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# Challenges of Litigating Mild Traumatic Brain Injury

2016 Traumatic Brain Injury Conference

January 29, 2016

Dale Orlando and Alison Burrison

# Objective

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- Prove impairments are caused by organic injury
- Prove the impairments are permanent
- Prove that the impairments impact on function

# Think Like a Juror

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- You know nothing
- Medical science knows everything
- X-rays, MRI and CT are infallible
- The patient/plaintiff looks and sounds fine

# Challenges

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- Injured party looks healthy
- No objective evidence of injury
- Experts rely on self report in making diagnosis
- Neuropsychology results are open to interpretation
- Equally qualified experts disagree on diagnosis, causation and functional impact

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# Standard Defences

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- Any symptoms are emotional and can be rectified by proper treatment
- The plaintiff is exaggerating or malingering
- Any impairments are as a result of pre-existing problems or a post accident event
- The plaintiff has bought into disability

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# Strategies

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- Look for physical evidence in the “early records”

# Use Ambulance & Hospital Records

**GCS = 14**

02/20/2008 12 45 FAX 9054727086 MSH ADMINISTRATION 003/005

Call Number if more than 1 page

432843 ERO2692/07 11/02/75

KISSI, MARTIN 32 M

Code	Time	Procedure	Temp	ECG	SpO2	Respiratory	Neuro	Other
2149030		Rt assessment					15 noted	
2146010	76	REF16 REF178116					4 4 6 14 4+ 4r	
2148111		collar applied					immobilization	
2150112		spinal board					immobilization	
2152301		monitoring	40	100				
2155010	76	REF16 REF175105					4 4 6 14 4+ 4r	
2156132		oxygen nasal cannula		100				
2205231		transfer spine						
2205010	72	REF16 REF182123					4 4 6 14 4+ 4r	
2207352		assess BGL					BGL 9.5 mmol	
2210010	72	REF16 REF166104					4 4 6 14 4+ 4r	
2215010	72	REF16 REF15398	40	100			4 5 6 15 4r 4r	

Remarks: *backing it and knocking it off the window*

**CERTIFIED TRUE COPY**

Date: 2/20/08 Sig: *[Signature]*

Head injury 4.2 3

Base Hospital Physician Name (if Patch): *[Signature]*

Receiving Facility Signature: *[Signature]*

Receiving Facility Name: *[Signature]*

Receiving Facility Address: *[Signature]*

Receiving Facility Phone: *[Signature]*

Receiving Facility Fax: *[Signature]*

Receiving Facility Email: *[Signature]*

Receiving Facility Website: *[Signature]*

Receiving Facility Other: *[Signature]*

Receiving Facility Total: *[Signature]*

Fluid Balance: 6

2140 2141 2142 2143 2144 2145 2205 2215

1881-40 (02/11) WHITE - Patient Chart BLUE - Billing Office CANARY - Base Hospital PINK - Ambulance Service 40/23/0



# Document Initial Observations

Patient Call Report <i>Confidential When Completed</i>		Leaders in Transport Medicine	
Surname: ██████████	Call Date: 2015-03-02	Service Name: ORNGE	
Given Name: ██████████	Comm Center: OCC	MT#: ██████████	
Mailing Address: ██████████	Patient #: ██████████	Trip #: ██████████	
City / Town: ██████████	Veh #: CGYNH	Veh Level of Care: Critical Care - 07	
Province: ON	Base: 7799 - Toronto (Primary)	Status: At Base - 0	
Country: Canada	Postal Code: ██████████	WS to Scene: NA (Aircraft)	WS to Dest: NA (Aircraft)
Gender: Female	Weight: ██████████	Priority - Dispatch: 4 - Urgent	Call Type: Modified Scene
Date of Birth: ██████████	Priority - Return: 04 - Urgent		
If patient is a child guardian's name: ██████████	CTAS - Dispatch:	CTAS - Return: 2 - Emergent	
# of Patients: 1	Patient Seq #: 1	Deceased: Not Applicable	
OHIP Card #: ██████████	Other #: ██████████	On Scene GPS: Lat Long	

**...Significant damage to vehicle +++++...pt unconscious. Immobilized at scene & pt regained consciousness en route to Trenton hosp (reportedly GCS 13-14)...Vomited x 1 & incontinent of urine...**

CLINICAL INFORMATION
At ~18:00 this evg, pt was the restrained rear seat right side passenger in a vehicle travelling at unknown speed when it collided with another vehicle head on. Significant damage to vehicle +++++. O/A of local EMS, pt unconscious. Immobilized at scene & pt regained consciousness en route to Trenton hosp (reportedly GCS 13-14). Shortly after arrival in ER, pt became decreased LOC with eyes deviating up & to the right. Vomited x 1 & incontinent of urine. No seizure activity noted. Pupils 3+ PERL bilat. Intubated @ 18:40 with Sux, Propofol & Roc. Fast negative, no further imaging done. Hosp bx: 2xPIV's, ETT, Lab work, OG, CXR. For transfer to HSC ER Trauma team. Uneventful transport. Transferred care to TTL & report given.
<b>Traumatic Injury Site/Type</b>
# 1 Trauma Injury: Location - Head/Brain/Scalp - 10, Injury Type - Blunt - 34, Mechanism - MVC - 58
<b>Relevant Past History</b>
Communicable Diseases - None Previously Healthy
<b>Medications</b>
<u>Home Rx: Prior to Hospital Visit/Admission</u> NO Medication
<u>Hospital Rx: Prior to Ornge Arrival</u> Fentanyl (Sublimaze) Propofol (Diprivan) Rocuronium Succinylcholine (Anectine)
<b>Allergies</b>
NKDA



# Strategies

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- Document in detail the evolution but overall consistency of symptoms

# Use the Later Records to Show Consistency of Symptoms

THE HOSPITAL FOR SICK CHILDREN DEPARTMENT OF REHABILITATION SERVICES PHYSIOTHERAPY <input type="checkbox"/> OCCUPATIONAL THERAPY <input checked="" type="checkbox"/>		Patient Name: Spencer Copeland HSC#: 1914237 D.O.B.: 93-03-20 Date of Ax: August 18, 1998						
DATE	<b>OCCUPATIONAL THERAPY REPORT (cont'd)</b>  <p><b>Behaviour:</b> Spencer demonstrates euphoric affect, impulsivity (at risk to wander and requires constant supervision), confabulation (recitation of imaginary experiences to fill in gaps in the memory). His behaviour is consistent with Ranchos Level 5 (Confused, Non-Agitated and Inappropriate) which means that he is fairly alert, distractible with poor ability to focus attention to a specific task, able to respond to simple one step commands consistently, however with increased complexity of commands his responses become fragmented. Spencer is a cooperative little boy who is motivated to interact with his environment. He requires firm limits, and responds well to provision of antecedent setting structure (which means, letting him know what will happen within an activity session so that he can anticipate it).</p> <p><b>Motor Skills: Oral Motor Skills/ Oral Feeding Skills:</b> Spencer presents with left facial weakness (most evident when smiling).</p> <p><b>Fine Motor Skills:</b> Spencer demonstrates a tendency to use his right&gt;left, and requires encouragement to activate left arm during bilateral tasks (which means tasks that automatically require two hands). Once he activates his left arm, he demonstrates good dexterity.</p> <p><b>Gross Motor Skills:</b> Spencer requires constant supervision due to safety concerns. He is demonstrating left inattention and tends to bump into objects on his left side, and also is impulsive. Please refer to Physiotherapy report for more details re: mobility.</p> <p><b>Functional Cognitive Skills:</b></p> <p>C.O.A.T. (Children's Orientation and Amnesia Test) was administered on Aug 18, 1998</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">General Orientation</td> <td style="text-align: right;">30/40</td> </tr> <tr> <td>Memory</td> <td style="text-align: right;">14/44</td> </tr> <tr> <td>TOTAL</td> <td style="text-align: right;">44 which is below the norms for his age</td> </tr> </table>		General Orientation	30/40	Memory	14/44	TOTAL	44 which is below the norms for his age
General Orientation	30/40							
Memory	14/44							
TOTAL	44 which is below the norms for his age							
	<p><b>New Learning:</b> Spencer is at risk for new learning difficulties due to his shortened attention span, distractibility, and poor memory.</p> <p><b>Functional Performance:</b></p> <p><b>Self Care-</b> Spencer requires constant supervision due to safety concerns.</p> <p><b>Leisure-</b> Spencer responds best to quiet activities (of 5-7 minutes duration) in a structured setting, or turntaking activities (eg. playing catch).</p> <p><b>School Performance-</b> Spencer is at risk for significant new learning difficulties.</p>							

**Attention and Concentration: Stephen demonstrates auditory and visual distractibility and requires redirection to complete tasks.**

# Strategies

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- Comment on force of impact/property damage if applicable

# Photographs of Badly Damaged Vehicle



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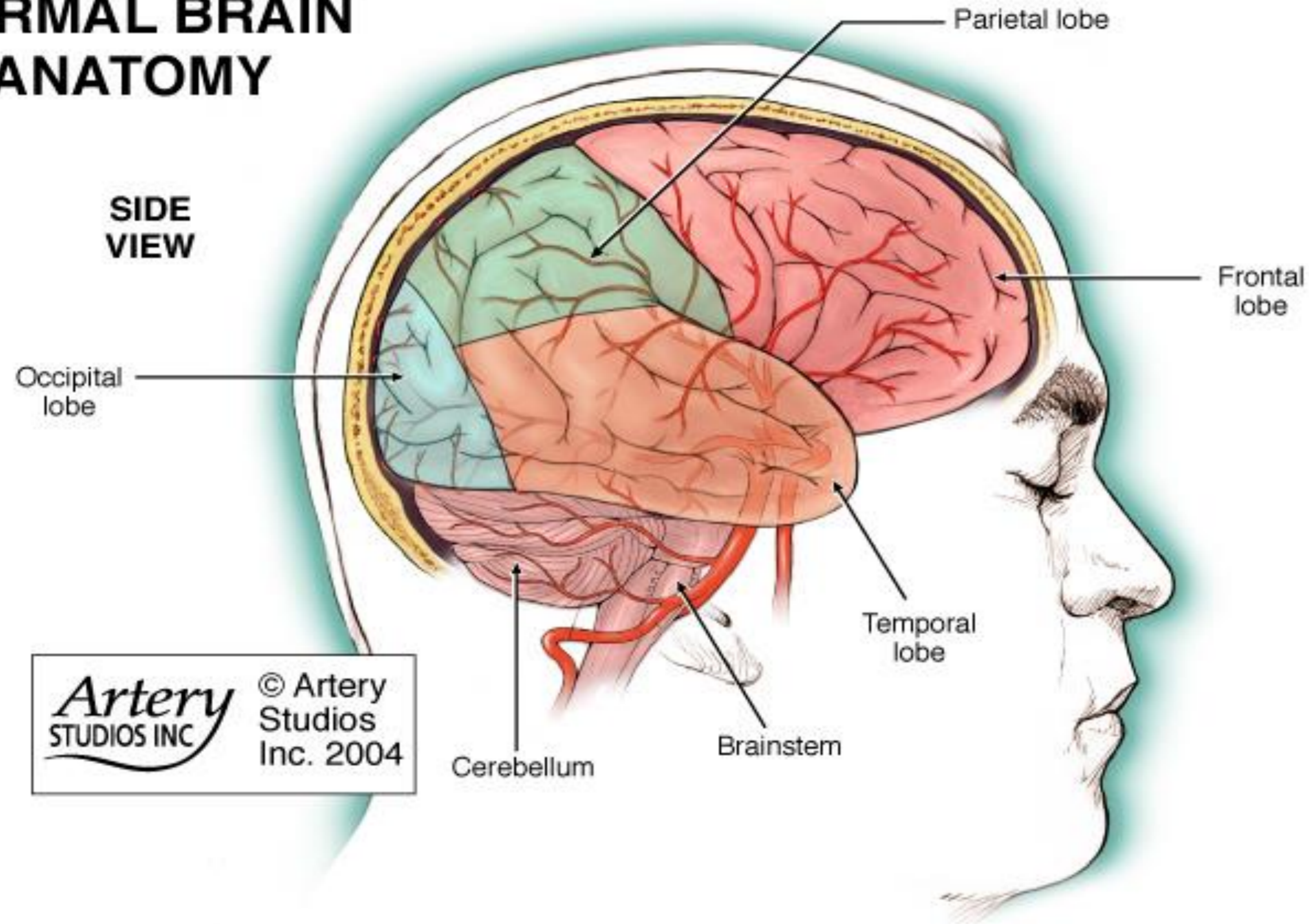
# Strategies

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- Explain the mechanism of injury

# Use Illustrations and Models to Explain Anatomy, Function and Mechanism of Injury

## NORMAL BRAIN ANATOMY



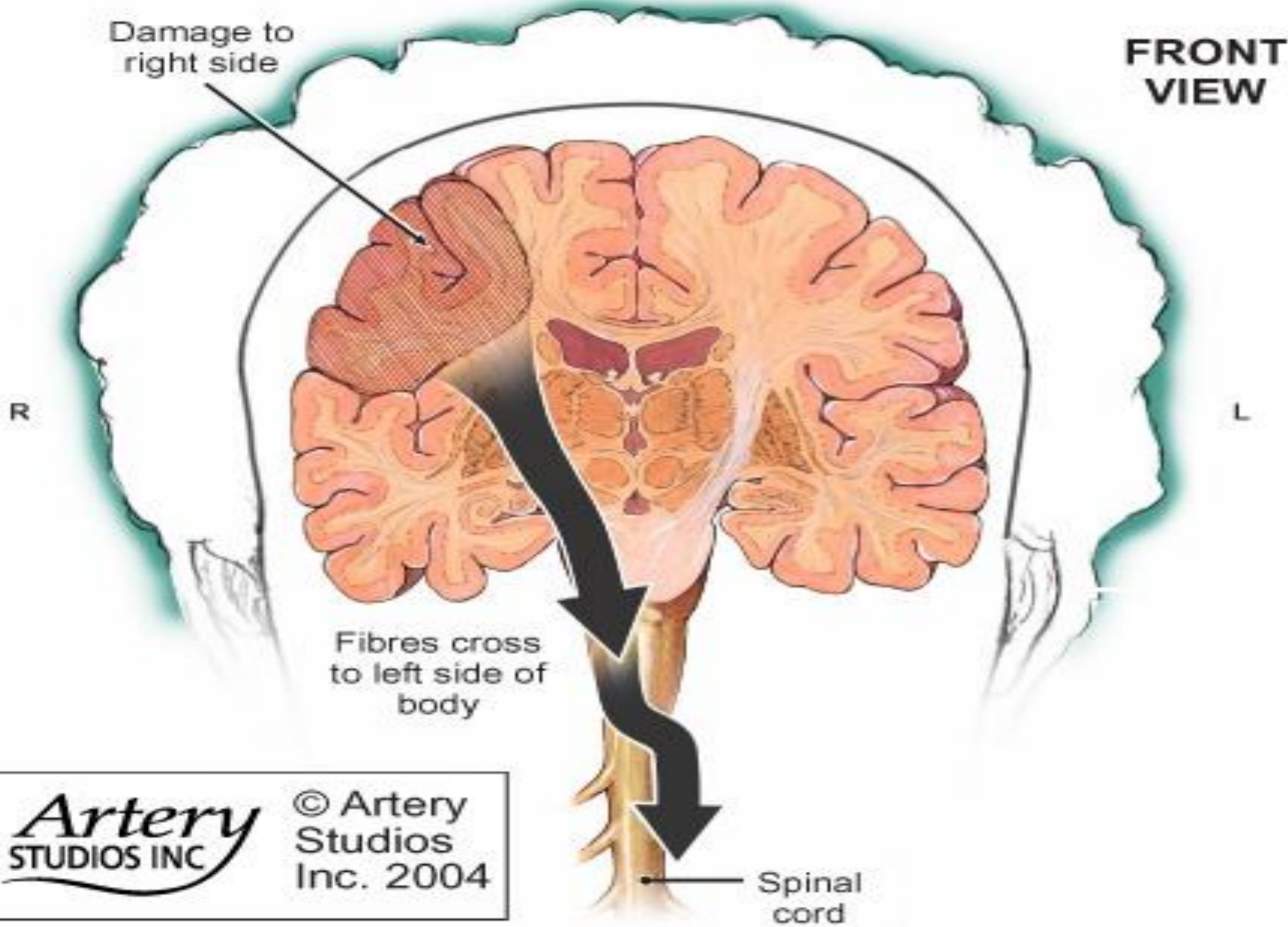
*Artery*  
STUDIOS INC

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Studios  
Inc. 2004

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# RIGHT-SIDED BRAIN INJURY AFFECTS LEFT SIDE OF BODY



**Artery**  
STUDIOS INC

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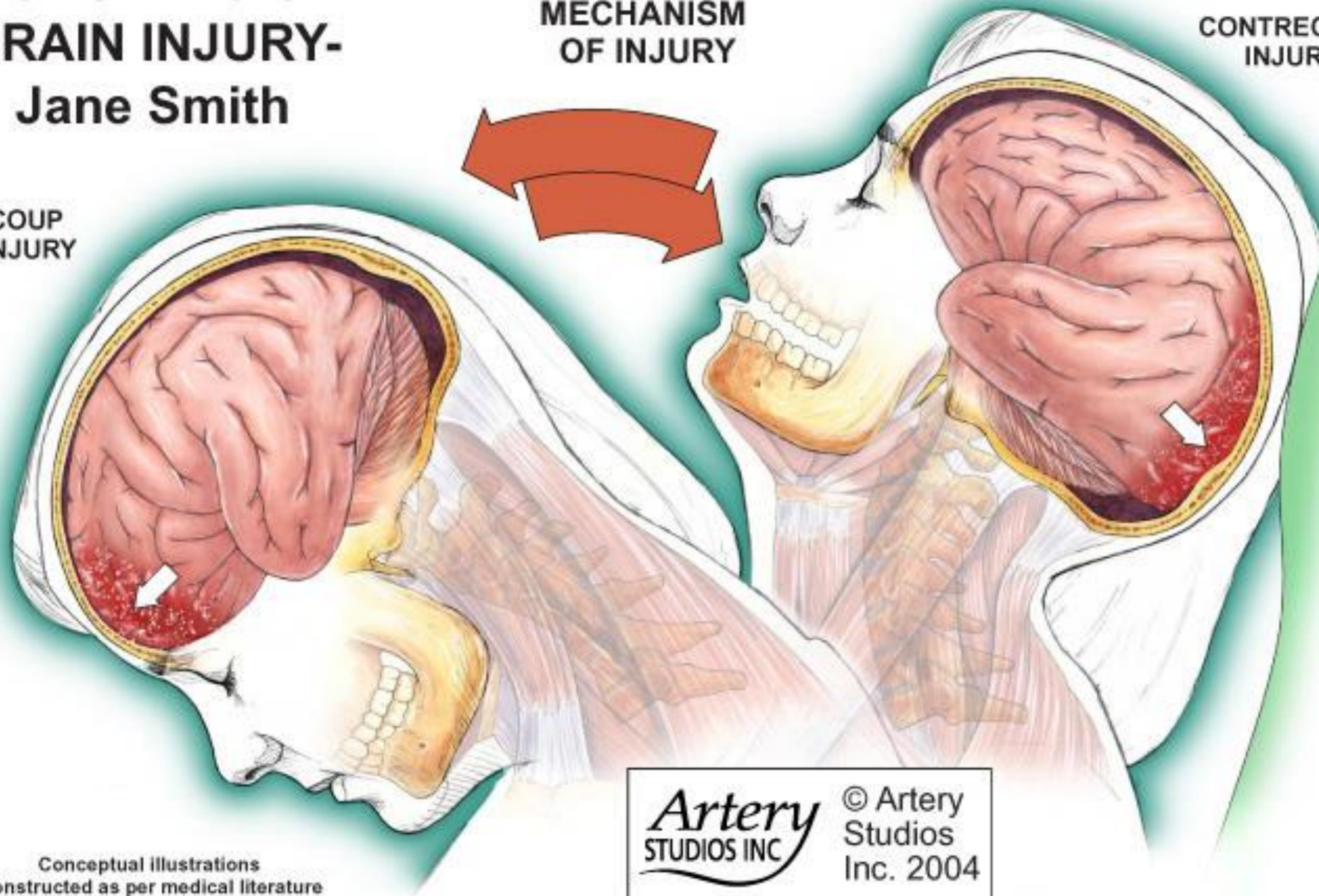
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# CONCEPTS OF BRAIN INJURY- Jane Smith

COUP  
INJURY

MECHANISM  
OF INJURY

CONTRECOUP  
INJURY



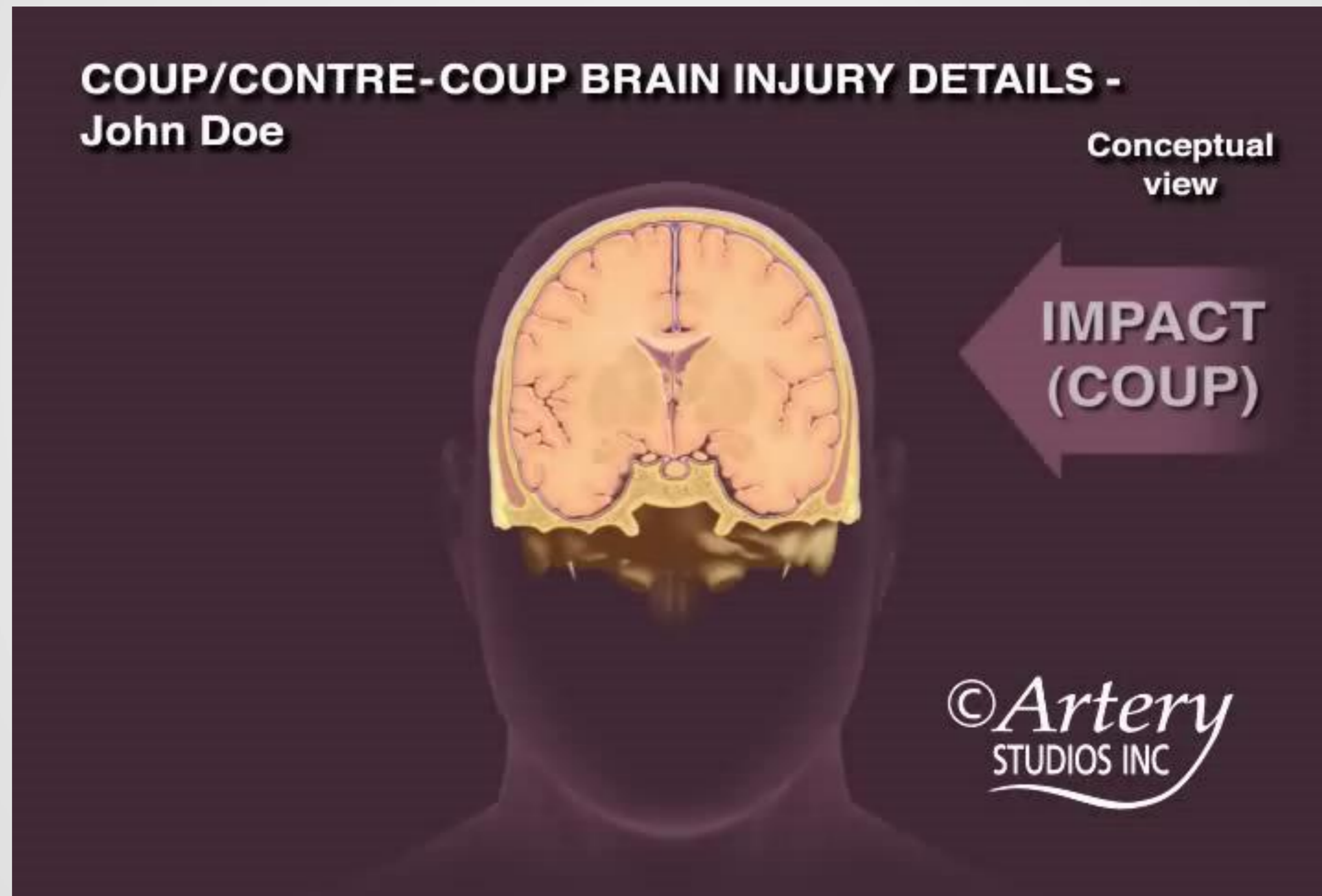
Conceptual illustrations  
constructed as per medical literature

*Artery*  
STUDIOS INC

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Studios  
Inc. 2004

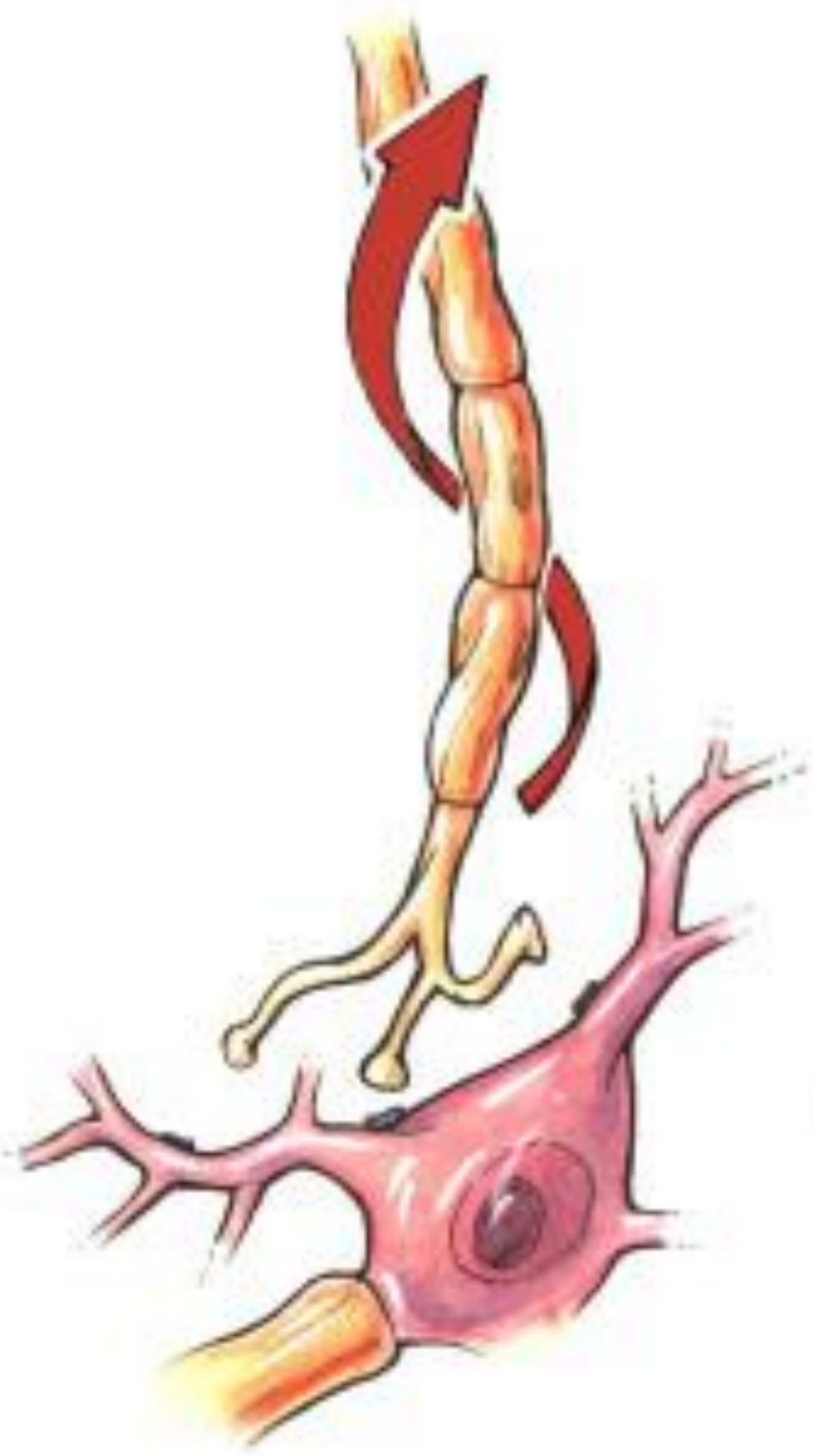


# Video: Coup/Contre-Coup Brain Injury



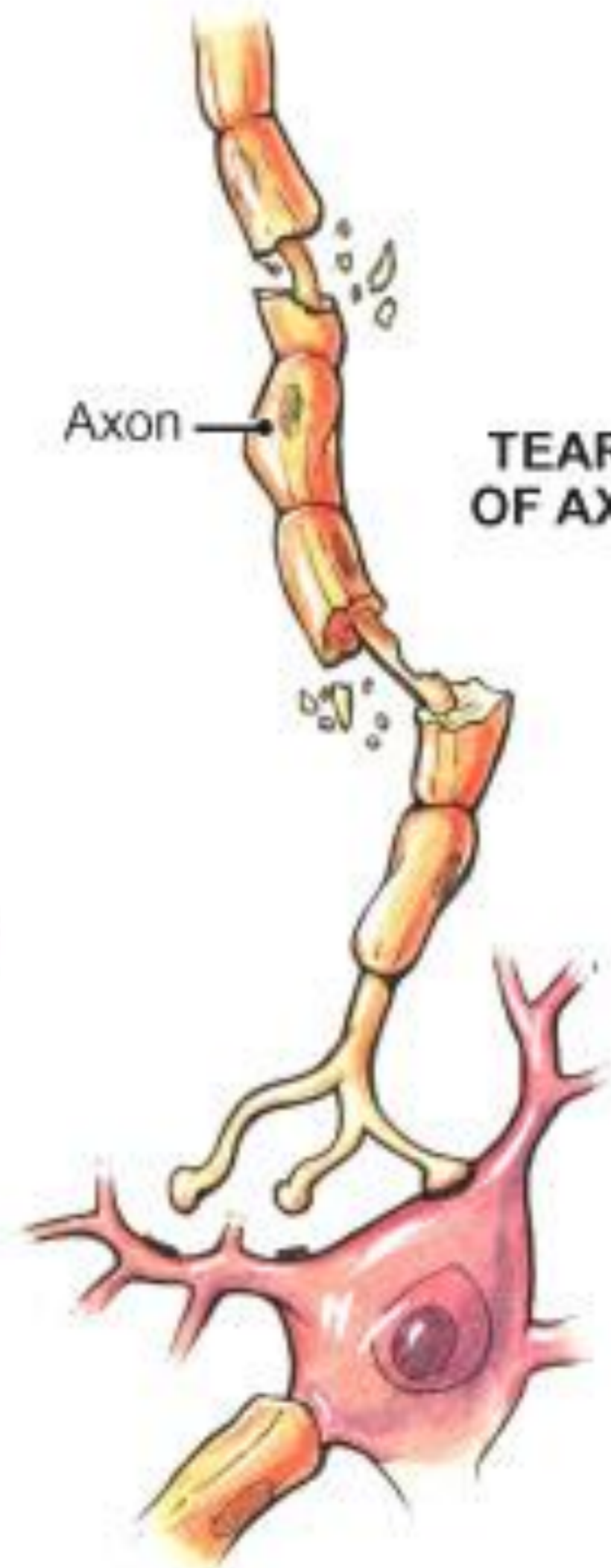
# DAMAGE TO AXONS

TWISTING OF AXONS



Axon

TEARING OF AXONS



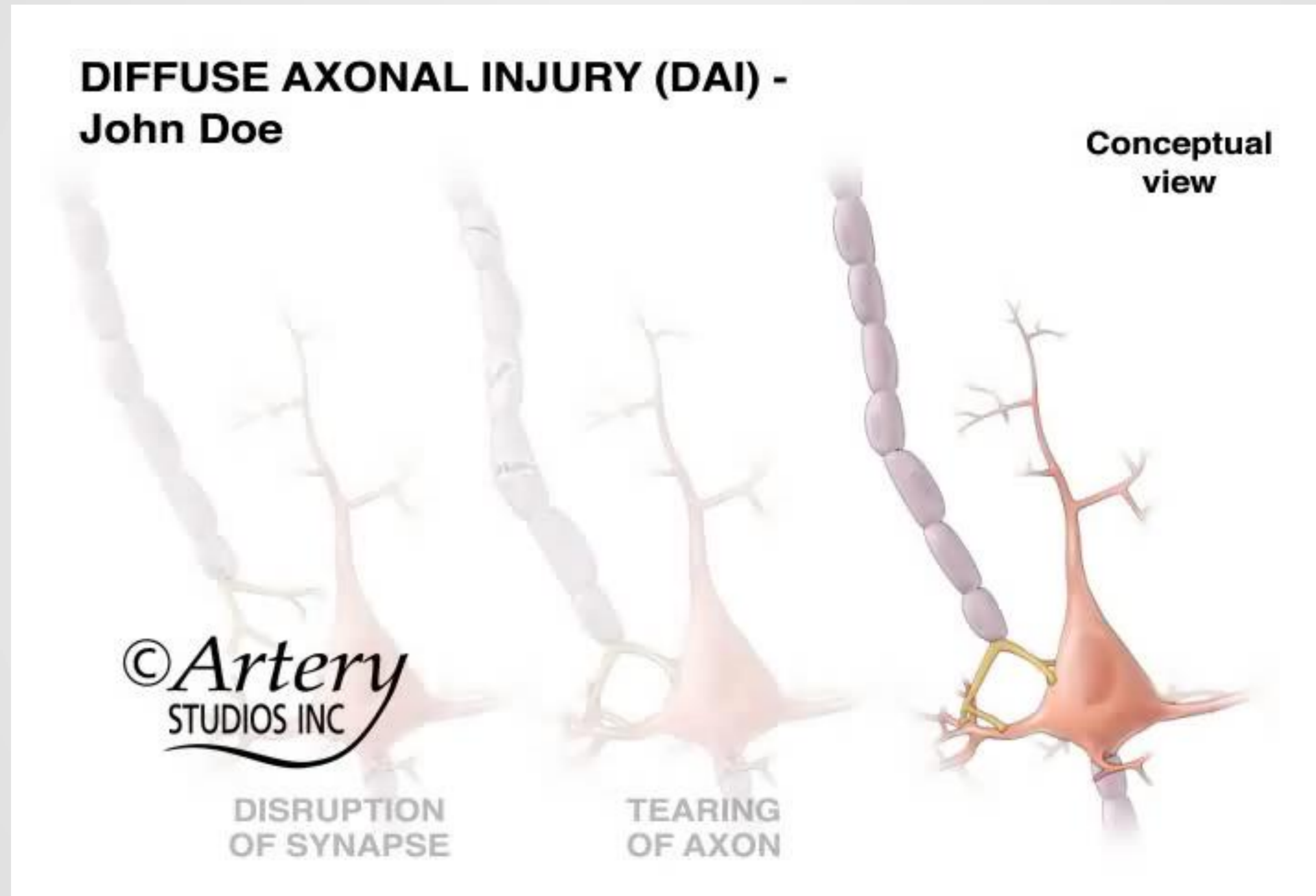
SHEARING OF AXONS



# Video: Diffuse Axonal Injury



# Video: Diffuse Axonal Injury- Breaking of Axon



# Strategies

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- Experts explain negative CT scans and MRI
  - Imaging techniques are still in their infancy
  - Negative scans expected in cases of mild and moderate TBI

# Strategies

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- Differentiate any pre-accident symptoms
- Compare and contrast pre-accident success with post-accident inability to function in similar roles
- Rely on reports of family

# QUESTIONS

THANK YOU

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