



Institute For
Addressing
Strangulation

Non-fatal strangulation

Professor Catherine White

20th November 2023



www.ifas.org.uk



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Donate

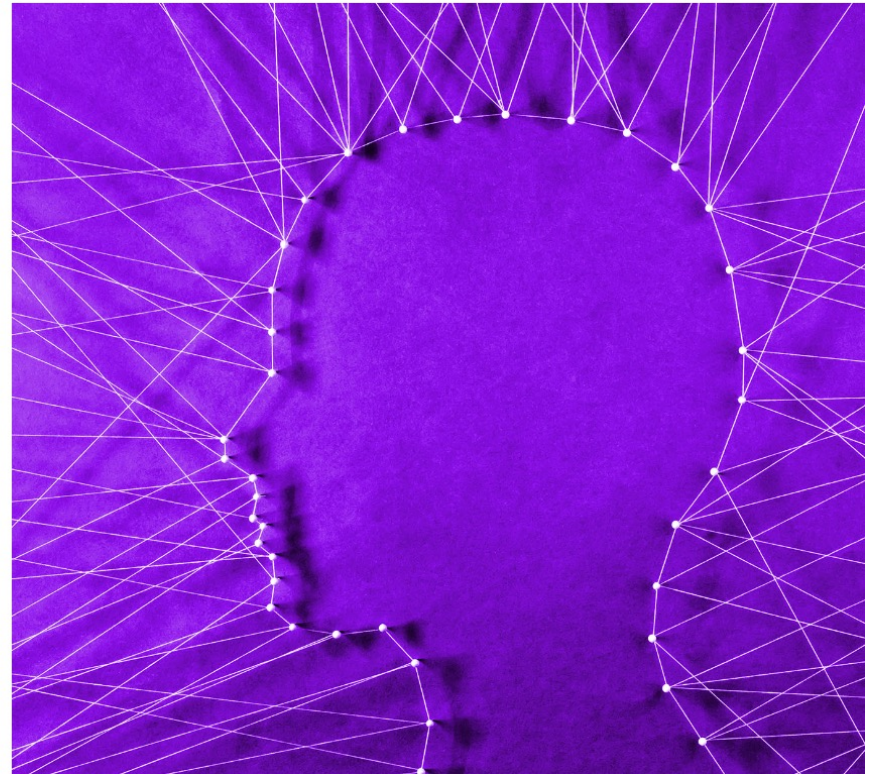


The Institute works to
increase awareness
of risks associated
with strangulation

Sign up to our mailing list to stay connected to all the latest research, studies and training events on strangulation. You will also be alerted to the latest IFAS resources.

Mailing list sign up

IFAS Resources



Prof Catherine White

Health warning



Have you had previous training on identification & management of strangulation?

- 1. Yes**
- 2. No**
- 3. Not sure**

NFS an important risk factor for homicide of women

Nancy Glass

J Emerg Med 2008 35(3)

A History of NFS:

X 6 times risk of becoming a victim of attempted homicide

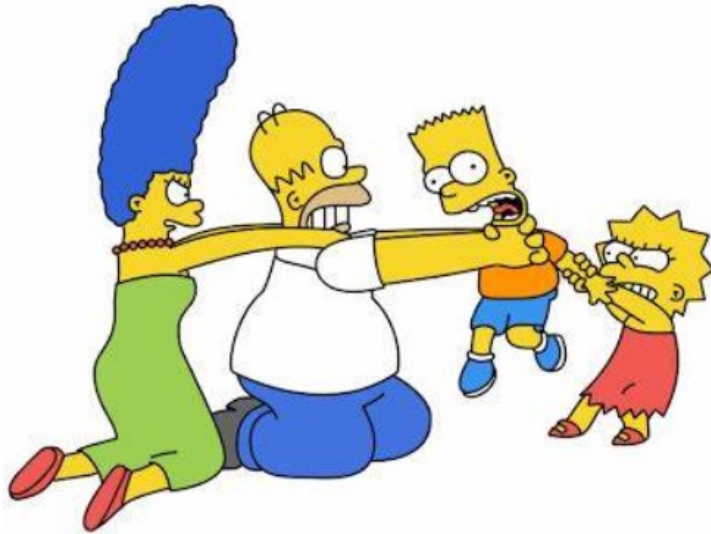
X 7 times risk of becoming a completed homicide

Nancy Glass Summary

In summary, non-lethal strangulation is an important predictor for future lethal violence among women who are experiencing IPV. We urgently need to improve the clinical response to women reporting an incident of non-lethal strangulation to improve treatment and enhance safety planning for this high-risk group of abused women. 2008



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What is strangulation?

What is strangulation?

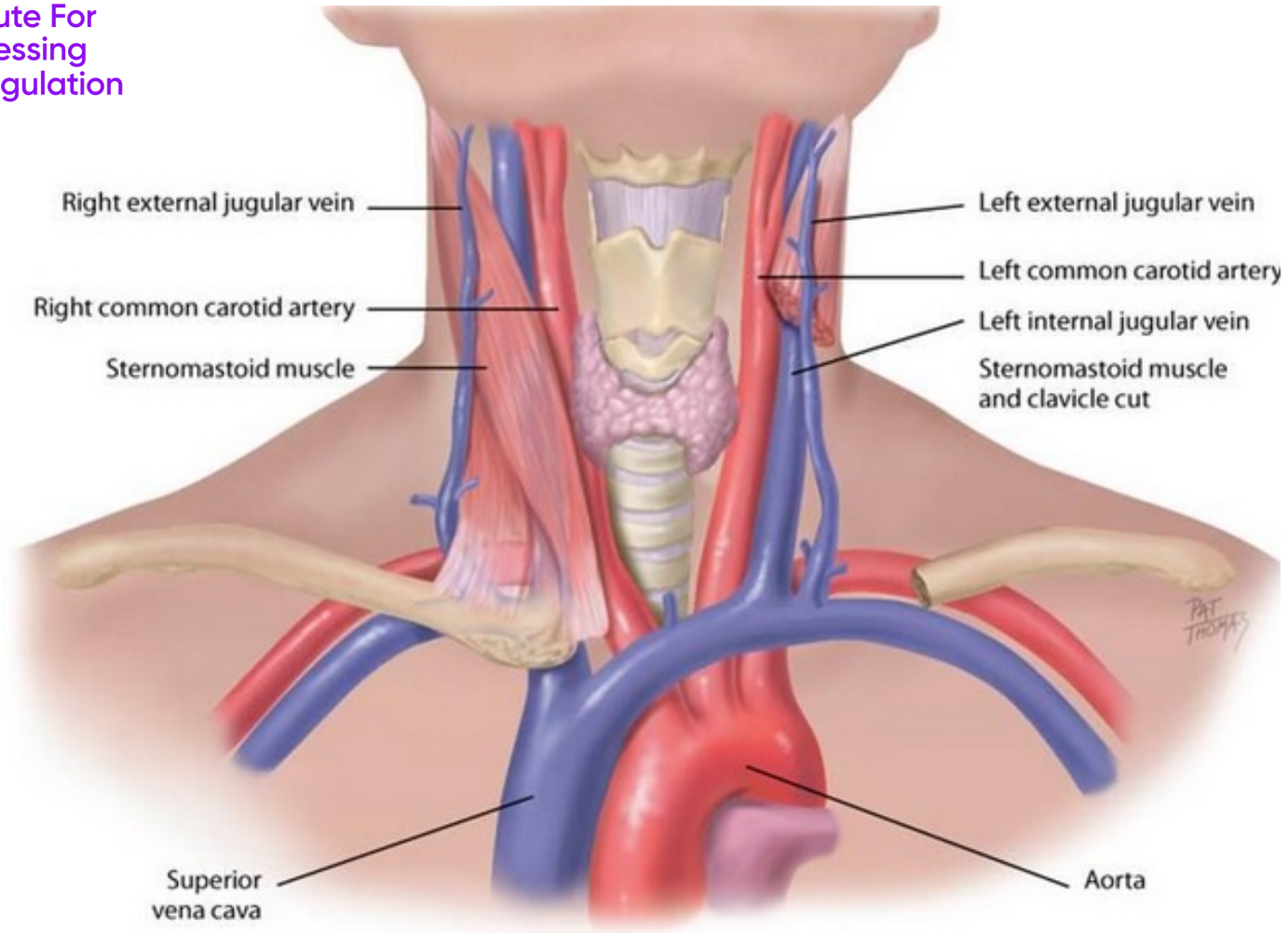
Obstruction of blood vessels and/ or airflow in the neck resulting in asphyxia.

Non-fatal strangulation

- [Section 75A\(1\)\(a\) SCA 2015](#) is the offence of non-fatal strangulation.
- The legislation does not provide a definition of 'strangulation' or 'strangles'. The word should be given its ordinary meaning which is the obstruction or compression of blood vessels and/or airways by external pressure to the neck impeding normal breathing or circulation of the blood. This offence applies where strangulation is non-fatal and does not result in death of the victim.
- Applying any form of pressure to the neck whether gently or with some force could obstruct or compress the airways or blood flow. Strangulation does not require a particular level of pressure or force within its ordinary meaning, and it does not require any injury.

Choke

Mechanical obstruction



- **Carotid artery compression**

- **Carotid artery compression**
 - **Decreased blood flow to the brain**

- Carotid artery compression
 - Decreased blood flow to the brain
- **Jugular vein compression**

- Carotid artery compression
 - Decreased blood flow to the brain
- **Jugular vein compression**
 - **Stagnant hypoxia**

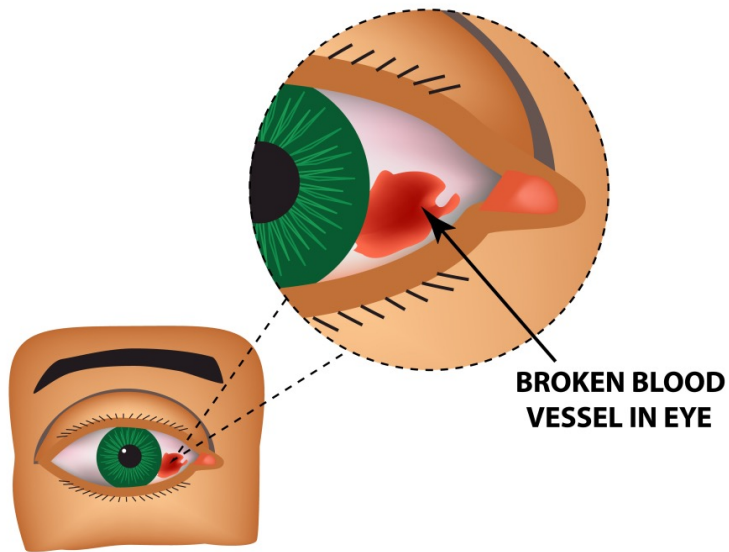
- Carotid artery compression
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- **Compression +/- fracture of larynx or trachea**

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 - **No oxygen intake**

- Carotid artery compression
 - Decreased blood flow to the brain
- Compression +/- fracture of larynx or trachea
 - No oxygen intake
- Jugular vein
 - Stagnant hypoxia
- **Pressure on carotid bodies and baroreceptors**
 - **Bradycardia / asystole**

Subconjunctival haemorrhage

SUBCONJUNCTIVAL HEMORRHAGE



Petechial haemorrhage



Pressure on the neck in adults

Jugular vein	4psi,
Carotid artery	11psi,
Trachea	34 psi.
Opening a can of coke	20psi
Adult male hand shake	80-100psi

We don't know the pressures required in children but most likely less.

The timeline



6.8 seconds

LOC

15 seconds

Bladder incontinence

30 seconds

Bowel incontinence

2-3 minutes

Cell death

4-5 minutes

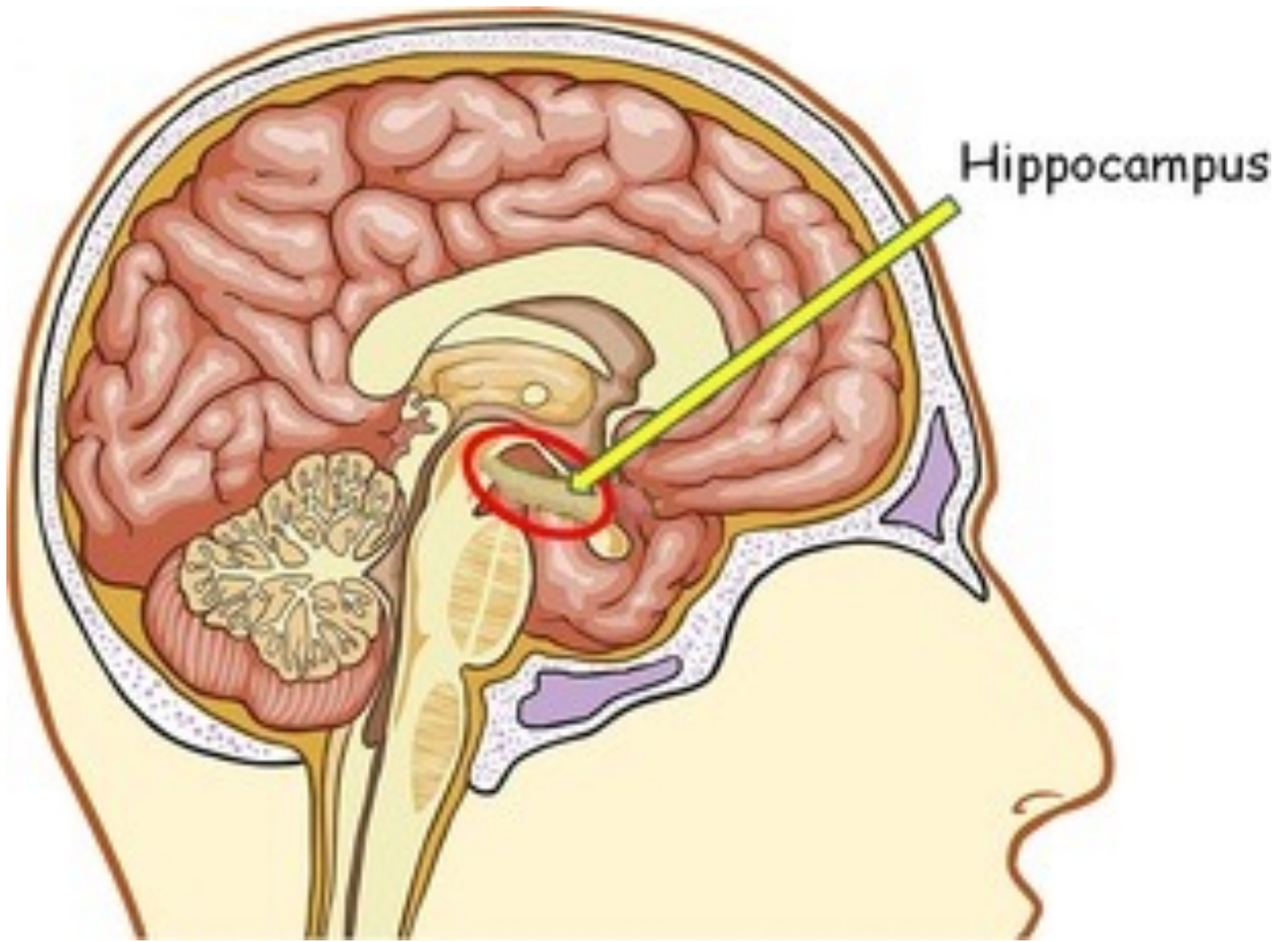
Brain death



Prof Catherine White



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No oxygen = no memory



Use of a proforma

IFAS NON-FATAL STRANGULATION PRO FORMA

This proforma focuses on the NFS elements of a forensic medical examination and as such should be used as an adjunct to other documentation e.g. SARC proforma/ED/custody proforma etc. where issues such as consent/capacity/ alleged assailant details/general medical assessment etc. should be covered.

Date _____ Time _____
 Clinician _____ Regulatory Number _____
 Patient Name _____ Patient DOB _____
 Patient Number _____

History of Strangulation

History from _____ Persons present _____

Method Manual one hand Manual two hands
 Ligature Head lock
 Other specify below _____

From 1 to 10 how hard was suspect's grip? (Low) 1 2 3 4 5 6 7 8 9 10 (High)
 From 1 to 10 how painful was it? (Low) 1 2 3 4 5 6 7 8 9 10 (High)
 Time strangulation occurred: Date/Time _____ Time since strangulation (hours/days) _____
 Number of episodes of strangulation in this event: One More than one Unknown
 Did suspect say anything during strangulation? Yes No Unknown

Actions of the complainant during the strangulation Unknown Not asked

What was the complainant thinking at time of strangulation? Unknown Not asked

Has the suspect strangled the complainant before? Yes No Unknown Not asked

IFAS NON-FATAL STRANGULATION PRO FORMA

Symptoms at the time of / immediately after strangulation:

History from _____ Persons present _____

Vision	Flashing lights <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Tunnel vision <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Spots <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
	Blurred vision <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Loss of vision <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Seeing "stars" <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Other: _____			

Hearing Buzzing, Roaring or Popping Yes No Unknown Not asked
 Details: _____

Loss of consciousness Yes No Unknown Not asked

Dizzy Yes No Unknown Not asked

Difficulty breathing Yes No Unknown Not asked

Difficulty speaking Yes No Unknown Not asked

Pain Yes No Unknown Not asked
 Details: _____

Incontinence of urine Yes No Unknown Not asked

Incontinence of bowels Yes No Unknown Not asked

Loss of strength Yes No Unknown Not asked
 Details (objective): _____

IFAS NON-FATAL STRANGULATION PRO FORMA

Symptoms and signs since the time of strangulation:

History from _____ Persons present _____

Neck pain	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not asked Site: _____ Severity: _____ Details: _____
Neck swelling	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not asked Details: _____
Neck injuries	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not asked Details: _____
Coughing	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not asked Details: _____
Dysphagia / drooling	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not asked Details: _____
Odynophagia (Painful swallowing)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not asked Details: _____
Dysphonia or voice changes	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not asked Details: _____
Dyspnoea	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not asked Details: _____
Vomiting	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not asked Details: _____
Headache	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not asked Details: _____
Motility disturbance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not asked Details: _____
Have any other symptoms or injuries thought to be related to the	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Not asked Details: _____

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journal homepage: <http://www.elsevier.com/locate/yjflm>



Research Paper

'I thought he was going to kill me': Analysis of 204 case files of adults reporting non-fatal strangulation as part of a sexual assault over a 3 year period

Catherine White ^{a,*}, Glen Martin ^b, Alice Martha Schofield ^a, Rabiya Majeed-Ariss ^a




^a Saint Mary's Sexual Assault Referral Centre, Oxford Road, Manchester, M13 9WL, UK

^b The University of Manchester, Vaughan House, Manchester, M13 9GB, UK



<https://authors.elsevier.com/a/1ccS3,dssAKy-7>

It happens a lot

	1 in 11 for all adults
	1 in 5 where alleged perpetrator is a partner or ex-partner
	1 in 15 where alleged perpetrator is not a partner or ex-partner

Sex

Complainants

96.6% Female

Alleged assailants

98% Male

“I thought I was going to die”

36.6%

Psychological terror

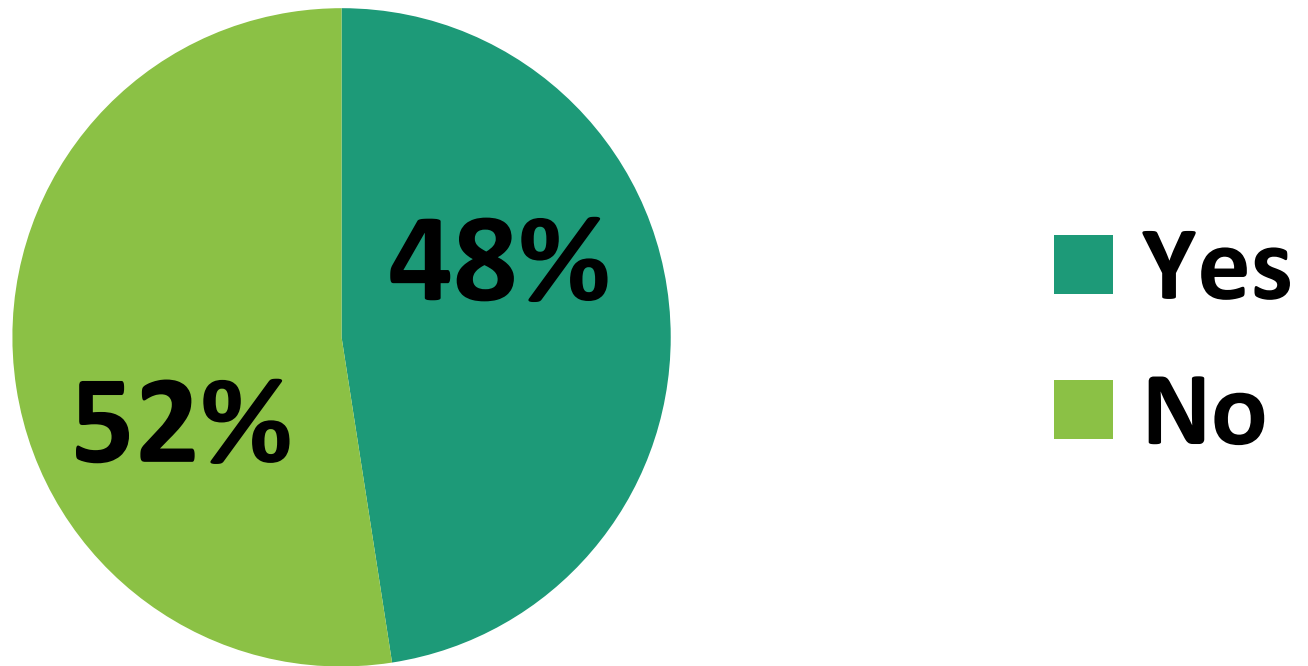
- *He is going to kill me. At least if he kills me it will be over*
- *God please give me life, my children need me.*
- *I actually thought he was going to kill me and the baby (20 weeks pregnant)*
- *I'm going to die. He only stopped each time when I was losing consciousness. He strangled me like he wanted to kill me. He only stopped because he thought I was dead.*

Neck & Head Injuries

Saint Mary's NFS cases 2017-2019

n=204

Neck & head injury seen at FME



Neck bruises





Fitzpatrick Skin Colour Scale



TYPE I

Light, Pale
White

Always burns,
never tans



TYPE II

White, Fair

Usually burns, tans
with difficulty



TYPE III

Medium, White
to Olive

Sometimes mild
burn, gradually tans
to olive



TYPE IV

Olive Tone

Rarely burns, tans
with ease to
moderate brown



TYPE V

Light Brown

Very rarely burns,
tans very easily



TYPE VI

Dark Brown

Never burns, tans
very easily, deeply
pigmented



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Internal injuries

- Brain
- Neck structures
 - Haemorrhage into muscles
 - Vocal cords
 - Nerves
 - Thyroid
 - Hyoid
- Blood vessels
 - Carotid artery dissection



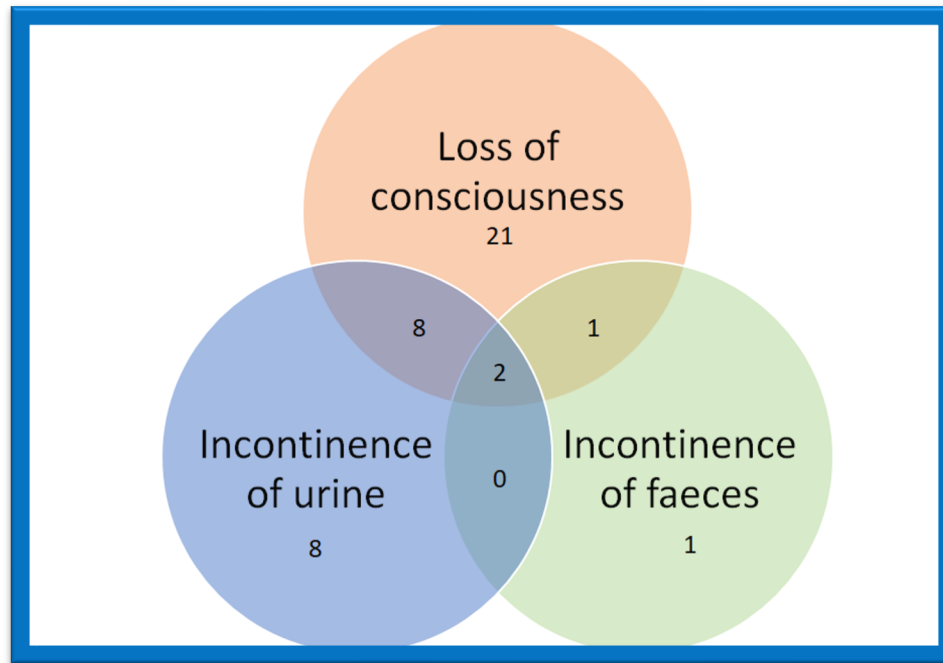
Loss of consciousness

- 32/204 (15.7%)

72% of those with LOC had at least one injury
(most common was bruising to the neck 69%)

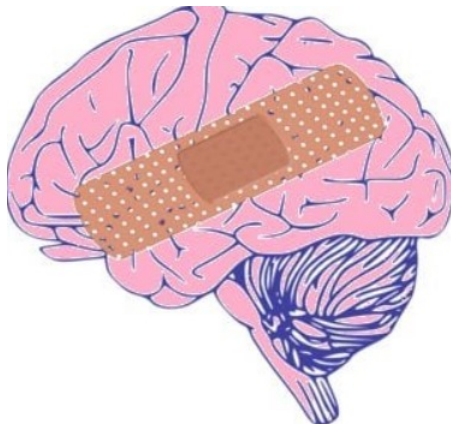


Saint Mary's Adult NFS cases

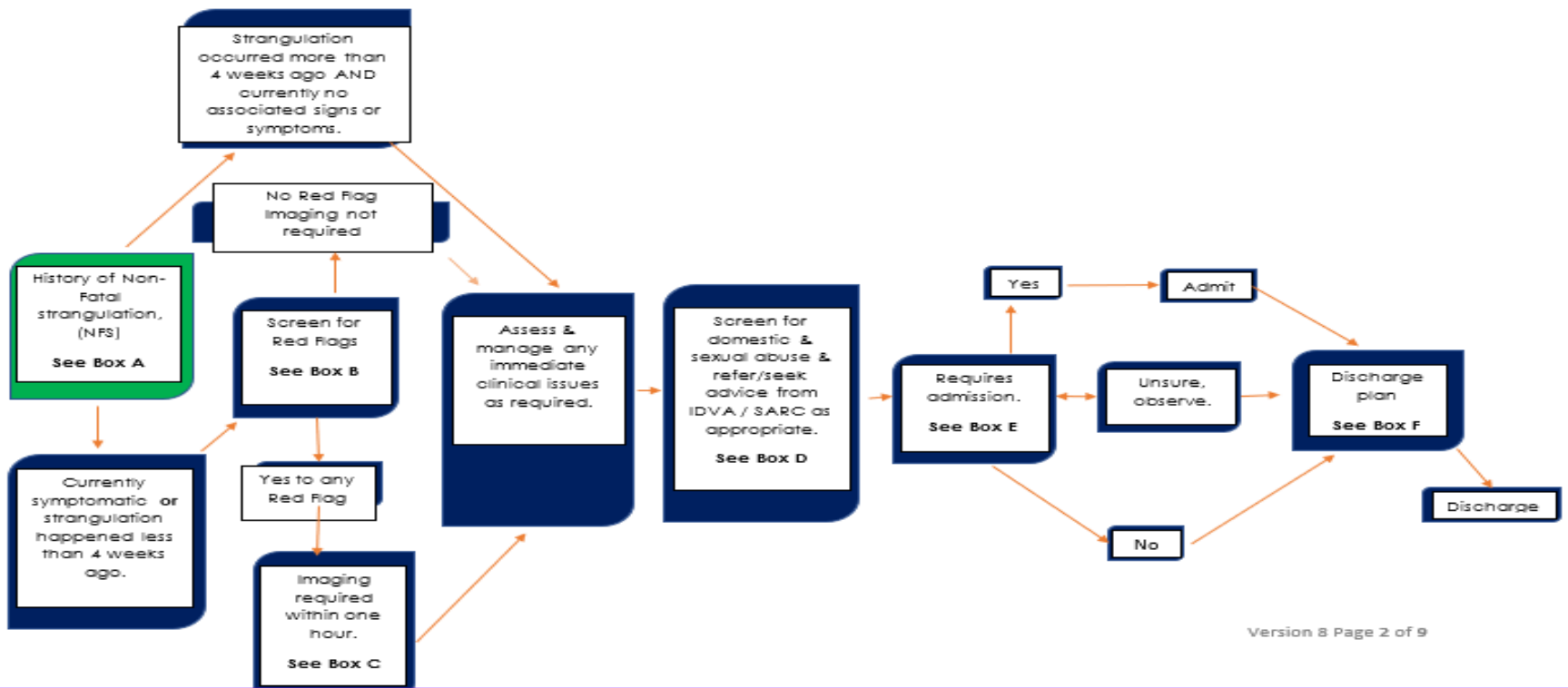




Acquired Brain Injury



Advice regarding seeking brain injury assessment should be provided if there is history of prolonged and/or repeated strangulations and/or deficits suggestive of hypoxic brain injury that persist in the months following the incident (Australian ED Guidance)





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Information sharing

ENT

Patient

Police

Lawyers

GP

DASH

Safeguarding

Statements

Consensual??

112 of the 224 cases a DASH was completed.

Dash –average score 15

Rough sex defence

The Journal of Criminal Law

Getting Away With Murder? A Review of the 'Rough Sex Defence'

Hannah Bows, Jonathan Herring

First Published June 29, 2020 | Research Article

<https://doi.org/10.1177/0022018320936777>

 Check for updates

Article information 



Contextual information

- History of DA
- Where has it happened?
- Injuries

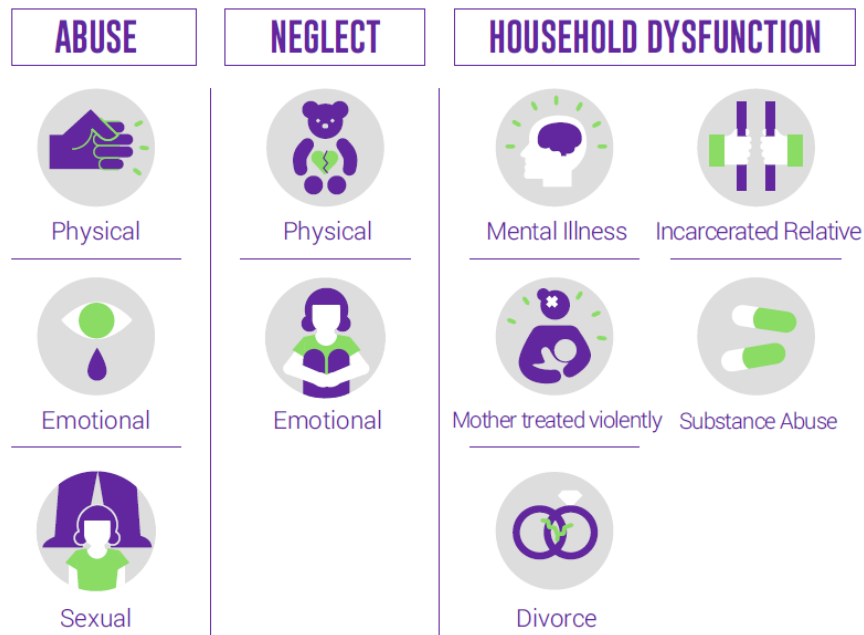
Children witnessing NFS

- Saint Mary's 2021 study
 - 40% strangled in their own home
 - 30% had children living at home
- San Diego Paper 1
 - Children witnessed the NFS in at least 41% of cases



Adverse Childhood Experiences

The three types of ACEs include





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Information for Victims of Strangulation

ifas.org.uk contact@ifas.org.uk

MARCH 2023

Risks of not knowing the risks

<https://static1.squarespace.com/static/63bd7ef0794e9f154bdce4ce/t/64131368ee0266496d81dde8/1678971753356/IFAS+01+-+Patient+Information+v5.pdf>

**Report into
Strangulation,
Suffocation,
Asphyxiation and
Smothering Homicides**
in England and Wales
from 2011 to 2021



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Funded by the Home Office

<https://ifas.org.uk/wp-content/uploads/2023/09/IFAS-final-ONS-1.pdf>



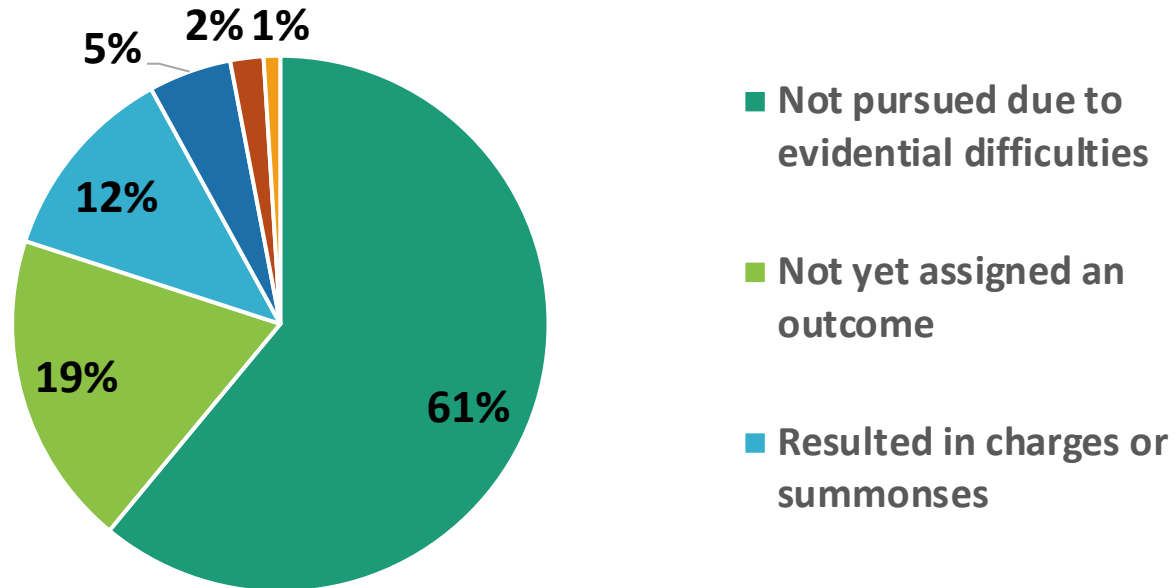
Abuse tends to hunt in packs

- Physical
- Sexual
- Neglect
- Emotional





ONS DATA Outcome of **8375** reports of non-fatal strangulation and suffocation in England and Wales from June 2022 to December 2022



Strangulation or Suffocation

- (1) A person (“A”) commits an offence if -
 - (a) A intentionally strangles another person (“B”), or
 - (b) A does any other act to B that -
 - (i) affects B’s ability to breathe, and
 - (ii) constitutes battery of B.

- (2) It is a defence to an offence under this section for A to show that B consented to the strangulation or other act.



Case 1

- Unidentified male calls emergency services
- Unconscious female found on hotel room floor
- Carpet noted to be wet.
- Wet with what?





Case 2

- Husband witnessed by neighbour strangling wife.
- Police & paramedics arrive.
- Woman unconscious.
- No forensic examination.
- Injuries captured on body worn video





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Case 2

- Retraction
- Says no assault
- Injuries due to love bites



	NFS + sexual assault	NFS but no sexual assault
Specialist secure victim focussed centre	✓	✗
Forensic clinician assessment	✓	✗
Crisis worker	✓	✗
Colposcopic images	✓	✗
Forensic samples	✓	✗
ENT Radiology pathway	✓	✗
Forensic report	✓	✗
Shower & clothing	✓	✗
Expert report	✓	✗
Advocacy	✓	✗
Quality assurance & peer review	✓	✗



RECOMMENDATIONS FOR THE MEDICAL/RADIOGRAPHIC EVALUATION OF ACUTE ADULT NON/NEAR FATAL STRANGULATION

Prepared by Bill Smock, MD; Bill Green, MD; and Sally Sturgeon, DNP, SANE-A

Endorsed by the National Medical Advisory Committee

Cathy Baldwin, MD; Ralph Rivello, MD; Sean Dugan, MD; Steve Stapczynski, MD; Ellen Talliaferro, MD; Michael Weaver, MD

GOALS:

1. Evaluate for acute medical conditions requiring immediate management/stabilization
2. Evaluate carotid and vertebral arteries for injuries (dissection/thrombosis)
3. Evaluate airway structures and other bony/cartilaginous/soft tissue neck structures

STRANGULATION PATIENT PRESENTS TO THE EMERGENCY DEPARTMENT

HISTORY (ANY of the following; current OR assault related and now resolved)

1. Loss of consciousness
2. Visual changes: "spots," "flashing lights," "tunnel vision"
3. History of altered mental status: "dizzy," "confused," "lightheaded," "loss of memory," "any loss of awareness"
4. Breathing changes: "I couldn't breathe," "difficulty breathing"
5. Incontinence (bladder or bowel)
6. Neurologic symptoms: seizure-like activity, stroke-like symptoms, headache, tinnitus, decreased hearing, focal numbness, amnesia
7. Ligature mark or neck contusion
8. Neck tenderness or pain/sore throat/pain with swallowing
9. Change in voice: unable to speak, hoarse or raspy voice

PHYSICAL EXAM (ANY Abnormality)

1. Functional assessment of breathing, swallowing, and voice
2. Thorough examination of neck, eyes, TMs, oral mucosa, nose, airway, upper torso for: tenderness, swelling, bruising, abrasions, crepitation, bruit
3. Venous congestion/petechial hemorrhages/scleral hemorrhages
4. Ligature mark = **HIGH RISK**
5. Tenderness of airway structures/carotid arteries = **HIGH RISK**
6. Mental status/complete neurologic exam

CONSIDER ADMINISTRATION OF ONE 325MG ASPIRIN IF THERE IS ANY DELAY IN OBTAINING A RADIOGRAPHIC STUDY

RECOMMENDED RADIOGRAPHIC STUDIES TO RULE OUT LIFE-THREATENING INJURIES* (including delayed presentations of up to 1 year)

1. CT Angio of carotid/vertebral arteries (GOLD STANDARD for evaluation of vessels and bony/cartilaginous structures, less sensitive for soft tissue trauma) or
2. MRA of carotid/vertebral arteries
3. Carotid Doppler Ultrasound (NOT RECOMMENDED - Unable to adequately evaluate vertebral arteries or proximal internal carotid arteries)
4. Plain Radiographs (NOT RECOMMENDED - Unable to evaluate vascular and soft-tissue structures)
5. Consider fiberoptic direct laryngoscopy to evaluate possible laryngeal injury or airway compromise

POSITIVE RESULTS

1. Consult Neurology/Neurosurgery/Trauma Surgery for admission
2. Consider ENT consult for laryngeal trauma or dysphonia
3. Perform a lethality assessment per institutional policy

NEGATIVE RESULTS

Discharge home with detailed instructions, including a lethality assessment, and to return to ED if: neurological signs/symptoms, dyspnea, dysphonia or odynophagia develops or worsens

IF THE CTA IS NEGATIVE, CONSIDER OBSERVATION OF NEAR-FATAL STRANGULATION PATIENT IF THE AIRWAY IS OF CONCERN. OBSERVATION HAS **NO** ROLE IN RULING OUT A VASCULAR INJURY.

Training Institute On Strangulation Prevention

<https://www.familyjusticecenter.org/resources/recommendations-for-the-medical-radiographic-evaluation-of-acute-adult-adolescent-non-near-fatal-strangulation/>

October 2022



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The Institute for Addressing Strangulation: One Year On

1. One Year On. Tuesday 28th November on-line event
2. Webinar series for emergency clinicians: Jan & Feb 2024
3. Webinar series for Sexual Health Clinicians: Feb & March 2024

contact@ifas.org.uk