate with the skull's base, form the temporomandibular joint (TMJ), a critical area repeatedly overlooked in head impact safety and trauma. The lower jaw is not attached to the skull and can move independently. Positioned directly on these joints are the temporal lobes of the brain, vital yet vulnerable components that current safety apparatus fail to protect. This oversight in design of the testing headform lacks the science of and omits the most vital structures: the temporal lobes and the TMJ which serves as a direct pathway for the impact forces of concussions to enter the brain. This lack of protection for the temporal brain areas is a significant factor in the rising incidence of concussions and TBIs. To mitigate these risks, it's imperative that future safety standards and concussion studies evaluate the TMJ and temporal lobes to develop effective safety measures. The impact testing headform has limited anatomical design and functions, lacking the anatomy of the TMJ structures which does not address the impact injuries of concussions: there is no condyle relationship.



Impact and Constraining Forces Against the Chin Produce Direct and Intensified Bilateral Impact Force of the Condyles (C) Impacting & Concussing the Brain's Temporal Lobe.



The Inner Circle 1,2,3,4, Identifies The Temporal Mandibular Joint (TMJ)
TMJ Provides the Most Direct Access for Impact Forces to Enter the Skull and Brain



The Enlarged View of the Temporal Mandibular Joint (TMJ) See Fig. 2). NOTE: A Majority of Concussion Outcomes Result in TMJ Pathologies

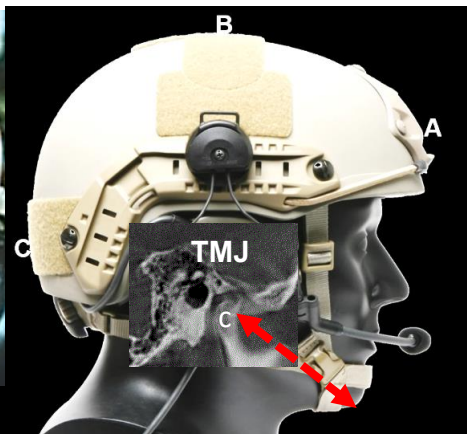
Society has not considered the deleterious impact forces of the condyle (C) that are delivered directly into the TMJ, and intracranial structures such as the base of the brain's temporal lobes, the medial temporal gyrus of the temporal lobe, the petrous pyramids (see, Fig. 2. ③), which processes vision and hearing), the abducens nerve, the ear canal (see, Fig. 2. ②), and the mastoid air cells. The following extracranial structures such as the jugular foramen, Vagus nerve, Spinal accessory nerve, and Hypoglossal nerve are within the impact striking distance of the condyles' full superior and lateral movements as they relate to head trauma and vehicular accidents. The Relationship: The Majority People Who Have Had a Concussion Suffer from Temporal Mandibular Disorders (TMDs). Concussion headaches and TBIs are herein defined by the American Congress of Rehabilitative Medicine: dazed or confused immediately post injury, not remembering the injury event, or loss of consciousness. The undiagnosed TMJ fractures associated with TBIs can splinter

and pierce the brain's temporal lobes and may be an etiology for the increase in suicides, alcoholism and mental health crisis based this devastating and uncontrollable pain response.

HELMET CHINSTRAP CONSTRAINT (HCC): PROMOTES CONCUSSION AND TMJD



Impact Force Line to the Temporal Lobe Concussion
The Forces of Chinstrap Constraint Pulls the Lower Jaw Up and Into the Base of the Skull's Glenoid Fossa Bone (see Fig. 2. 4.) Enhancing the Concussive Impact Forces Against the Base of the Brain While Irritating the Wearer



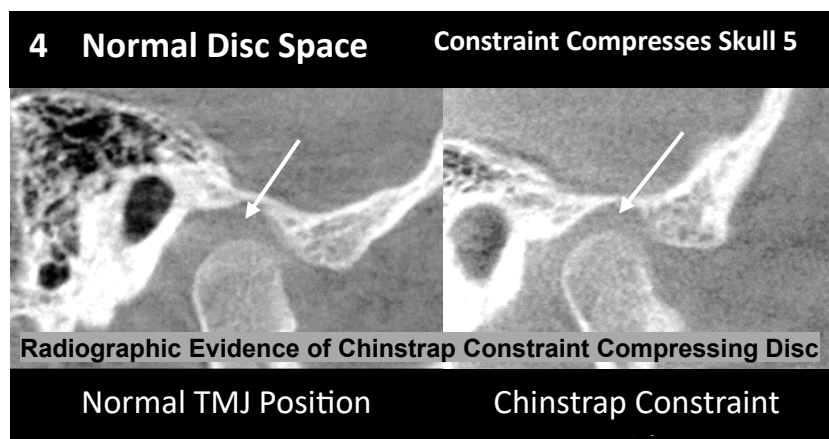
Military helmets are subjected to extreme chinstrap constraints because of weight and distribution of Helmet Mounted Display Systems



Firefighters Are Also Subjected to Phenomena of Chinstrap Constraint

Helmet design gives little to no credence to the effects of the helmet chinstrap constraints against the base of the skull and brain, setting up the temporal lobes (like a gulf-tee) for the impact forces of concussion headaches and TBIs, see Fig. 3. All of these forces confined against the sweet spot effectively creates a "Knockout Helmet." The oversight of the bones of the TMJ and its inseparable and supportive relationship to the brain's temporal lobes must be considered as a component of brain health and safety to diminish the crisis of TMDs, headaches, concussion headaches and TBIs, see Fig 2. The temporal mandibular joint is the missing scientific link to a more accurate diagnosis of concussion headaches and TBIs. Concussion headaches are the signature injuries of the military and the global crisis in the world of sports. Overlooking the TMJ which is constrained by the helmet retention chinstrap attachments compressing the condyle into the base of the skull's glenoid fossa bone (see, Fig. 4 A below), is the Achilles Heel of helmet designs. This is also a segue to the escalation of TBIs, TMD, and TBI (see cognitive symptoms, Fig. 15).

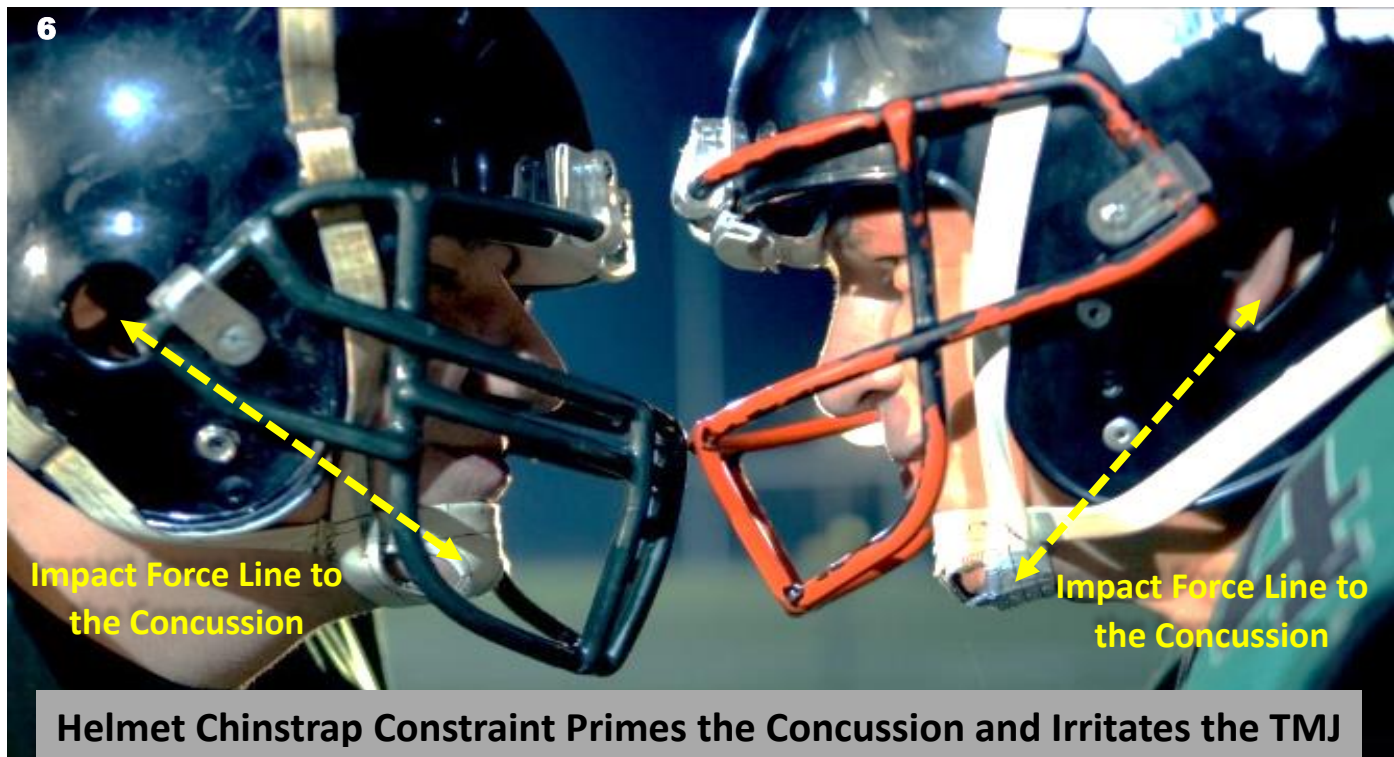
Helmet design gives little to no concern to the effects of the helmet chinstrap constraints compressing the condyle into



the base of the glenoid fossa, directly affecting the skull and brain, setting up the temporal lobes (like a gulf-tee) for the impact force of concussions, see Fig. 3. The omission of the TMJ and its inseparable relationship to the base of the brains' temporal lobe must be considered as a component of brain health & safety to diminish the crisis of TMD, TBIs, and the crisis of concussions. Concussions are the global crisis in the world of sports and the signature injury of the military. Overlooking the TMJ which is constrained by the supporting helmet chinstrap

attachments

compressing the condyle into the base of the skull's glenoid fossa bone (see Figs. 4 & 5), is the Achilles Heel of helmet designs.



The fractures found in 3D CT scan imaging are caused by head impacts that bilaterally drive the condyles of the lower jaw into the unprotected base of the glenoid bone. These concussive forces will fracture the thin bones at the base of the skull and directly traumatize the brain's temporal lobes. Medical science has overlooked the presence, complexity, and physical abuse of the crucial TMJ and its support of the brain. Consider the following: any bodily impact will send a component of force to the TMJ. Studying the head impacts of concussions without considering the TMJ is like studying the impact and function of a hand with no fingers. Chinstraps condylar positioning produces symptoms such as headaches, irritation, fatigue, weakening of the individual's strength, and amplifies the head impact forces against the base of the skull alongside other shared symptoms among our athletes. Releasing helmet chinstraps reduces the painful encumbrance, constraint and stress opposing the TMJ. However, this behavior places athletes at risk, increasing the probability of TBI, violating the safety compliance of the helmet. The rule of the NFL penalizes the opponent for impacting any component of the helmet of the quarterback: What about the multiple helmet impacts per game against the helmet of the lineman? These multiple nose tackle impacts indiscriminately continuously concuss the base of the brain, limiting their career expectancy, and their quality of life after the games.

This catastrophic mechanism of concussion must be addressed, the future of football is riding on it! Not every child will become a professional football player, but every child that plays football will suffer from TMJ injuries and the concussion headaches resulting from play.

The nose-tackle impact surface ranges from the frontal of the helmet to the bottom of the faceguard: the massive linemen impacts produce an intense and repetitive force driving the condyle (accentuated by the chinstrap constraint) into the base of the skull and brain enhancing the TMJ fractures and multiple unreported concussion issues. NFL linemen's career expectancy is approximately 3 years (with expected cognitive decline).

DIAGNOSING THE TMJ FRACTURES OF CONCUSSIONS AND TBIs

This medical assessment validating the newly discovered mechanism of brain concussion; the condyle constantly and directly impacting the base of the skull and brain, directly affecting his quality of life (see Fig. 6). How many unreported and silent concussions did this quarterback sustain in his outstanding career to create this crippling fractured pattern of the concussion at the base of the brain?

This specific fracture pattern results from multiple condyles impacts against the thin and vulnerable glenoid fossa bone, over time. As seen here the condyle has direct access to continually traumatize the exposed temporal lobe. A devastating injury pattern never seen or realized.

These lesions/holes in the base of the skull: the invisible clinical TMJ fracture of concussions are likely to occur in athletes of all contact sports, increases their vulnerability for multiple concussions and TBIs with less applied physical force, causing recurring headaches and more frequent periods of the tormenting and recurring symptoms of concussions. These fractures also can produce localized brain swelling, while accelerating mental decline with aging and a distressingly painful, and predictable motivation for opioid addiction, alcoholism, suicidal ideations, and suicides. Treating the symptoms of concussions without considering the damage of the concussion can be ineffective or limiting. Healing the damaging fractures eliminates the symptoms and ensure success.

6 The Damage or Fracture of Concussions

The Fracture of Concussions

The loss of the integrity or hole in the Bony Floor Supporting the Brain, Exposes the Temporal Lobe of the Brain to the Direct and Continuous Trauma From the Condyle.

Condyle or ball of joint socket

Right-handed-NFL Quarterback-Left Side

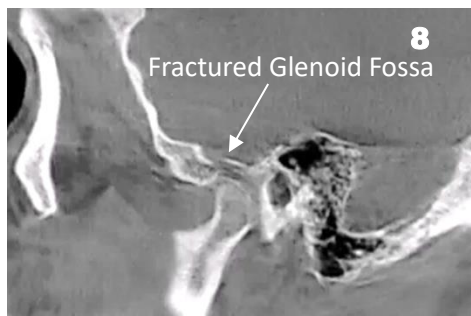
The Diagnostic Value of the New 3D Scanning Technology

How many multiple condyle (C) impacts and silent concussions did this quarterback sustain in his outstanding career to create this crippling fractured pattern of the concussions? This type of lesion results from an enormous number of condyles impacts against the glenoid fossa over-time. Perhaps these the kinds of painfully undiagnosed bone fractures into the base of the brain that would cause a warfighter or athlete to commit suicides?

HEALING THE FRACTURES OF CONCUSSIONS: REMEDYING THE INJURY RESOLVES THE SYMPTOMS



**Common Female Soccer Injury
Producing Recurring Headaches**



**Treated Unsuccessfully for Tormenting
and Recurring Concussion Symptoms
for 4 Years with Little to no Results.**



**Healing the Same Damaging Fractures
of Concussions in 4 Months Alleviates
Tormenting and Recurring symptoms.**

Concussion headaches see Figs. 7 & 8 Which exhibit the fractures in the TMJ associated with the concussion, TMJD, TBIs and other unexplained temporal lobe issues. Fig. 7 is a common injury found in soccer players causing the common headache and other cognitive symptoms. Fig. 8 is an unusual fracture of a soccer player following 4 years of treatment. Fig. 9 is the same soccer player after 4 months of treatment; healing these fractures eliminated the tormenting and recurring symptoms of concussions. With our new standard of care is a time and cost-effective treatment for concussions.

Healing the Fractures of Concussions Restores the Quality of Life!

CONCUSSION IMPACTS IN VARIOUS SPORTS

The Various Sports Exhibiting Traumatic Fracture Patterns in Bones of the TMJ Causing the Common Symptoms of Crippling Concussion, Headaches, TBIs and TMDs that can be Healed and Prevented: The Following Impacts are Concussion Producing Events.

THE CONCUSSION: TMJ IMPACTS IN FOOTBALL

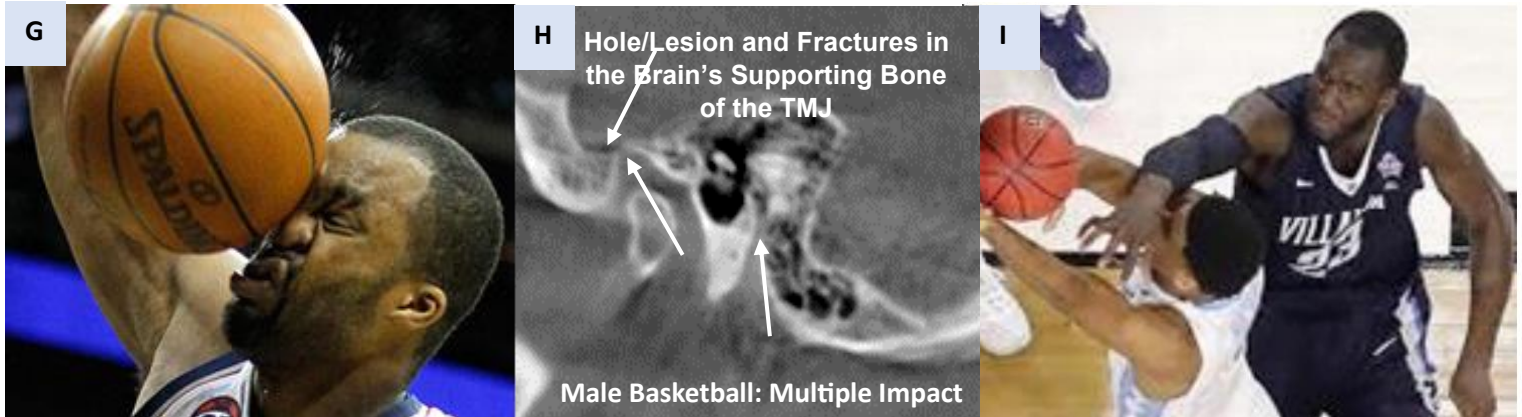


THE CONCUSSION: TMJ IMPACTS IN SOCCER



Soccer impacts that will produce TMJ fractures, concussion Headaches, TBIs and TMDs. The Head Impacts in the Wonderful Game Are Accumulative and the Crippling Results May Not Manifest Themselves for Years Until after the Games are Over. The Relief of the Symptoms by Taking Opioids and Meds May be Rendered Ineffective Over Time as Commonly Seen. Diagnosing, Healing and Preventing These Delicate Fracture at the Base of the Brain Eliminates the Suffering, Placing a Safety Net About the Future Soccer.

THE CONCUSSION: TMJ IMPACTS IN BASKETBALL



These Damaged Glenoid Fossa Fracture Types Found in Athletes and Military Personnel Are the Results of the Direct Impact of the Condyle into the Glenoid Fossa and Temporal Brain Producing the Concussion Headaches, TMDs, TBIs. **J-RES** (see below) Prevents these fractures, the Suffering, Cognitive Decline and The Early Retirement of Many Outstanding Players. Basketball today for the most part is played above the rim; however, the impacts of landing and the other head impacts occurring above and below the rim will have a direct and an accumulative impact damaging force against the delicate TMJ and Brain. This coupled with other impact forces of the game such as ball into the face, slip-n-falling, body-to-body impacts, picks or brick wall screens and others makes basketball players most vulnerable to TMDs, TBIs Concussions and long-term brain injuries affecting their quality of life after the games and critically affecting, their physical and mental health for life.

THE CONCUSSION: TMJ IMPACTS IN BASEBALL



Jaw Joint Science Institutes certainly applauds the positive efforts in baseball to enhance facial safety by adapting the helmet faceguard. This effort and product which enhances the safety of the sport will protect the temporal mandibular joint, base of the skull, face, prevents the concussion and other associated injuries of direct ball impacts. This co-operative effort will certainly increase the wellbeing of our baseball players. The design is simplistic but the results and safety margin are outstanding! This new device will prevent the contrecoup injuries that will occur in the jaw joint space. This will also will also diminish these kinds of injuries in body-to-body contact in baseball.

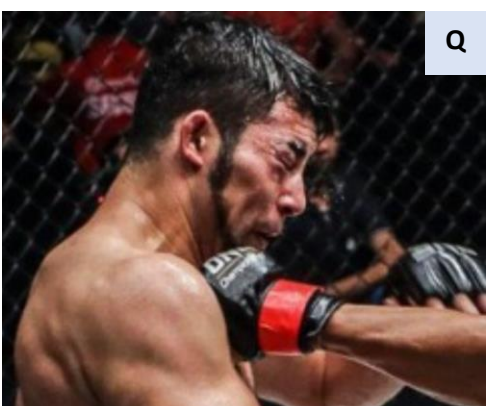
These kinds of head impact injuries can mar the player for life.

THE CONCUSSION: TMJ IMPACTS IN RUGBY



The multiple and crippling concussions of Rugby are rapidly threatening the future of the game worldwide.

THE CONCUSSION: BILATERAL TMJ IMPACTS IN BOXING



In the World of Boxing, it Has been Most Understood and Accepted that an Impact Against the Mandibular Symphysis (Sweet Spot) Will Send Two Equal and Opposite Impact Forces to the TMJs Simultaneously.

This Produces the Knockout or Concussion!

CONTRECOUP TMJ CONCUSSION INJURIES



The Damaging Lateral Coup and Contrecoup (Movement) of Mandibular Condyle Not Only Impacts the Brain and Intracranial Skeletal Structures, But It Also Slams Unsuspecting Extracranial Structures (see below). Note the displacement of bone and adjacent tissue. However, we must also consider the extracranial structures that are within striking distance of the condyles' lateral (excursion) range of motion. These kinds of head impacts, see Figs. 10, 11 & 12, and heading the ball will cause intracranial brain and extracranial vascular and nerve injury, triggering the tormenting and recurring symptoms of concussions. Lateral excursive movements visually occurring in soccer also occurs less visually in helmeted sports.

NOTE THE CLOSE PROXIMITY BETWEEN THE BRAIN AND THE IMPACT SITE OF THE EAR



The Cauliflower Ear Deformity

Ear Canal Relationship to Cauliflower Injury (Generally Traumatized Region)

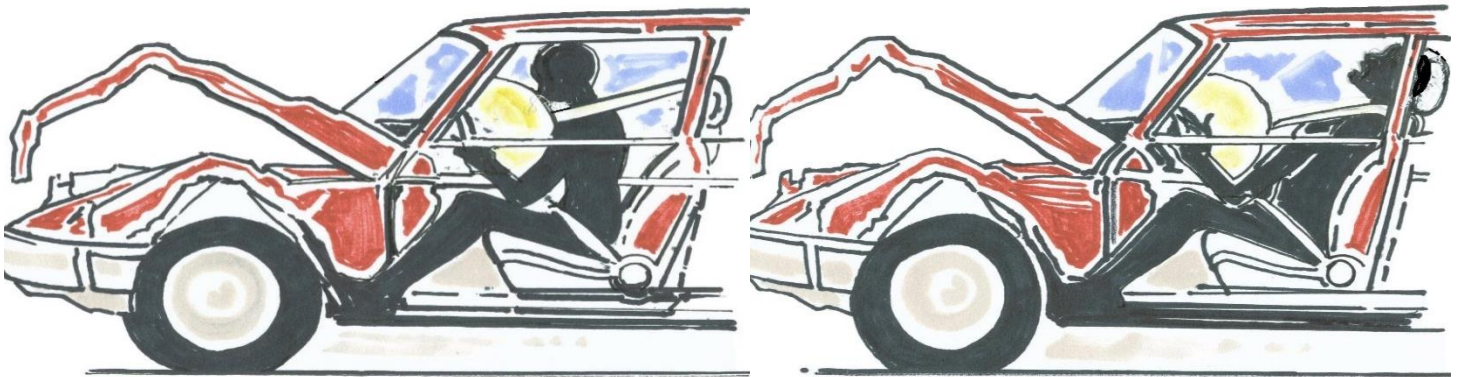
The multiple blunt trauma necessary to cause this deformity of the ear will also produce the associated blunt trauma that will fracture the thin associated temporal bones and cause multiple concussions of the temporal lobe of the brain. This region is the body's most sensitive, frail, problematic and unforgiving impacting site.

INJURY MECHANISM IN AN AUTO COLLISION SUPPORTING FINDINGS

At the time of the auto collision, the body leads with the head and the air bag deploys at 200mph, striking the head, face and lower jaw. The head slamming against the headrest instantaneously follows this event (see illustration below).

An overlooked component of this head trauma is the lower jaw dynamics. The lower jaw (a constituent of the Temporal mandibular joint: TMJ) not being attached to the skull, at the moment of impact and punch of the deployment of the air bag, it is slammed onto the base of the skull. The impact is influenced primarily by two variables of force. The air-bag deployment impacts the head traveling in the opposite direction the inertia speed of the auto. These components of force slam the head back onto the headrest (a whiplash event) while the lower jaw is again slammed onto the base of the skull.

These events collectively produce more than enough force to cause TBIs, concussions and fracture bones in the jaw joint space/TMJ.



In the jaw joint space, the glenoid fossa is the ceilings of the TMJ, is eggshell thick. This thin glenoid fossa is also the floor of the middle cranial fossa of the skull, which contains and supports the temporal lobe of the brain. The focal point of the glenoid fossa fractures occurs at a specific site at the base of the brain called the inferior lateral boarder of the middle gyrus of the temporal lobe. These jaw joint fractures cause irritation, inflammation and swelling at the base of the brain at the described site (see pg. 9 of previously sent booklet). These TMJ injuries are not diagnosed or valuated by the health care provider. This inflammatory process contributes to the cognitive symptoms post-traumatic symptoms of temporal lobe manifestations. This scenario is further exacerbated by the condyle of the lower jaw impacting upon this fractured bony component during teeth clenching episodes, stress, exercise, the excursive movements of opening and closing the mouth, eating and the like. This also accounts for the reoccurring cognitive symptoms of temporomandibular joint disorders (TMD) and other traumatic brain injuries (TBI).

OTHER ANATOMICAL STRUCTURES IMPACTED BY CONCUSSIVE FORCES

INTRACRANIAL STRUCTURES:

- Middle cranial fossa basal surface supporting the temporal lobe of the brain
- Medial temporal gyrus of the temporal lobe
- The petrous pyramid
- Abducens nerve
- The temporal bones of the ear canal, auditory meatus, and ossicles of the inner ear
- The mastoid air cells
- Brain's temporal lobes

EXTRACRANIAL STRUCTURES:

- Condyle of the lower jaw
- The glenoid fossa bone, the ceiling of the TMJ
- **Carotid Canal**
 - Internal carotid artery
- **Jugular foramen and 4 Cranial Nerves:**
 - Vagus Nerve
 - Spinal accessory Nerve
 - Hypoglossal Nerve
 - Glossopharyngeal Nerve

THE TREATABLE: COGNITIVE SYMPTOMS OF CONCUSSIONS, TMDs, TBIs, & OCCLUSAL STRESS

15 The Delicate and Most Easily Fractured Bony Structure the Temporal Mandibular Joint (TMJ) Will Adversely Affect More Bodily Functions Than All Other Joint and Muscular Systems Combined!

- ☐ 1. Irritability
- ☐ 2. Depression
- ☐ 3. Mood Swings
- ☐ 4. Hearing Loss
- ☐ 5. Poor Sleep Habits
- ☐ 6. Mental Confusion
- ☐ 7. Behavioral Changes
- ☐ 8. Living in Mental Haze
- ☐ 9. Personality Variations
- ☐ 10. Loss in Concentration
- ☐ 11. Facial and Joint Pains
- ☐ 12. Intellectual Difficulties
- ☐ 13. Sinus-Like Headaches
- ☐ 14. Nausea and/or Vomiting
- ☐ 15. Impaired Sense of Balance, Dizziness
- ☐ 16. Impaired Visual and Auditory Processing.
- ☐ 17. Grinding, Clicking or Popping Sounds When Opening or Closing The Mouth
- ☐ 18. Migraine-Like, Sinus-like Severe Headaches
- ☐ 19. Pulsating Pains Behind the Eyes

- ☐ 20. Attention/Perception Problems
- ☐ 21. Reduced Problem-solving ability
- ☐ 22. Post Traumatic Stress Disorders PTSD
- ☐ 23. Unrealized Physical Loss of Strength
- ☐ 24. Increase Sensitivity to Light and Noise
- ☐ 25. Memory Loss More Forgetful than Ever
- ☐ 26. More Hostile & Intense Than Usual
- ☐ 27. Raspy voice & Tongue-tied Speaking
- ☐ 28. Rotator Cuff and Frequent Stiff Neck
- ☐ 29. In a State of Anxiety and Quick to Anger
- ☐ 30. Higher Propensity for Strokes (CVA)
- ☐ 31. Decreased Ability to Cope With Stress
- ☐ 32. Ringing in the Ears, Tinnitus
- ☐ 33. An Increase in Unusual Behavior
- ☐ 34. Substance Use & Abuse Disorders
- ☐ 35. Teeth Clinching Episodes or Bruxism
- ☐ 36. Causation for Alcoholism and Suicides

The Reoccurring Migraine Headaches Are The Most Prominent Symptom

Diagnosing & Healing Jaw Joint Fractures Alleviates These Symptoms of Concussions, Improves the Safety of Sports, Military Healthcare, Combat Readiness & Quality of Life; Reducing the Alcohol, and Opioid Addictions (Cocktails of Pain)

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“Many Events of Sports and Military Operations Cause the Lower Jaw to Impact the Base of the Skull and Brain with Little to No Resistance and Absolutely No Protection and Are the Etiologies of Many Unsolved Cognitive Problems Suffered by Our Athletes and Warfighters.”

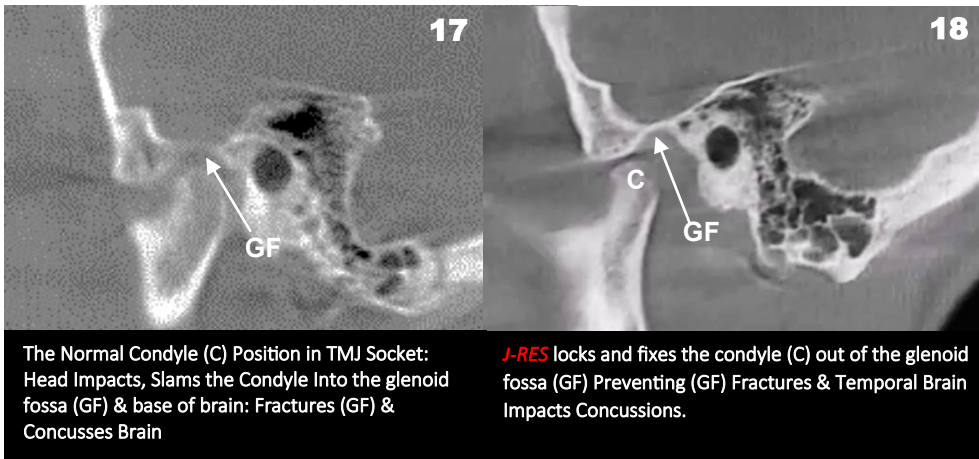
J-RES: SOLUTION TO CONCUSSIONS: PROTECTING THE BASE OF THE BRAIN AND TMJ

THE SOLUTION: Preventing the Impact Load Forces of the Condyle from Being Transmitted Through the TMJ
Entering the Brain's Temporal Lobe Prevents the Concussion; **J-RES** Is the Solution

Protecting and Safeguarding Life's Most Vital Joint the TMJ, Dr. Edward Williams of Jaw Joint Science Institute introduces an intraoral appliance, the **J-RES** (jaw-restorer), see Fig. 16. A dual channel device that fixes the upper and lower teeth into a locking position, that disengages and secures the condyle (C) out of the glenoid fossa (GF), see Fig. 17, which prevents the condyles' impact forces from ever entering or being transferred to the base of the brain's temporal lobes (preventing the concussion). The aberrant head impact forces are absorbed, redirected, and dissipated by **J-RES**. This design-specific scenario works in tandem with helmets, mitigating headgear constraints, TMDs, fractures associated with concussions, and TBIs while enhancing headgear compliance and comfort in lengthy wearing times. **J-RES** is a cost-effective item that can be properly fitted within 3-minutes, with and without the helmet. The correlation between the helmet, concussions, and TMJ is void of research.



PREVENTING THE CONCUSSION DURING THE GAME; SAVES THE PLAYER AND THE GAME



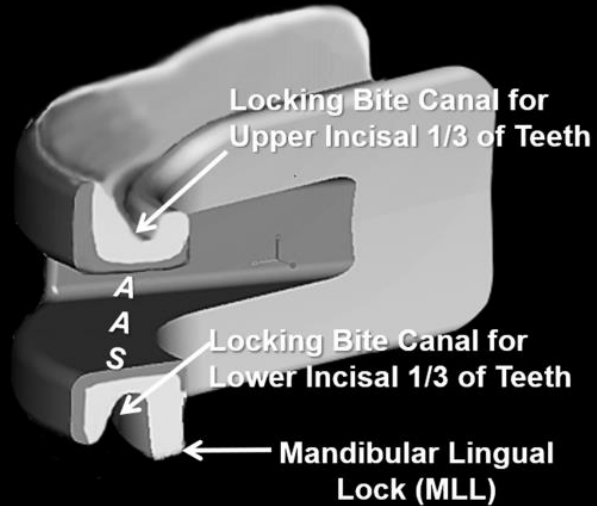
The Normal Condyle (C) Position in TMJ Socket: Head Impacts, Slams the Condyle Into the glenoid fossa (GF) & base of brain: Fractures (GF) & Concusses Brain

J-RES locks and fixes the condyle (C) out of the glenoid fossa (GF) Preventing (GF) Fractures & Temporal Brain Impacts Concussions.

Mandating mouthguards has added abuse to TMDs, TBI, and Concussion injuries. The design of **J-RES** enables speech, enhancing the teeth-clenching mechanism while breathing through the mouth facilitating strength, while reducing fatigue for our athletes and fighter forces during training, aviation, and field operations. Our product is designed to prevent TMDs,

alleviate direct traumatic injury against the brain's temporal lobe and TBIs, elevate brain safety, and eliminate headgear TMJ constraint, while improving physical performance. **J-RES** prevents the harmful direct transfer of head impacts, blast & breach, and pulling G's. **J-RES** contributes to the strength, stamina, brain health.

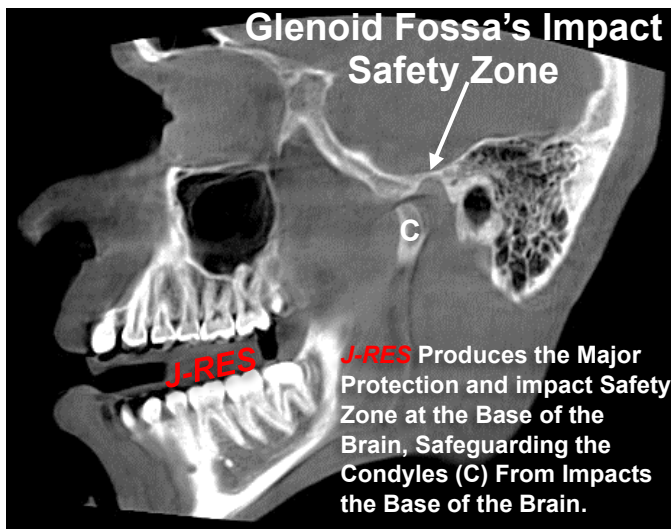
THE TEMPORAL LOBES CAN NO LONGER BE THE SACRIFICIAL LAMB FOR SPORTS OR THE MILITARY

J-RES: A MULTIPURPOSE DEVICE, PROTECTING THE TMJ PREVENTS THE CONCUSSION**J-RES Prevents Brain Concussions, TMD Fractures and TBIs from the Lower Jaw Impact****J-RES Jaw Restorer****American Made
American Tough**

In Order to Engage the Lower teeth into Locking Lower Bite Canal the Lower Jaw Must Move Down and Forward Stabilizing the Jaw Configuration Moving the Condyle Out of the Joint. Prevent the Forces of Concussion From Entering the Base of the Temporal Brain

An Innovative Solution For Training, Workouts, Military Ops and Sports

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J-RES In Place Moves and Locks Condyle (C) into a Fixed Distances out of the Delicate Glenoid Fossa, so that the head impact forces will be absorbed **J-RES** and the teeth, Preventing Impacts Against the Brain's Temporal Lobe, thus Preventing the TMJD and the Concussion.

**MOUTHGUARDS POTENTIATE THE CONCUSSION IMPACT FORCES**

The mouthguard is the only headgear equipment ever mandated for safety that has never been biomechanically or impact tested for any standard of function or safety. The mouthguard was designed and functions only to protect the anterior component of the teeth. Unfortunately, as a result, this has Caused the lubricated teeth of the lower jaw to slide against the mouthguard, causing the condyle to slam into the base of the brain; the slide and slam phenomena, increasing the fracture load against the glenoid fossa.

OPTIMIZING TMJ PROTECTION, HUMAN PERFORMANCE AND STRENGTH

Strength Restoration Is the Exciting Giveback Component of **J-RES**



J-RES: A Revolutionary Benefit for TMJ Protection and Enhanced Physical Performance: **J-RES** stands out not only for its protective benefits for the TMJ by safely repositioning the condyle, but it also significantly enhances muscular strength, intensity, and overall physical performance by 20-35% across a range of activities including strength training, military operations, and sports. An intriguing aspect of **J-RES**'s effectiveness lies in its ability to leverage a lesser-known physical phenomenon: the act of breathing through the mouth while clenching the teeth can unexpectedly promote strength. This discovery underscores **J-RES**' role in not just safeguarding against TMJ damage but also in elevating the wearer's physical capabilities **beyond their normal limits!**

AN EMPOWERMENT TO PHYSICAL THERAPY: Wearing **J-RES** during physical therapy rehabilitation will also enhance the physical output of the individual. this enhanced strength will incentivize many physically injured making-for a more rapid return to the game, work, function, and life.

To Magnify the Concept of Brain Safety and Added Physical Strength and Endurance for Warfighters, I strongly Suggest that Every Helmet Distributed Have a **J-RES** Attached.

J-RES Should Also be Worn during Training and Mission Ops. **SAFETY FIRST!**

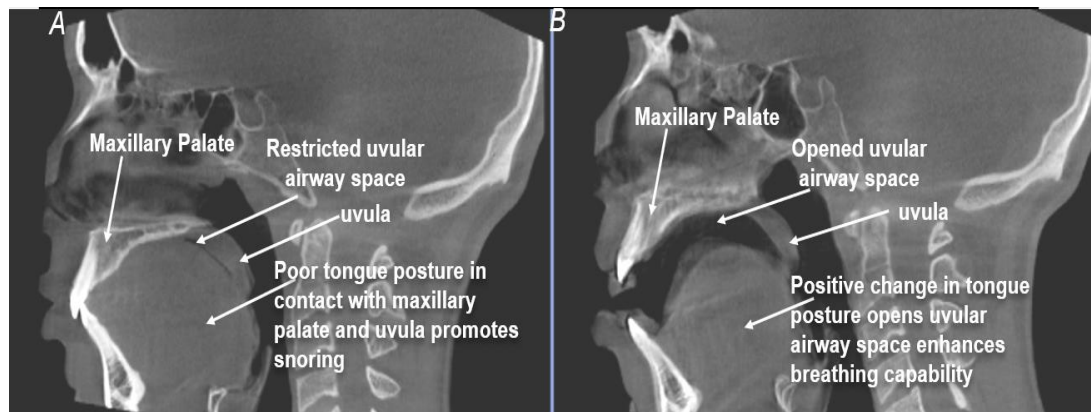
OVERVIEW OF THE BENEFITS & JOY OF WEARING **J-RES**

Efficacies of **J-RES** Protecting the TMJ will alleviate the following:

- A. Enhances the outcome of physical therapy.
- B. Prevents jaw joint & TMJ fractures & the onset of lower jaw impact concussions.
- C. Enables greater repetition of exercise.
- D. Eliminates chinstrap constraint promoting comfort & safety compliance of helmets.
- E. Enhances the athlete's peak performance and muscular endurance.
- F. Anterior airway space increases the ability to speak with **J-RES**.
- G. Functions for many as a sleep apnea device to reduce snoring.
- H. Absorbs the physical head impacts which will minimize the onset of CTE.
- I. Enables mouth breathing while teeth-clenching for strength.
- J. Diminishes headache responses while physically engaged.
- K. Strength enhancement is a magnificent component of **J-RES**.
- L. Enhances the proficiency & physical endurance of contact sport events.
- M. Clenching & breathing through the mouth enhances strength & reduces fatigue.
- N. Maintains stability, balance, proper fit of helmets & enhances brain safety.
- O. Protects against tooth fractures from facial & lower jaw impacts & clinching episodes.
- P. Protects the teeth and TMJ without disabling speech.

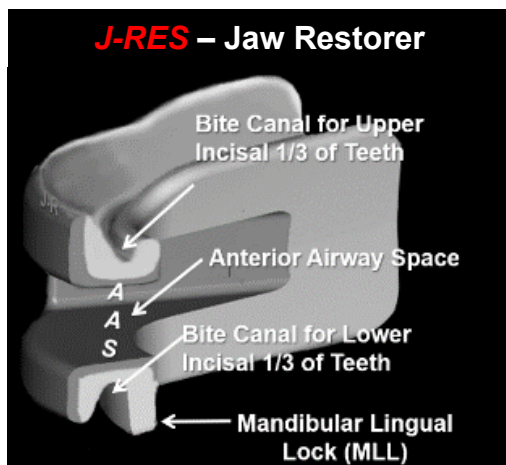
J-RES REDUCES SNORING

J-RES locks the lower jaw into the down and forward position increasing the glottis airway space, positively changing the tongue posture which relieves stress of the uvula; this prevents snoring, enhances sleep and relieves the stress against the TMJ.



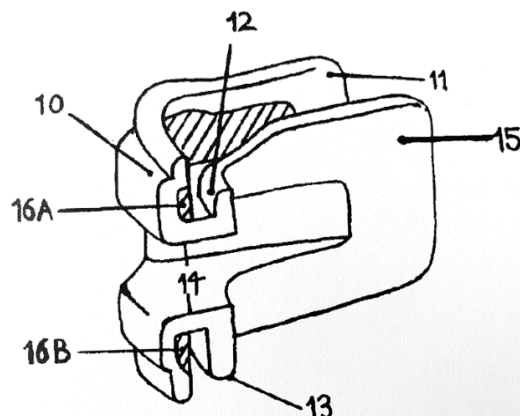
PATENT INFORMATION

INTELLECTUAL PROPERTIES OF **J-RES** AND DUEWA



Dual Use Exercise Whitening Appliance

Strap Provided for Helmet Attachment



J-RES US Patent No.: 11,583,751

DUEWAUS; US Patent No.: 11,179,232

Many persons experience exercise induced headaches. Those headaches are eliminated using the DUEWA while enhancing strength and the proficiency of the exercising routine. Also, by removing 16A and 16B materials and inserting the whitening jell, the user will be able to whiten their teeth while exercising.

The Following Photo's Functional Forces Contributes Heavily to The Brain's Temporal Lobe TBI/Concussion
JJSI Treats & **J-RES** Prevent the Resulting Tormenting & Recurring Symptoms of Concussions



SLIP-&-fall



RUGBY



RIDING, AND FALLS OF THE EQUESTRIAN



SOCCER



CAR ACCIDENTS



BMX CRASHES



MOTORSPORT



IMPACT FORCES OF WRESTLING



HOCKEY



MMA



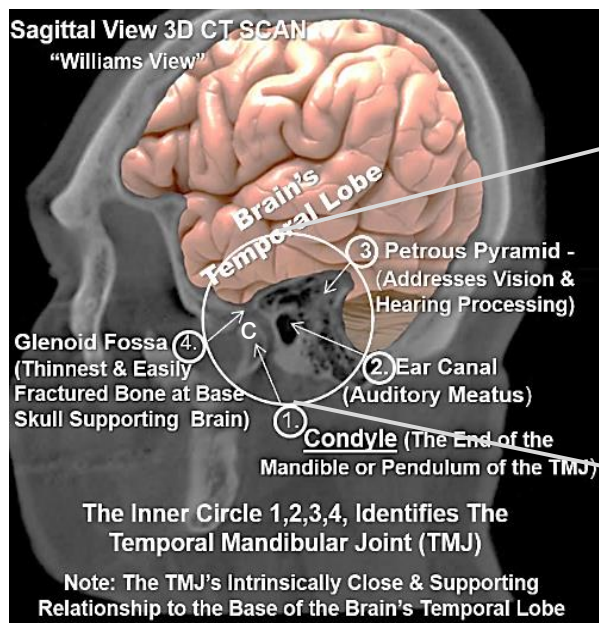
LACROSSE



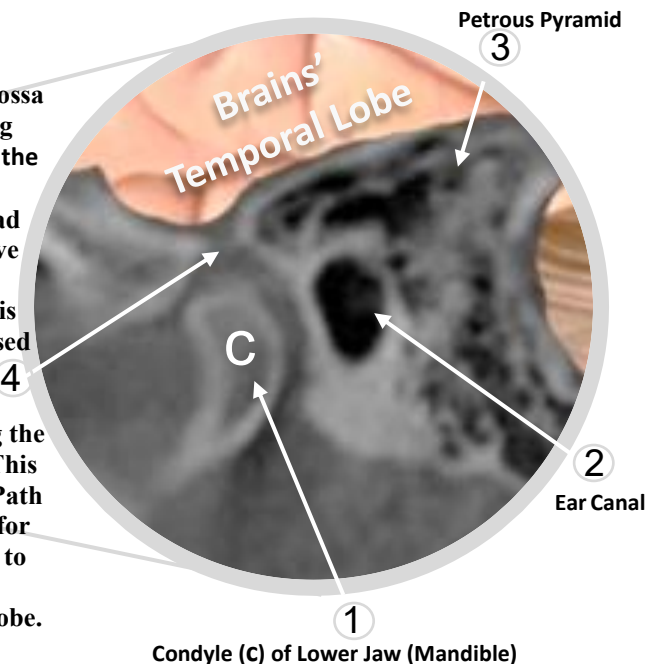
BOXING

SUMMING UP

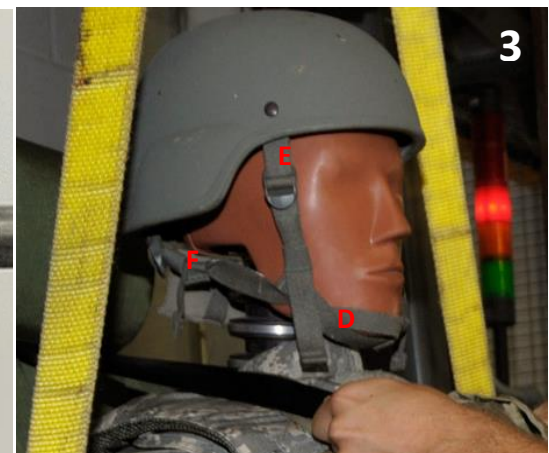
After researching, diagnosing, treating, and successfully preventing sports related concussions and the underlying symptoms, I would like to introduce this information to those who may best utilize it and for the safety and wellbeing of both the great players and sports we enjoy. My clinical findings as a dentist support the science I have developed.



The Thin Glenoid Fossa Bones (4) Supporting the Brain: Creating the Condyles (C) Direct Pathway for the Head Impact and Explosive Forces to Enter the Temporal Brain. This Produces Undiagnosed TBIs, TMDs and Concussion Injuries Precisely Disrupting the Brain's Functions. This Is the Unprotected Path of Least Resistance for the described forces to Directly Enter the Brain's Temporal Lobe.



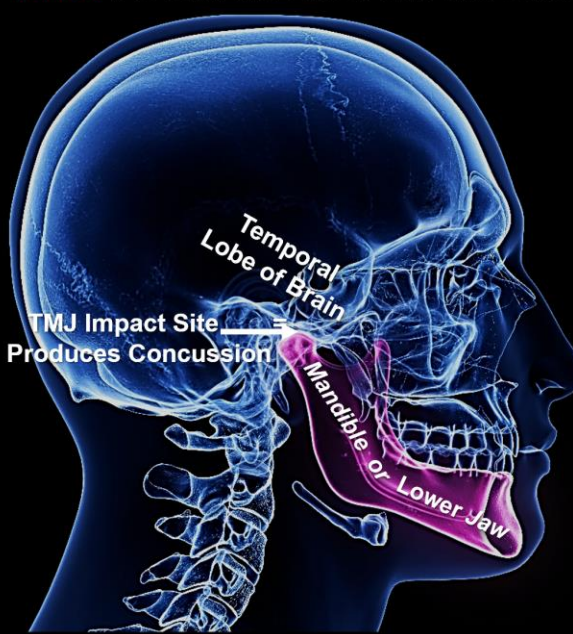
Life's Most Vital Joint (THE TEMPORAL MANDIBULAR JOINT) Has Long Been Overlooked in the Evaluation of and Protection Against Headaches, Concussions, and TBIs. The Thin and Unprotected Glenoid Fossa Bone Was Not Designed too and Can Not Withstand the Physical Impact Forces of Various Sports: Protecting this Delicate Structure at the Base of the Brain (the TMJ) is Essential to the Performance, Strength, Endurance and Wellbeing of Sport Participants



THERE ARE TOO MANY RISKS AND ANATOMICAL LIMITATIONS IN MAINTAINING THE STATUS QUO OF THIS HEADFORM LACKING THE JAW JOINT STRUCTURES

This Obsolete Impact Testing Headform (1) of Over 25 Years Has totally Omitted the vulnerability of Life's Most Vital Joint: the TMJ. With the Billions of Dollars Spent to Date, We Have not Seen a 1% reduction in TBIs, Concussions, or TMDs. This overlooked diagnostic methodology of TBIs must be considered as a major solution that will enhance the standard in brain healthcare. These injuries are exacerbated by the chinstrap constraint (2,3). We cannot continue to ignore the link between TBIs and the TMJ; acting as if this vital joint structure of the head being directly impacted does not exist. It has been ignored and neglected by the medical societies studying the effects of TBIs and concussions for too long.

J-RES Prevents the TMDs, TBIs and Concussions While Supporting the Athlete's Brain Health



Temporal Lobe of Brain
TMJ Impact Site
Produces Concussion
Mandible or Lower Jaw

J-RES US Patent No. 11,583,751

***J-RES:** A TMJ Injury Prevention Device, Enhances Our Athletes' Physical Strength and Endurance, While Maintaining the Brain's Impact Safety Health*

J-RES CAN BE PROPERLY FITTED AND FUNCTIONALLY TESTED IN 45 SECONDS: AGGRESSIVELY REDUCING THE ONSLOT OF CONCUSSIONS

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JAW JOINT SCIENCE INSTITUTE
Trust In Our Reliability To Enhance Your Success

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Testimonials



Digital Booklet

“Increasing the Safety Margins for the Brain Enhances the Quality of Life for the Athlete and Their Families!”

THE TRUTH HAS TO BE SERVED: DAMAGING THE MOST DELICATE ORGAN OF ALL WITHOUT FORETHOUGHT, THE TEMPORAL BRAIN