



Comprehensive Countermeasures Course

Threat Analysis and Strategic Support Branch

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- **Introduction:**

- **Do you think you have ever been beaten by someone performing CM activity? (If you haven't caught anyone – you've been beaten)**
- **If you tell your examinee to stop performing CM – Do you think they actually stop? (Not likely if trying to hide relevant issue)**
- **Do you think examinee's pick a single CM to perform? Or do they perform multiple CM? (Usually pick multiple CMs)**
- **Can you tell the difference between a spontaneous CM and a deliberate CM? (Spontaneous often controlled breathing trying to relax – going to a happy place in their mind)**
- **Has anyone in this room been told by a mentor, supervisor, or QC to go ahead and make an NSR/NDI call when CMs are suspected because there was not any responses at the relevant questions? (If not –good)**
- **This week may be an eye-opener for some. We will provide the tools to detect and deter CM...and provide answers to your questions**

Comprehensive CM Course Discussion

- How many have caught an examinee performing CM?
- How many believe that CM activity is rare?
- What is your Agencies policy when CM are suspected?
- What do you want to accomplish this week?

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- Purpose of questions on this & next slide is to determine the knowledge base for CMs and establish the approach for the course
- Question 1:
 - How did you determine CMs taking place?
 - What did the test data (CM) look like? (Write the observed signatures on a white board).
 - Did you confront the examinee? How?
 - If you have suspected CM but the test data is numerically DI/SR what do you do?
- Question 2: Do you think CM is a rare occurrence?
- Question 3:
 - What is your agencies policy when CMs are detected?
 - If the policy is to tell them to stop it and continue testing – how do you know that they indeed stopped rather than change tactics?
- Question 4:
 - What do you want to accomplish this week? (Place comments on white board)

Comprehensive CM Course Discussion

- **Why do you think examinees perform CM?**
- **Can a guilty person beat your test?**
- **Do you think that an examiner with poor operational polygraph skills is more likely to get beat?**
- **What do anti-polygraph websites say about polygraph and polygraph CM?**
- **What should you do with confirmed CM data?**

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Q #1 – Many will probably say, “ because they think they have to in order to pass the test” – reality: they do it to “beat” the test.

Q #2 – Yes! A guilty person can beat the test. They are doing it everyday.

Q #3 – Yes! They are sloppy and lack attention to detail.

Q #4 – Polygraph doesn’t work & examiners are charlatans so whether guilty or innocent must use CM.

Q #5 – Email the test data to TASS Branch – data base is used to identify trends and for research.

Introduction TASS Branch Creation

- 1608 Public Law 108-136, 24 Nov 2003
 - Research on CM & anti-CM
- DUSD (CI & Scty), 27 Mar 2006
 - Established mandatory requirements for DoD
- U.S. Code: Title 10, 1564a, CI poly program
 - Research on polygraph CM & anti-CM
 - Developmental research on poly techniques, instrumentation, and analytic methods
- DoD Instruction 5210.91, 12 Aug 2010

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- Why we were created – QAP may have redefined this for us – so delete if necessary
- DUSD, 27 Mar 06 – established mandatory requirements for DoD Components with polygraph programs: (*Interim Policy for Polygraph Anti-CM Procedures*)

- This policy implemented recommendations from IG report (05-Intel-18) Montes.

- What does the policy say:

- DoD polygraphs will use MSD in all exams
- All polygraph records maintained for 35 yrs
- Confirmed CM & relevant data sent to NCCA for analysis
- NCCA will analyze exams containing suspected CM (SCR)
- CM research, analyze trends, identify signatures, investigate techniques, procedures, and technology to develop anti-CM and counter-CM to improve examiner training.
- All DoD examiners required to attend a comprehensive CM course within 2 yrs of graduation
- All DoD will attend a refresher CM course not less than 4-hrs every 2 years after comp course.

Comprehensive CM Course Introduction

- ***Esquire Magazine* – 1941 – How to Beat the Lie Detector by William Scott Stewart**
 - Don't submit to the test
 - Control breathing
 - Mental imagery
 - Bite inside of mouth or side of tongue
 - Move big toe
 - Flex arm muscles
 - Examiner is not your friend
 - Never admit any attempt to beat the poly

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- **CM is not a new concern – That is the purpose of this slide**
- **Esquire Mag-1941-How to Beat the Lie Detector-William Scott Stewart**
 - Stewart at one time a Chicago DA
 - Became a lawyer for the mob
 - Famous case (Beulah Annan) – Married woman that shot her boy friend
 - 1924 case – She was found not guilty in face of overwhelming evidence
 - A musical written about case – Chicago – Roxie Hart
- Control breathing (DB just before unimportant question with a sigh just after)
- Mental imagery (think of something unpleasant at harmless questions)
- Bite mouth or tongue (at questions of no importance)
- Move big toe (questions of no importance)
- Flex or tense arm muscles or tense leg muscles
- Poly Examiner is not your friend – never trust him
- Never admit any attempt to defeat the polygraph

Comprehensive CM Course Introduction

- WikiHow – (Present day) *How to Cheat a Polygraph Test (Lie Detector)*
 - Refuse to take the test
 - Practice CM in advance
 - Control breathing (don't breathe too deeply)
 - Mental math
 - Bite side of tongue
 - The polygrapher is not your friend
 - Don't admit anything relevant

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- **CM is not a new – From 1941 to the Present**
 - **What is new?** – The Internet provides ready access to everyone
- WiliHow; Beat a Lie Detector Test. Com; Wikipedia; Antipolygraph.org
 - All provide similar information

Introduction Comprehensive CM Course

- **AntiPolygraph.org**
 - *Mawsu'at al-jihad* (Encyclopedia of Jihad)
 - *Usturah jahaz kashf al-kidhb* (The Myth of the Lie Detector)
 - Information taken from *The Lie Behind the Lie Detector*

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- For the Anti-polygraph crowd the “end justifies the means” – they are willing to compromise national security in their quest to rid the world of polygraph
- Information obtained from the AntiPolygraph.org website
 - [Encyclopedia of Jihad](#) – Contains a section on polygraph – suggests behavioral CM
 - [The Myth of the Lie Detector](#) – Identifies and explains polygraph procedures and comparison questions
 - Suggests physical, mental and behavioral CM.
- AntiPolygraph.org publishes an ebook called, “The Lie Behind the Lie Detector?”
 - The book provides explicit information regarding CM
 - Behavioral – be nice and cooperative
 - Physical – Bite the side of the tongue
 - Mental – Math equations
- *Is there anyone in the room who has not reviewed “The Lie Behind the Lie Detector?” If not – why not?*

Comprehensive CM course introduction

■ www.tawhed.ws - Jihadi Training

- Identifies comparison questions & their purpose
- Controlled breathing
- Bite tongue to induce pain
- Solve complicated math problems
- Never trust the polygraph examiner
- Polygraph is a hoax – Quotes from former presidents, ex-FBI and CIA officials criticizing the effectiveness of polygraph

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- Global Terrorism Analysis (The Jamestown Foundation) www.jamestown.org
- Publication: Terrorism Monitor, Vol. 4; Issue 17, Sep 8, 2006.
- Identifies comparison questions – No secrets in polygraph
- Controlled breathing – Why do polygraph examiners give breathing instructions?
- Bite tongue - You'll get a chance to try it in the lab – then tell me if it works
- Math problems – Do you think you can beat the polygraph with a math problem?
- Never trust a polygraph examiner - Does this mean rapport is not important?
- Polygraph is a hoax - In the hands of some this may be a true statement.
- *What do I mean?* – Some examiner's do not believe their test data – they will run 5 to 12 series until they obtain an NSR. Obviously, these "chart-rollers" think the polygraph is a hoax.
- Discuss the comment:

Comprehensive cm course introduction

- 70 years of anti-polygraph rhetoric
 - What has changed?
 - What do the anti-polygraph folks hope to accomplish?

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- John Reid was so concerned about CM and CM ability to influence physiology that he invented the first CM chair to detect the presence of physical CM activity.

- **What has changed?** The world wide web. Anyone, anywhere has access to CM information.

- **What do the anti-polygraph folks hope to accomplish?**

- One senior blogger on the anti-polygraph.org website commented that “the end of the polygraph is near”... “y’all are goin down.”

- The developer of the website is “angered and dismayed at the stupidity and incompetence of USG officials who continue to rely on polygraph” particularly after details on how to defeat the polygraph have been given to everyone.

- **Do you think we (polygraph examiners) are getting beat?**

- Discuss what we (TASS) have seen
 - Discuss the statistics

Comprehensive CM course objectives

- Enhance ability to detect and deter CM activity
- Identify what is being taught on anti-polygraph websites regarding CM
- Explain how to counter what is being taught on the anti-polygraph websites
- What to do with the confirmed CM data

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- Q #1 – We will provide the tools necessary to detect & deter CM
- Q #2 – We will discuss the anti-polygraph websites in detail
- Q #3 – We will provide tools to counter what is being taught on the anti-polygraph websites
- Q #4 – Email to TASS@NCCA.MIL



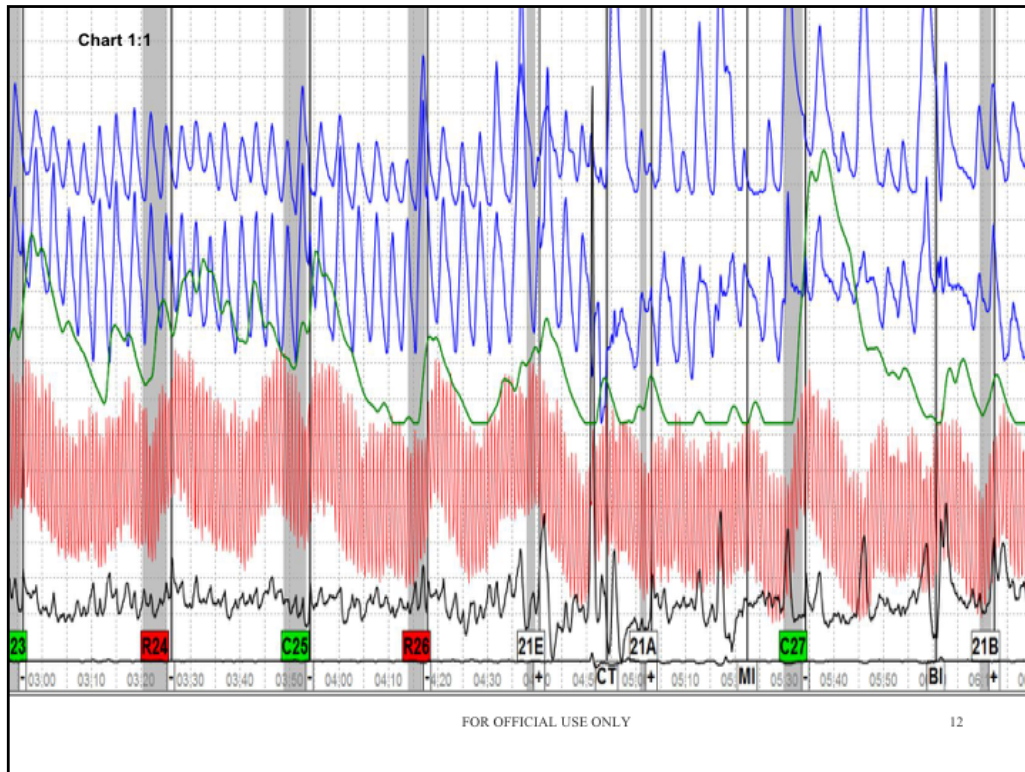
Back to basics

Threat Analysis and Strategic Support Branch

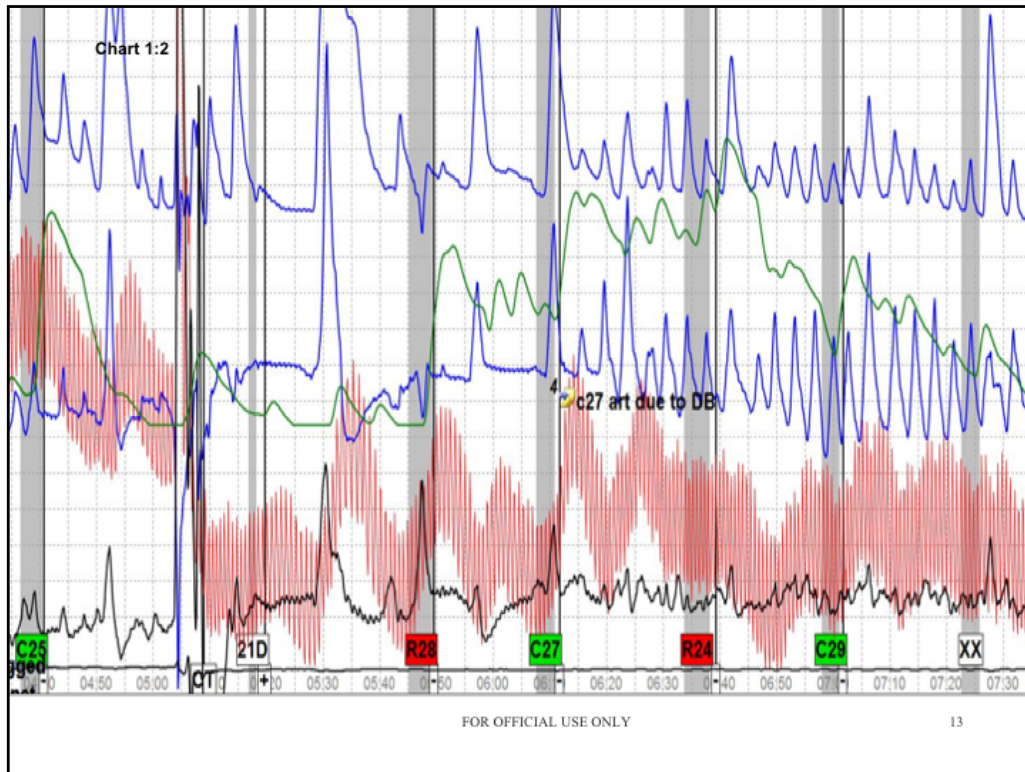
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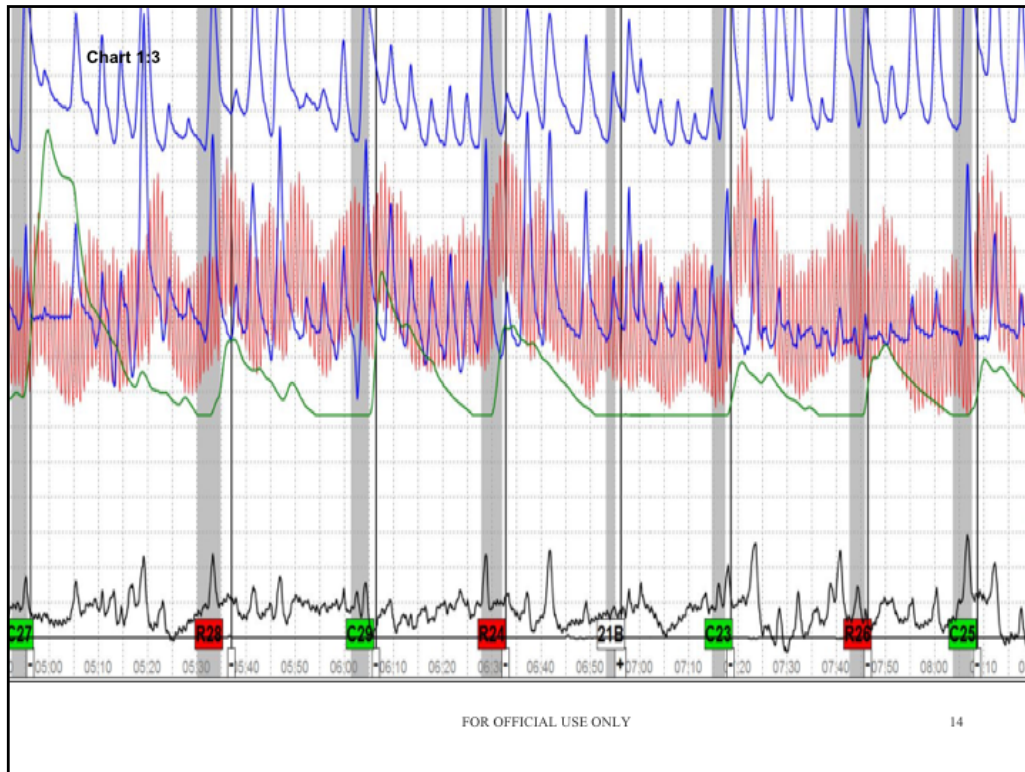
- **Show of hands – How many believe that they run good test data most of the time?**
- **Show of hands - How many have messy test data most of the time?**
- **Show of hands – How many cut corners in the pretest interview? During the in-test? During the post-test interview?**
- **How many have had a nice clean series but the second series (usually another topic) is messy? What does that mean?**
- **Show the next 3 slides (Charts 1:1 through 1:3) ask for an opinion as to whether poor operations, poor pretest interview, CM activity, a DI person, or someone that is DI & performing CM.**



- Show the next two slides then ask for a decision...
- Discussion:
 - Why do you think the PN channels are not stable?
 - Starting at Q 21E it appears that physiologically the examinee lost control with his breathing – Why?
 - Starting at 21E the MV pad appears to have MVs to the end of the test – Do you think they are deliberate MVs or caused by the breathing abnormalities?
 - What comment do you have about the EDA channel? Does it look normal or nervous?
 - Discuss Lafayette's legacy detrended, detrended, automatic & manual – what are the problems?
 - Discuss Axciton & Limestones EDA - issues



- Do not discuss CM decision until after the next chart.
- Discussion for this chart:
 - Examiner note on chart says C27 not used due to DB. We see that the CV channel at C25 is early and the PN channel is unstable and erratic. It also appears that the EDA at C25 matches the early CV – How many would evaluate R28 against either comparison?
 - What if anything does the test data suggest?



- **Can you easily see the EDA? Consider black and bold**
- **What do you think has been going on during this in-test? (Nervous tension, spontaneous CM, Deceptive exam, deliberate CM, or just poor operations) – Would you evaluate this test data? Discussion**
- **Examinee admitted to doing the following:**
 - Taking deep breaths; Focusing on a spot on the wall; Repeating phrases or songs during the entire test; (repeating the names of different streets that he lived on; singing short songs)
 - **Do you think the above was deliberate or spontaneous to help himself through the exam?**
- **Why did he do the above?**
 - (1) He was hiding information about petty thefts; (2) He was hiding information about his brother stealing cable TV & electricity; (3) probably still lying.
 - **Deliberate but unsophisticated CM**
- **Could the examiner have done anything to improve the test data?**
- **Key point: If good tracing are normal – this test data should be telling you something.**

Back to basics objectives

- Reintroduce basic skills important to CM detection
- Explain the importance of CM sensors and how they should be used
- Provide examples for discussion

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- **Show of hands** – How many have been a QC reviewer?
 - We have already discussed how “Garbage in = Garbage out” when it comes to CM.
 - The same can be said for the pretest interview and operations during the in-test [Garbage in = Garbage out]
 - Ask yourself – Does my agencies QC allow “garbage in?”
 - **Discuss**
 - There are numerous differences between a “chart roller” and a “polygraph examiner.” Most important is good interpersonal communication skills. Another is attention to detail in every aspect of the polygraph process.
 - **Discussion**
- How to properly use the CM sensors – should be a no-brainer but apparently some are afraid that they might see a CM taking place.
 - **Discussion**

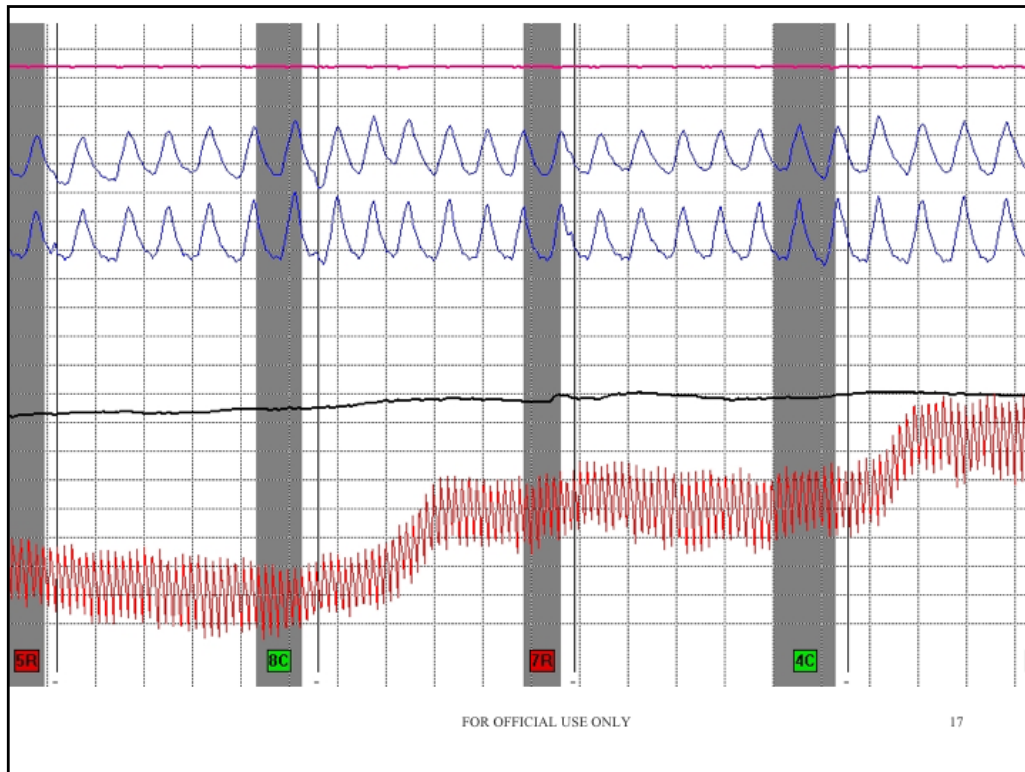
Back to Basics Comprehensive CM Course

■ **What does a CM look like?**

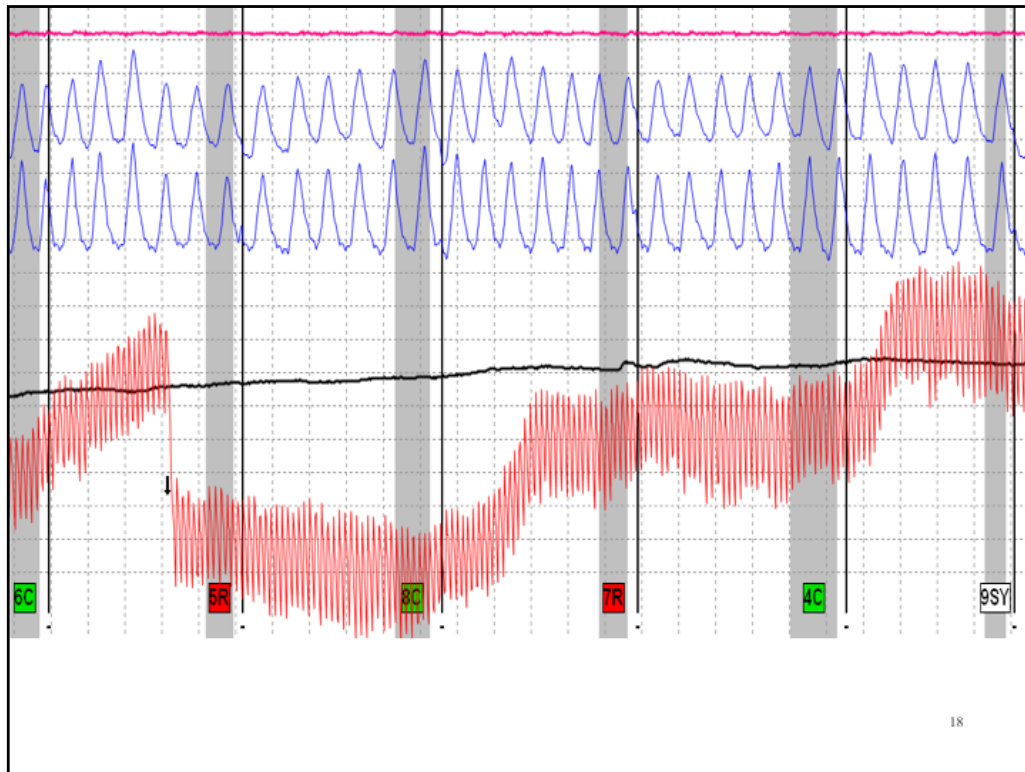
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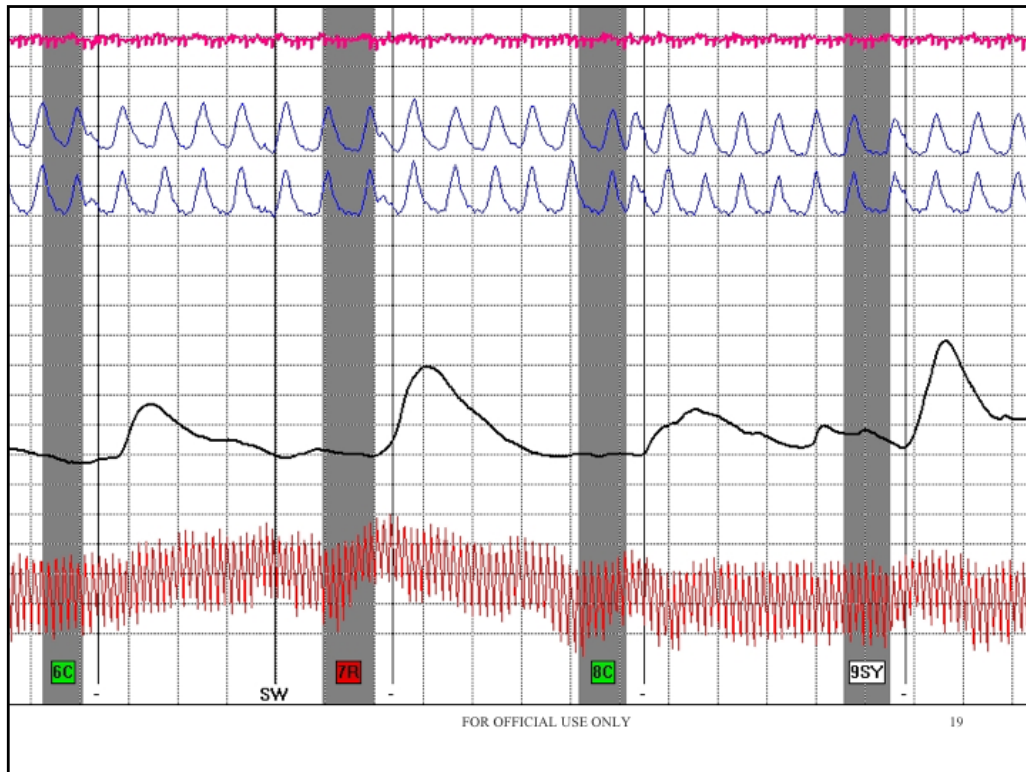
- **What does a CM look like?** [This entire week will be devoted to this topic]
- Some say that there is no CM signatures.
 - If that statement is true does that mean you will get beat if the examinee only performs CM at one comparison on each chart?
- Do you think performing CM at only one comparison on each chart is a pattern?
- How about if it is a different comparison on each chart?
- Is it possible to “beat” an examiner even if the test data is clean and stable? (Behavioral CM discussion – connect to anti-polygraph sites)
 - We will discuss behavioral CM in detail later
- See next two chart – The attached charts contain clean test data – **Do you think CMs are taking place?**



- This slide and the next slide is the same person.
- Discussion
 - Would you provide an NDI opinion based on this test data?
 - Do you think the PN, EDA, & CV channels have sufficient sensitivity?
 - Do you see the small bump at 7R? If the EDA was set at 10SU would that be sufficient to give a minus? (Wait until next chart – EDA is set at 2SU)
- Let's look at the next slide



- Note: Tracing colors changed by me
- Discussion: 6C CV channel is re-centered then 5R is asked. Had homeostasis returned to the CV when 5R was asked?
- Do you see anything to indicate CM activity? Why? Why not?
- EDA is set at 2 SU – not 10 SU – Would you give the EDA a minus, plus, or zero?
- Do the CV channels at the comparison questions look good? Do they look atypical? Why? Why not?
- This individual is DI and is hiding information about passing information to an unauthorized foreign national – He was performing mental CM (picking a number above 600 and counting backwards by 3's.
 - The examiner's opinion was NDI – overturned by the QC & told to interrogate get confession on the issue, then get CM confession.
- Discussion – Identify the CM signatures that led to QC making a CM call vs. the NDI call made by the field examiner.



- This is a chart from the next exam after examinee was confronted and admitted to unauthorized foreign contacts and mental CM activity.
- Once examinee found he could not get away with CM he went DI to the next exam – still lying.
- Examinee was a -2 at R5 and a -7 at R7. Clearly DI
- Outside issue question still strong responses indicating the possibility of an issue hanging out there that is as important or more important than the relevant issue on the exam.
- Do you consider the PN channels to have adequate sensitivity?
- Do you think the test data looks different from the previous two charts?

Back to Basics No Shortcuts

- **Pretest Interview**
 - **Fully scoping the issues**
- **Comparison Questions**
 - **Do not over-emphasize**
- **Why are the above issues important for deterring and detecting CM activity?**

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- **Discussion**

- **How many think spending time fully discussing criminal issues or security and suitability topics in screening will “sensitize” the examinee to the relevant topics?**
- **The comment has been made numerous times that one cannot over-emphasize a comparison question when the examinee is DI - Is that a true statement? (Explain why this is not a true statement)**
 - **Discuss the nuances of this issue:**
- **Does balancing relevant and comparison questions mean that equal amounts of time must be spent on both? (Explain why this is not a true statement)**
- **How might an examiner over-emphasize a PLCQ? A DLCQ?**
- **If shortcuts are made scoping the relevant screening questions can this lead to an over-emphasis of the comparison questions? How?**
- **What does this have to do with CM detection?**

Back to basics

- Do not conduct a pretest or a post test with examinee attached to the components
- Position examinee to observe profile
- Have examinee move long hair behind ear
- Watch examinee during response window
- Make sure MV sensor has sufficient sensitivity and hasn't moved from beneath examinee

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- **1st bullet:** (1) does not lend itself to developing rapport & building a partnership; (2) makes it impossible to see changes in baseline behavior
- **2nd bullet:** (1) better to see physical MV; (2) better to see facial MV; (3) better to see foot & leg MV
- **3rd bullet:** Want to see if muscles around mouth, cheek & jaw MV
- **4th bullet:** Most anti-polygraph websites suggests beginning CM when the question is asked and/or during the answer and continuing for 5 to 15 seconds.
- **5th bullet:** Sensors are useless if the sensitivity is not sufficient to see the MV. Examinee's will sometimes move their hips out from under the pad or scoot the pad until it falls off the back end of the chair.

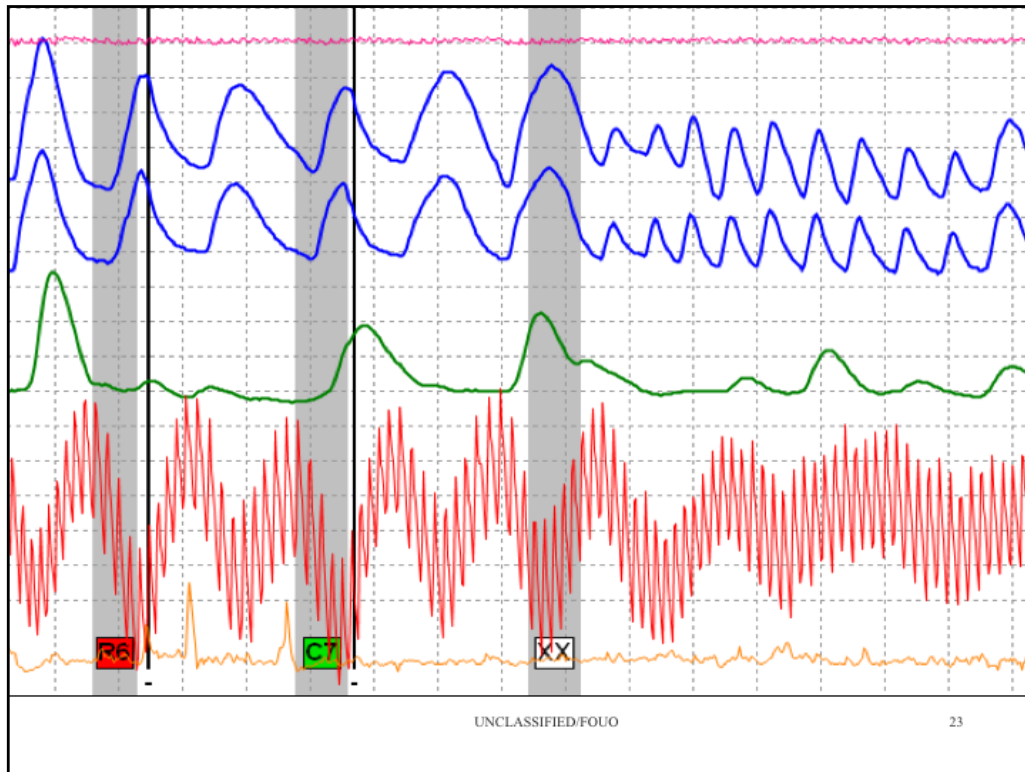
Back to basics Pneumograph

- Record 15 to 20 seconds of breathing before the X & after XX – Why?
- Breathing instructions – Last resort – Why?
- What is correct placement of PN tubes?
- What is proper tracing amplitude
- Breathing at 6 - 8 cycles per minute usually contrived

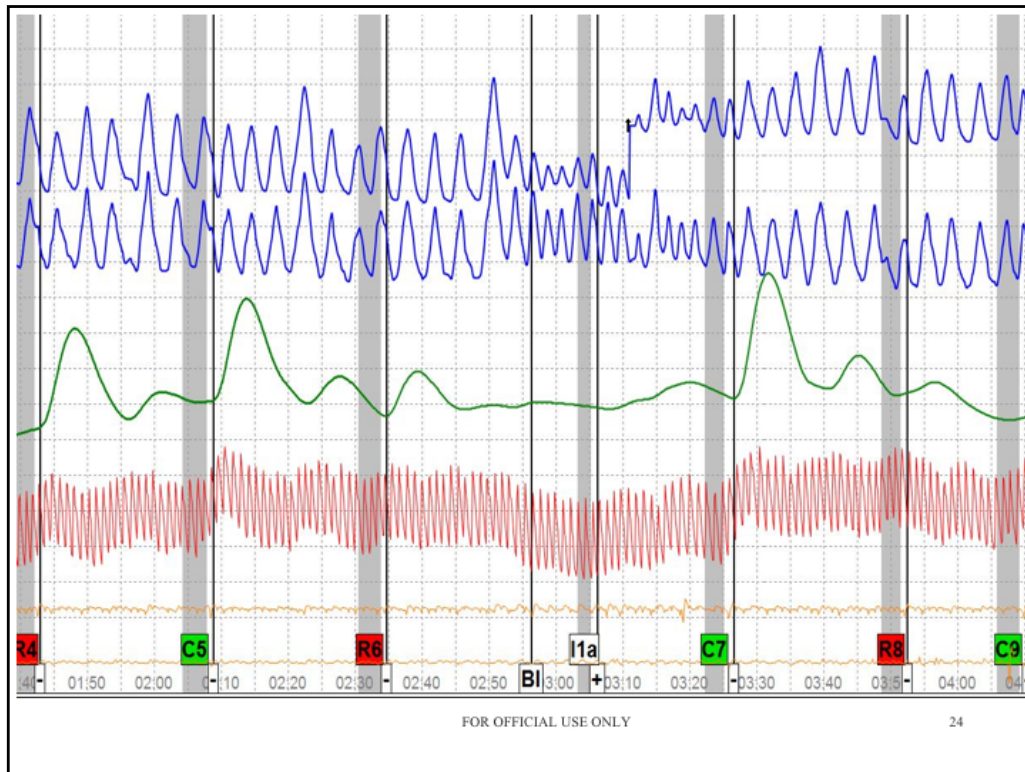
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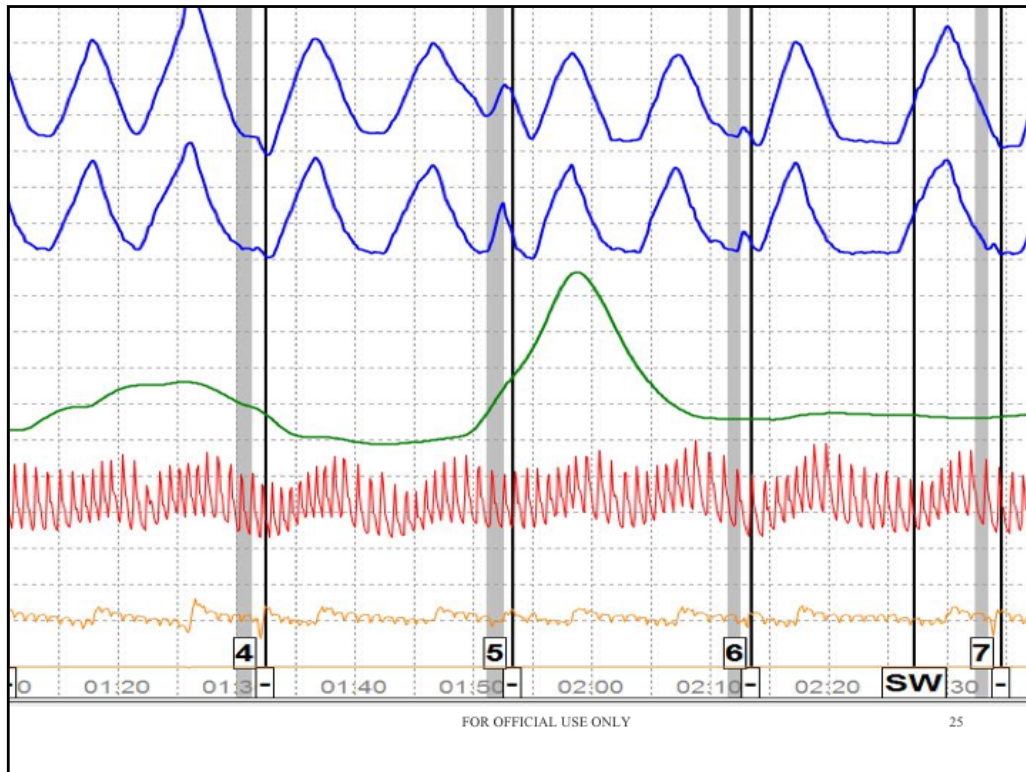
- **Bullet 1:** To establish a breathing norm.
 - Ideally – 30 seconds of recording before & after the X
 - Why is it that no one wants to record before and after the X?
- **Bullet 2:** Dick Arther (32,000 charts) – BI cause a truthful examinee to breath at ½ the normal rate – also causes examinee to focus on breathing & not on the questions
 - All anti-polygraph sites tell examinee's to control their breathing
 - If this is the case – why tell someone to breath normally?
- **Bullet 3:** Post across upper chest and across diaphragm – Stretch 1 inch – If too tight will cause DB. If too loose will cause tracing to not be stable.
- **Bullet 4:** Less than ½ inch and CM criteria nor evaluable criteria cannot be seen cannot be seen
- **Bullet 5:** Arther & Reid if PN channels are 6-10 CPM consider DI breathing – never call NDI
 - Re-adjust tubes and telling examinee to settle down
 - Consider increasing BP pressure to 100 – cuff discomfort will often stop the contrived breathing
 - Just the opposite, if repeated DBs check cuff pressure – might be too high. Consider MV to forearm – if done increase pressure to about 80 mmHg.



- **What does this chart suggest?**
 - Breathing at XX is recovery from controlled breathing
 - Controlled breathing is affecting the CV channel & MV sensor
 - Question spacing is inadequate
- **Why is the breathing deliberate?**
 - Examinee could be lying
 - Examinee could have received a Breathing Instruction (e.g. breathing normally) – causing them to control their breathing
 - Examinee might be spontaneously controlling their breathing between the X & XX to calm themselves down
 - Examinee could deliberately be trying to defeat the test
- **What should you do?** This examiner ran 4 series trying to get conclusive results
 - Discuss other options



- **The reason for this chart:**
 - To show how BI might affect examinee
 - After BI had 30 seconds had hyperventilation.
- Would you use C7 to evaluate against R6 & R8? Why? Why not?



- **Bradapnea – 6-8 CPM – controlled for most**
 - **Reinforce options for dealing with controlled breathing**

[Back to Basics Comprehensive CM Course]

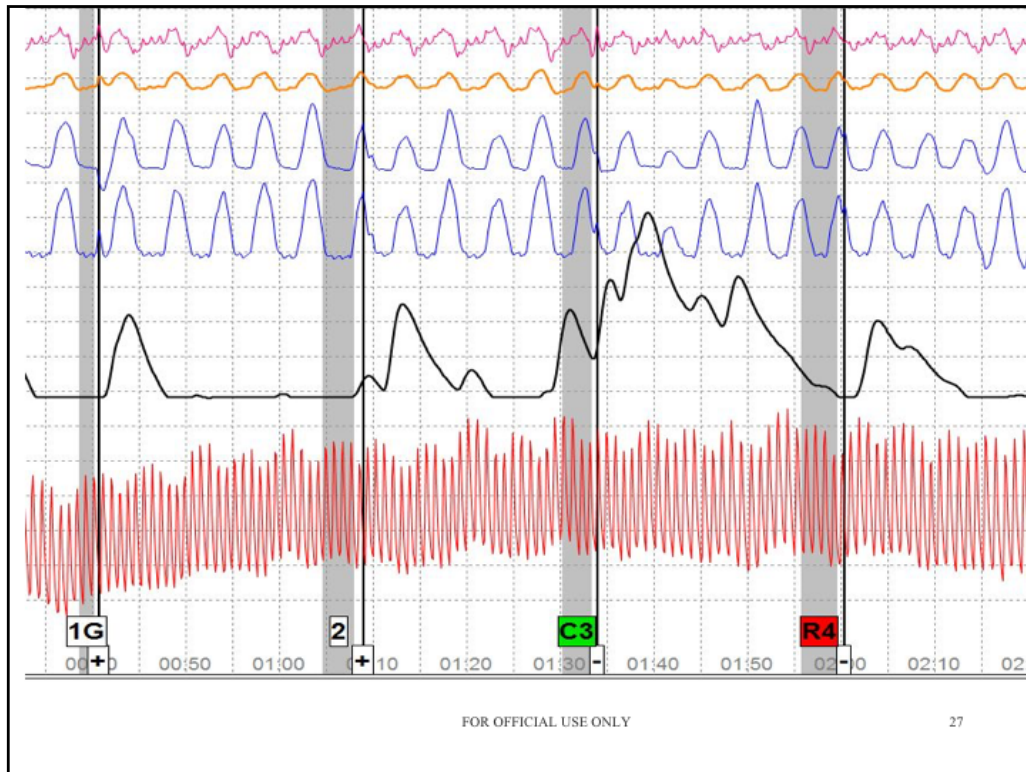
■ Electrodermal Activity

- EDA amplitude 1 to 2 inches
- Bold EDA with dark color
- What is a normal EDA vice abnormal?

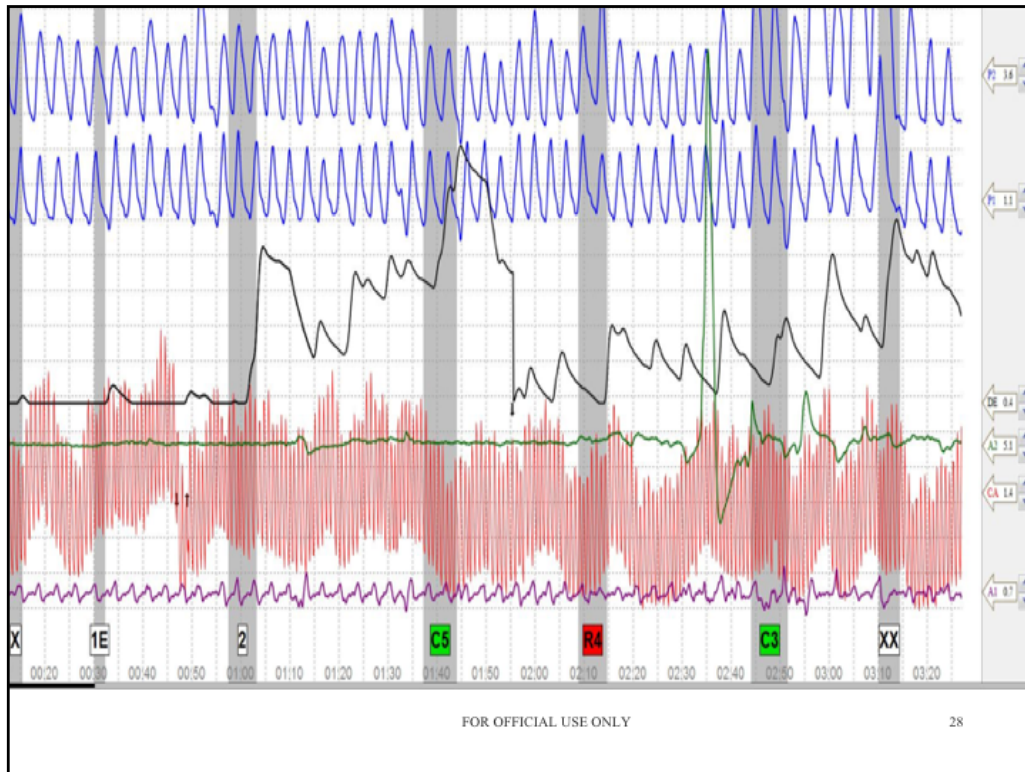
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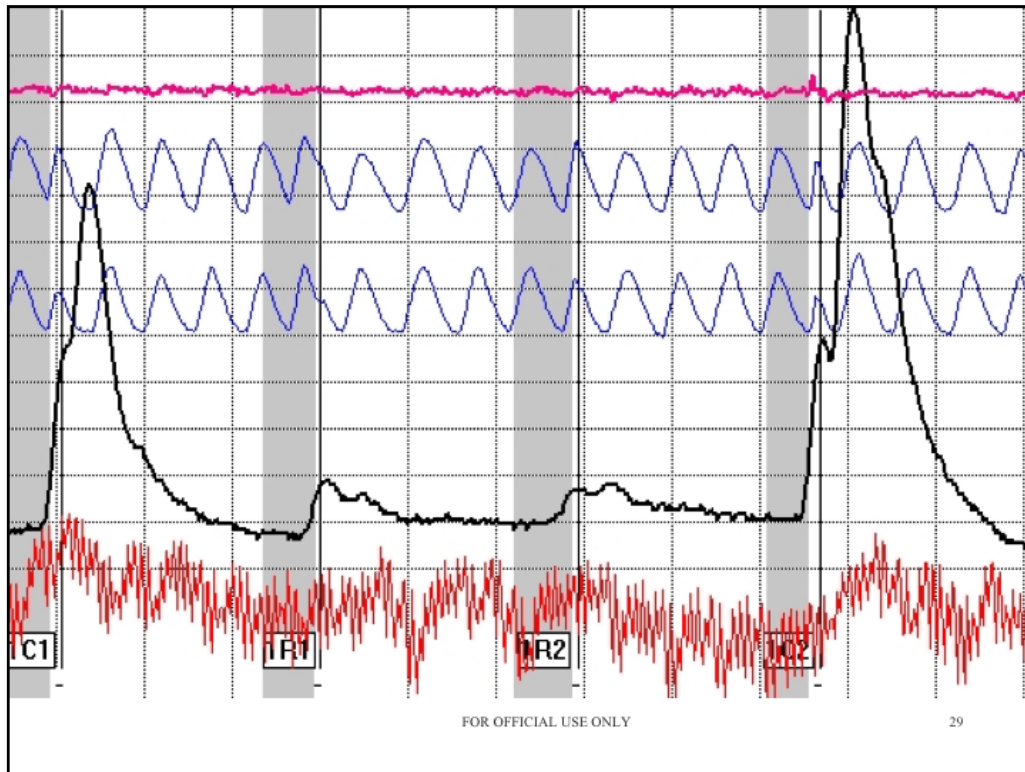
- **EDA amplitude 1 to 2 inches** – Must have adequate EDA to make a valid decision.
 - EDA should dissipate due to habituation.
 - Discuss EDA issues with the various polygraph instruments
- **Bold EDA w/dark color** – Difficult to see when a light pink, light lime green and unbolded.
- **What does a nervous EDA suggest?** (1) did I do a PPP?, (2) Is examinee nervous because of the relevant issues (possibly PLC issues), (3) Is examinee performing CM.
- **What does the test data suggest when EDAs are too big at comparison questions?**
 - What is too big?
 - What if too big only at the relevant questions?
 - What if too big only at irrelevant questions?
- **If EDA looks strange – consider why?** Strange shapes; Complex only at irrelevant, symptomatic or comparison questions.
- **Finger plates too tight** – How might that affect the test data?



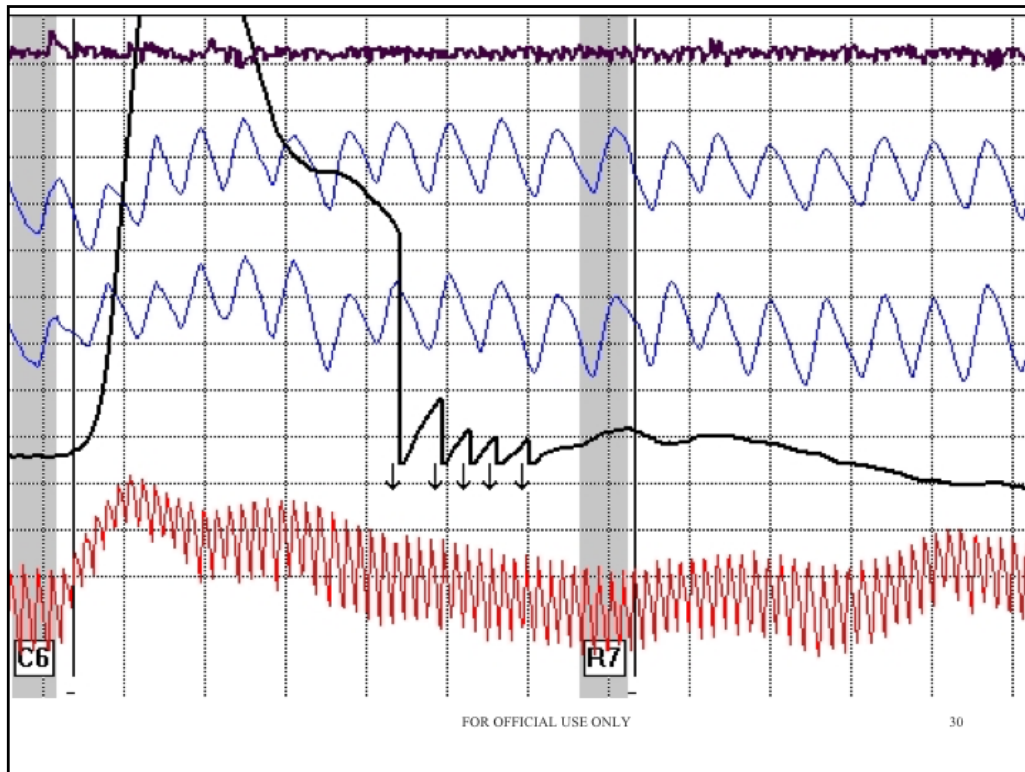
- The EDA is black and bolded - Is it easy to see?
 - How many in this room do not bold tracings and use light colors that blend in with the back ground? Why?
- Does the test data look clean and stable?
- Do you see any test data that looks unusual? Explain.
- There does not appear to be a lot of responsiveness in the CV channel. What are some steps that can be taken to fix that?
 - Sometimes it may be nothing more than readjusting the cuff.
 - Another possibility is too much pressure in the cuff.



- **What do you see? Is anything unusual?**
- The 2 sensor pad tracings have been bolded, sensitivity increased, and moved up where they can be seen. **What do you see?**
- Do you think it is possible that once the sacrifice relevant was asked the examinee was listening for the right questions in which to perform CM – thus causing the EDA to look nervous?
 - This chart is easy because we can see the examinee was deliberately either pushing his foot or pressing his toes to the floor.
 - What is important is to consider is that the cognitive process and fact that a deliberate attempt is going to be made to beat the exam will often create atypical physiology.



- What do you see?
- Does the fact that examinee is responding strongly to the two comparison questions mean that CM activity is taking place?
 - Must look for clusters of behavior.
 - 1C2 has a small bump in the MV sensor – Examinee pressed his toe to the floor.
- **Key point** – A polygraph examiner should always question the test data.
 - It is okay to numerically evaluate
 - But ask yourself – **is the test data typical? – is there a pattern that is atypical?**
 - Be nice – but always question



- **Would you evaluate C6 against R7? Why? Why not?**
- Teaching point – look at the MV sensor – there is 20 seconds of MV (AS)
 - MV shows up in different ways depending on the body structure of the examinee, how they are sitting on the pad, and how they perform a particular CM.
 - **What other clusters of activity do you see?**
- Again – question everything – be skeptical

[Back to Basics Comprehensive CM Course]

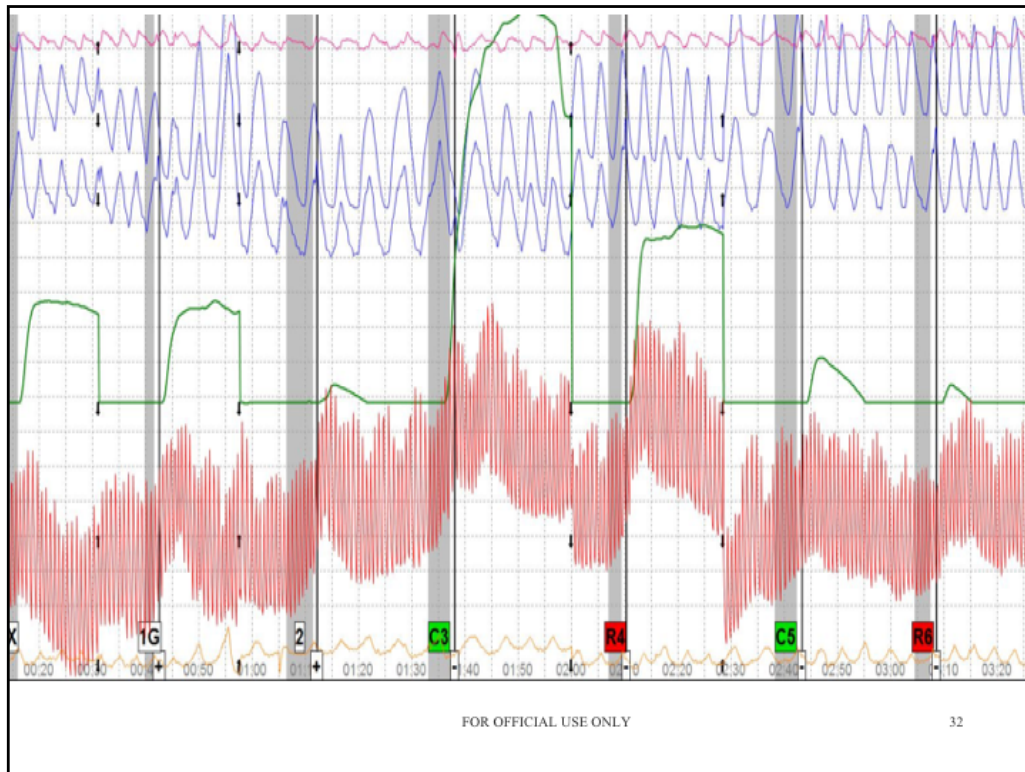
■ Cardiograph & Pump Bulb Assembly

- ¾ inch tracing is optimum
- Is re-centering really necessary?
- Barland's Law of Inequality
- Nervous erratic tracings
- CV tracings not consistent with other test data
- If you start at 80 mmHg and end at 50 mmHg – what do you have?

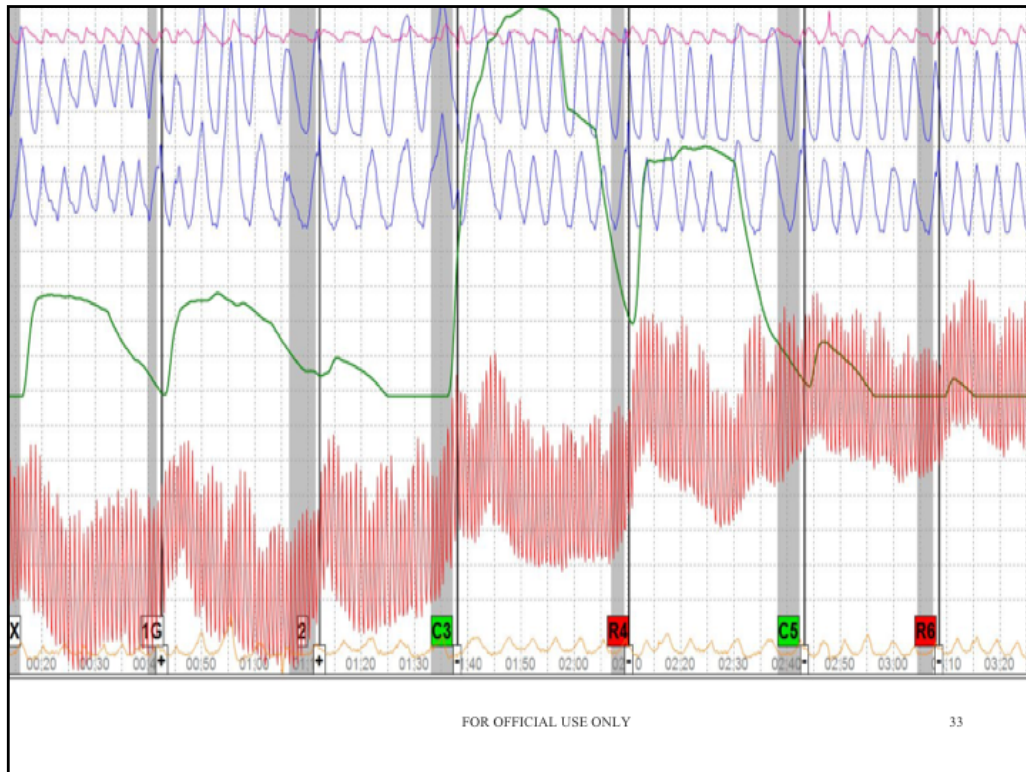
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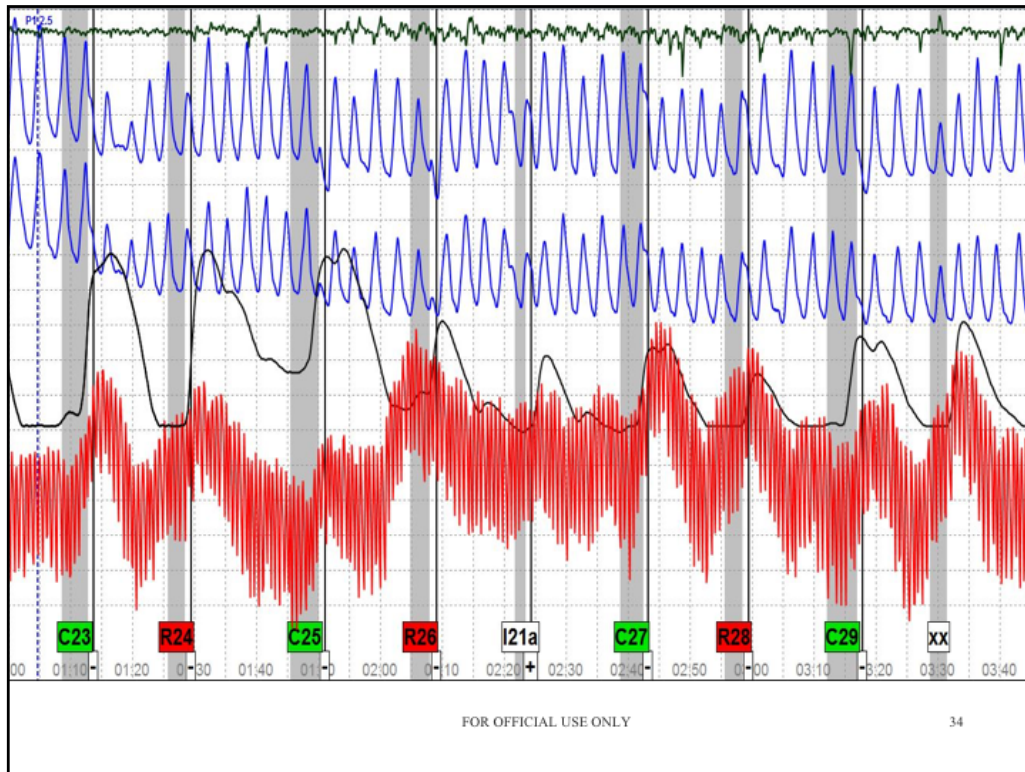
- ¾ inch tracing is optimum – ¼ inch or less is difficult to evaluate.
- If tracings are fairly stable – stop re-centering – makes a mess that looks unstable
- Barland's Law of Inequality – If it looks too good to be true at a comparison it probably is. If it looks too good to be true at a relevant it is probably a DI response.
- Nervous erratic tracings – (1) PPP, (2) lying at relevant question, (3) lying at a PLCQ, (4) performing CM, (5) lying & performing CM.
 - If Phase 1 smooth and Phase 2 erratic probably DI
- CV not consistent: (1) Is it too good to be true?
 - Discussion: What is too good to be true? What does it look like?
- If the CV component has a leak – why would you let it continue?
 - Track down the leak and fix it.
 - Use a binder clip to pinch off the hose. Is the leak in the cuff, hose or o-rings. Was cuff properly massaged?



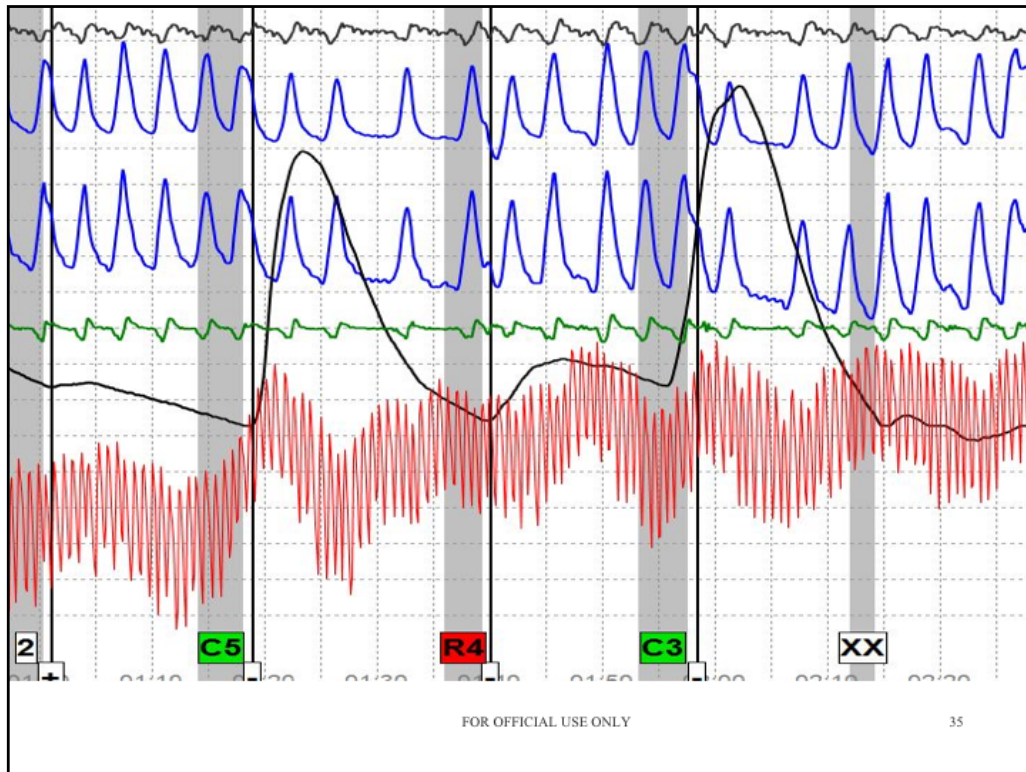
- **What is the problem with this chart?**
- **Do you think all of the re-centering marks are necessary?**
- **Do all of the re-centering marks improve the readability of the test data?**



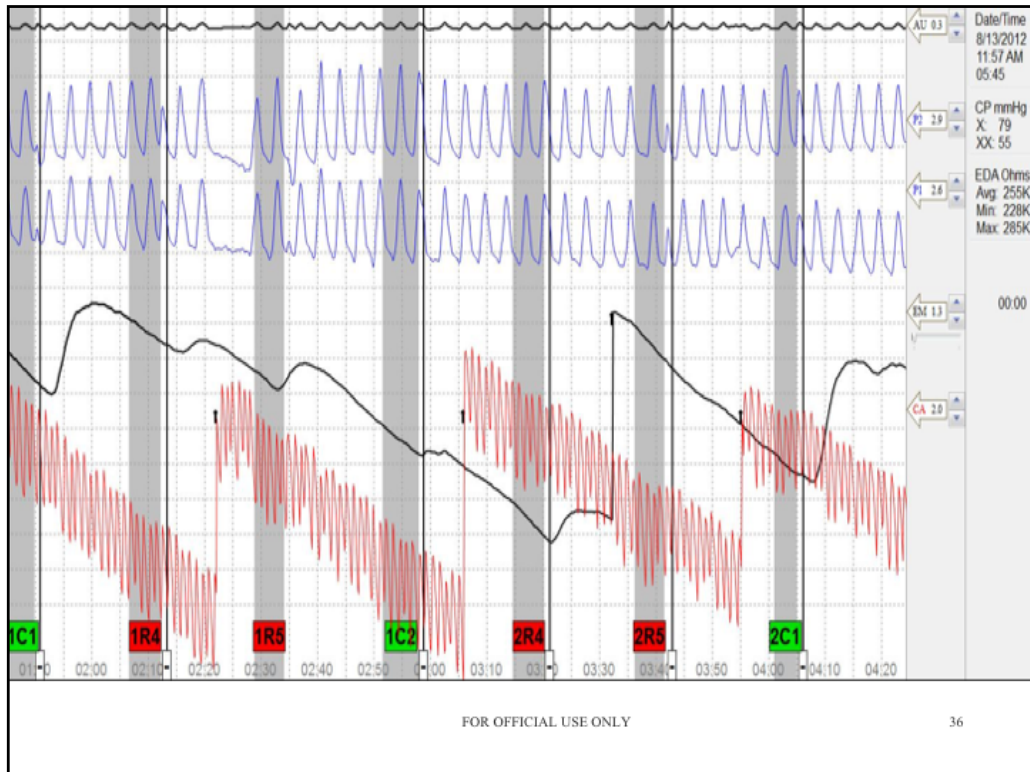
- The re-centering marks were eliminated from the previous chart
- Is this chart easier to evaluate?
- In this chart the PN channels are stable although the breathing is erratic – but clearly easier to evaluate that the last chart.



- Do you see anything about this test data that should be questioned?
 - Lack of proper question spacing
 - Asking relevant questions when CV channel is still in a response mode
 - PN channels are not stable. Baseline is slowly dropping throughout the test
 - Some MV in MV sensor but no frequency or specificity
- Do you think that the CV channel at the PLCQs is too good to be true?
- Next chart is another series with this examinee – look at that chart then make a decision as to whether CMs taking place.



- This is the same examinee that produced the physiology seen in the last chart – new series.
- Do you see a problem with this spot?
 - C6 – there is a PN channel rate change and a CV channel blood volume increase that is still continuing when R4 is asked.
 - Should R4 be artifacted? Why? Why not?
- For this series I did not bold the CV channel
- Do you think CM activity taking place? Why? Why not?
 - TB and or TP



- Back to basics – Every exam this examiner ran for a 2-week period had a leak in the CV channel.
- What is wrong with this picture?
 - If the pressure is discontinuous is the examiner comparing apples against apples?
 - What is the changes that as pressure decreases the rise at the bottom of the tracing increases?

Back To Basics Comprehensive CM Course

■ Proper use of Irrelevant Questions

- Absorb orienting responses
- Return to homeostasis
- When CM observed
- When other artifacts occur
- Pattern avoidance
- What is atypical for an irrelevant?

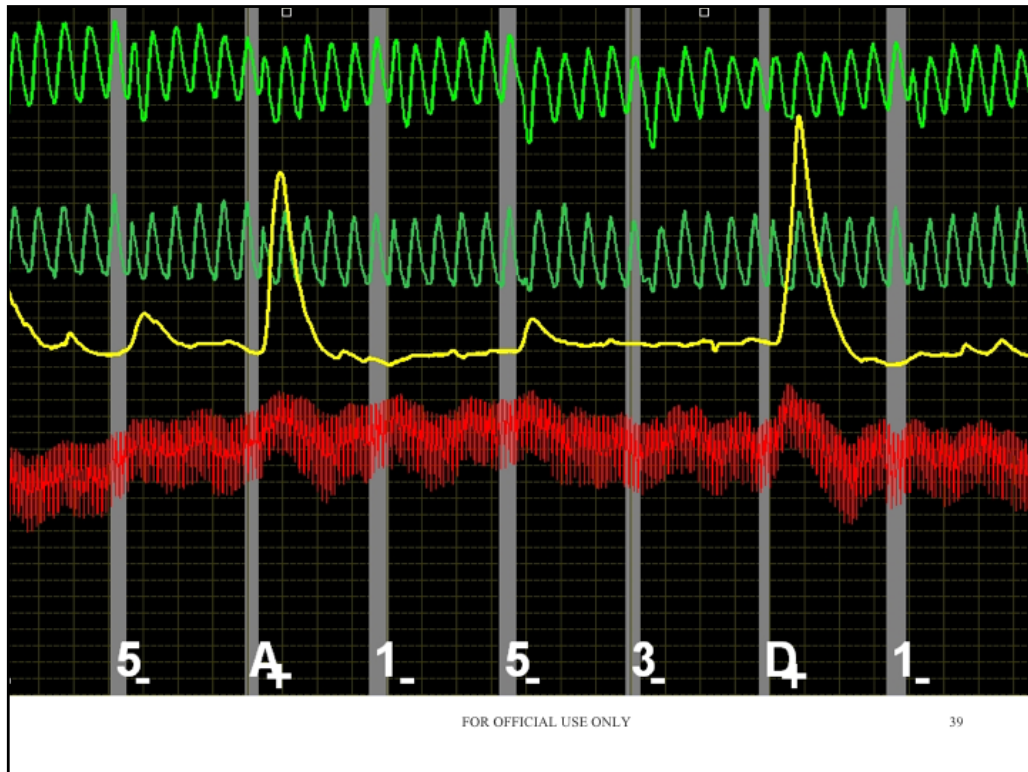
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- **Discussion:** When using formats with comparison questions when should irrelevant questions be used?
 - Unexplained response just before asking next question
 - Artifacts – DB, CT, SW, SN, SZ, C, M, T, OSN, ISN, TI, MI
 - When response goes beyond normal response window
 - When it appears that a CM occurred at a comparison question
- Why are irrelevant questions used in an R/I format?
- How do you know when CM activity is occurring at an irrelevant question in an R/I format?



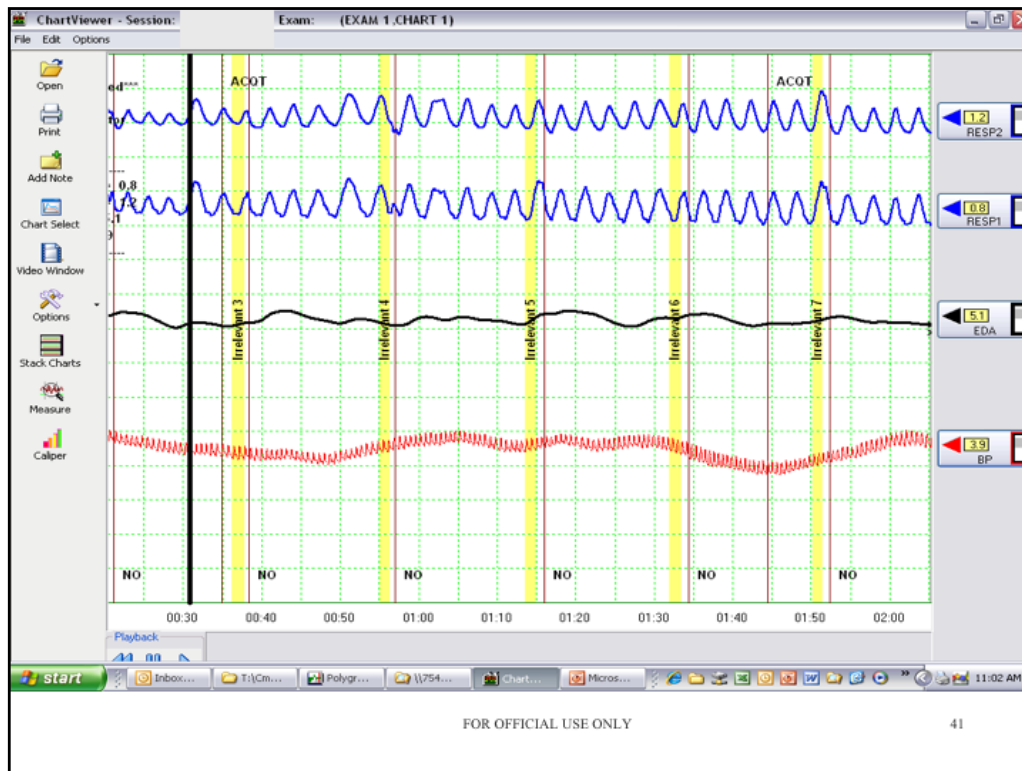
- This individual is clearly responding to the R5 question in the criminal issue case.
- The PN channels at the symptomatic and the irrelevant look atypical. There is a strong EDA response at the irrelevant question.
 - What questions would you ask your self regarding this chart?
 - If similar test data was on the next chart would you consider it to be a CM?
 - Would you interrogate on the relevant issue or the suspected CM?
 - **Never allow examinee to leave without addressing the obvious CM – EVER! Why?**
- Examinee former police officer – TB at irrelevants (they were identified as control questions & the comparisons identified as background questions) He thought the symptomatic was a control question.



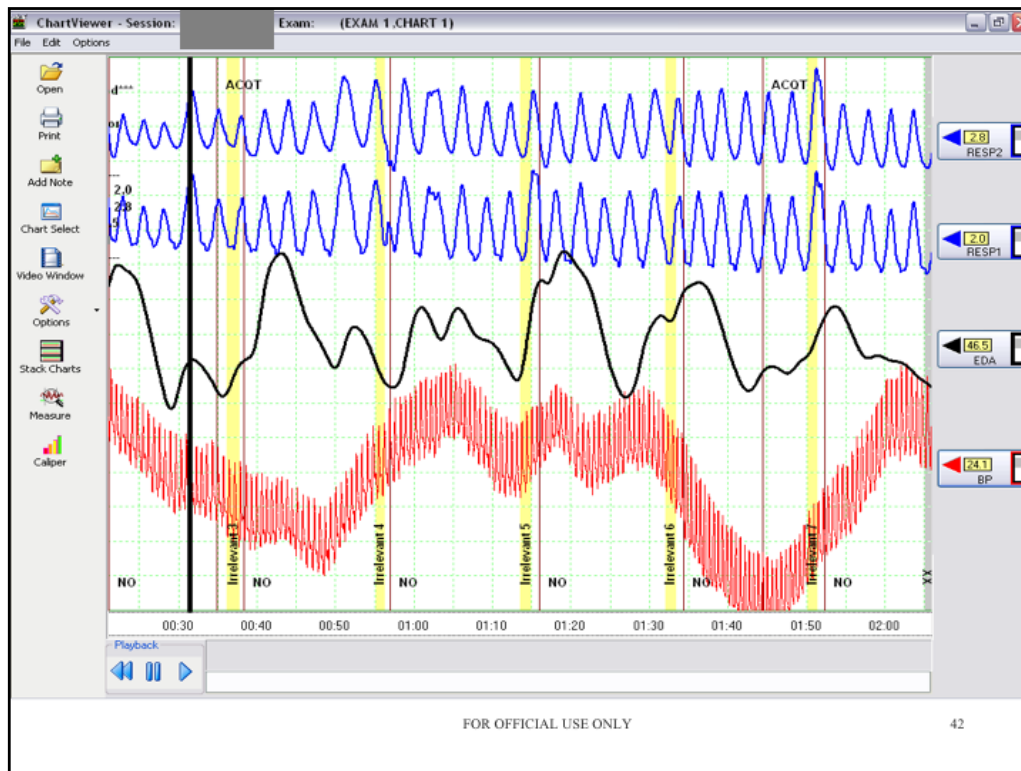
- What is unusual about this R/I chart?
- This individual went online to a anti-polygraph website that suggested flexing leg muscle at the control questions
 - (The online site identified a number of irrelevant questions as control questions)
- Always question test data that is out of the ordinary.
- In R/I screening the irrelevants are designed to return examinee to homeostasis. They are the biggest responses on the chart.
- Do you think the CV channel is atypical?

Back to basics Proper tracings

- **An examiner with 2 years experience commented that he kept his tracings at ¼ inch because he did not want to see CM**
- **Review the following two slides**



- Attached is the ACQT of a screening exam.
- The entire screening exam was run with the same sensitivities.
- If you were the Quality Control examiner – would you accept this work?
- The examiner told me that if it were necessary he could increase sensitivity to look at a spot.
- Let's look at the same chart with sensitivity increased:



- Do you see an obvious difference?
- Now – ask yourself – why would anyone run an exam with their test data almost turned off?

Back to Basics Comprehensive CM Course

■ Post-test interview:

- All anti-polygraph sites strongly urge examinee not to admit to CM activity
- If CM activity is clear, what should you do?

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- If the test data contains consistent, significant responses at a relevant question – interrogate on the relevant issue.

- After the confession – tell the examinee in a matter of fact manner that you observed CM activity
- Tell them you will not move on until they tell you what they were doing

- If you are one of those agencies that do not interrogate on screening issues – but you have consistent, significant responses at a relevant issue – move to an Expanded Interview on the salient relevant topic.

- The Expanded interview is not an interrogation but it clearly identifies the salient relevant topic.
- Once the Expanded interview is completed – point out in a matter of fact manner that CM activity was observed.
- Ask them what CM they used - discuss
- NEVER let them leave thinking the CM worked – why?

Back to Basics Comprehensive CM Course

- If CM activity is observed and you point it out and tell the examinee to stop it, “do they actually stop the CM activity?”

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- If CM activity is observed and you point it out and tell the examinee to stop it, “do they actually stop the CM activity?”

- Review of 100s of CM cases reveal that they usually do not stop the CM activity.
- They will continue the activity – and in many cases move to a different CM or a variety of CM
- Often they will continue the CM activity but dial it down in hopes that it will not be observed (You provided the biofeedback)
- Once CM activity has been observed – confront the examinee
 - NEVER POINT OUT the CM [Do not show tracings; Do not draw tracings – ABSOLUTELY NO BIOFEEDBACK]
 - Be very critical in any follow up evaluations – It is their fault not yours



Movement Sensor Devices

Do MSD's really work?

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- During the past decade there have been complaints about the MSD used on modern polygraph equipment.
- Some have unplugged the sensor or turned the sensitivity down so responses cannot be observed.
- A variety of excuses have been raised as to why such actions are accomplished.
- It is the belief of the TASS Branch that MSDs are a deterrent. Most anti-polygraph sites now discourage the anal sphincter and leg flexing because of the MSDs.
 - MSD for arms, feet & seat are worth the money particularly in OS vetting & asset validation.
- The objective of this slideshow is to provide an understanding of the MSDs, why they should be used, and how to properly use them.

Movement Sensor Devices

- Today's MSDs are either acoustic or pneumatic
- What will they detect?
- How should they be used?
- How should we treat artifacts observed in the MSD tracings?

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- **What will MSDs detect?** Originally designed to detect AS, Kegel manipulation, Valsalva maneuver, leg flexing & some toe pressing.
- Consider using MSDs for arms, seat, & feet
- **How should they be used?** Proper sensitivity - bold print
 - Test sensor to make sure it works; Must test the sensor with examinee sitting on it to make sure it works
- **How should we treat artifacts observed in the MSD tracings?**
 - I'll ask a question to answer the question. **How do you treat artifacts in any other channel?**
 - If it is in a scoring window & appears to affect the tracing do not use it.
 - If it is outside a scoring window – is it affecting a scoring window?
 - Is it accidental or deliberate?

Reid CM Chair - 1945

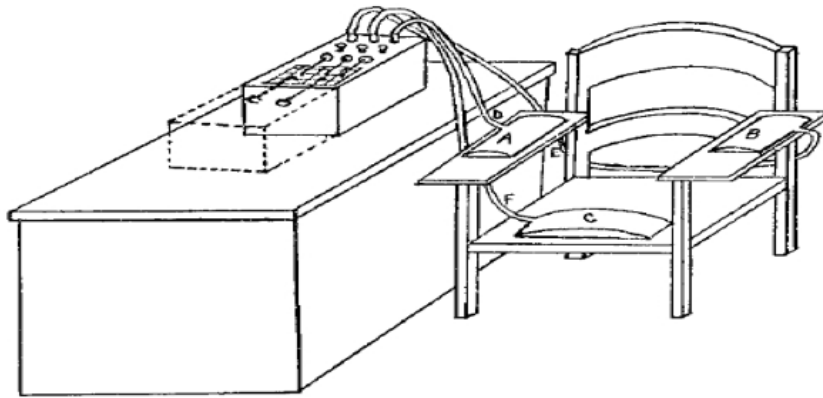


FIG. 11. SCHEMATIC SKETCH OF INSTRUMENT FOR RECORDING MUSCULAR MOVEMENTS

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• Reid's CM device (1945)

- Closed Pneumatic system in which inflated rubber bladders (placed under the FA and thighs) are connected to 3 separate tambour units, which permits the recording of any muscular exertion by feet, legs, arms and hands.
- John Reid did not have a lot of faith that examiner's could identify physical CM activity.
 - He developed the CM chair to counter-physical CM.
 - He conducted studies using the chair where he produced physiology by flexing arm and leg muscles that he felt would beat most examiners.
- My guess is that the CM chair required a second instrument separate from the analog polygraph so never became popular.

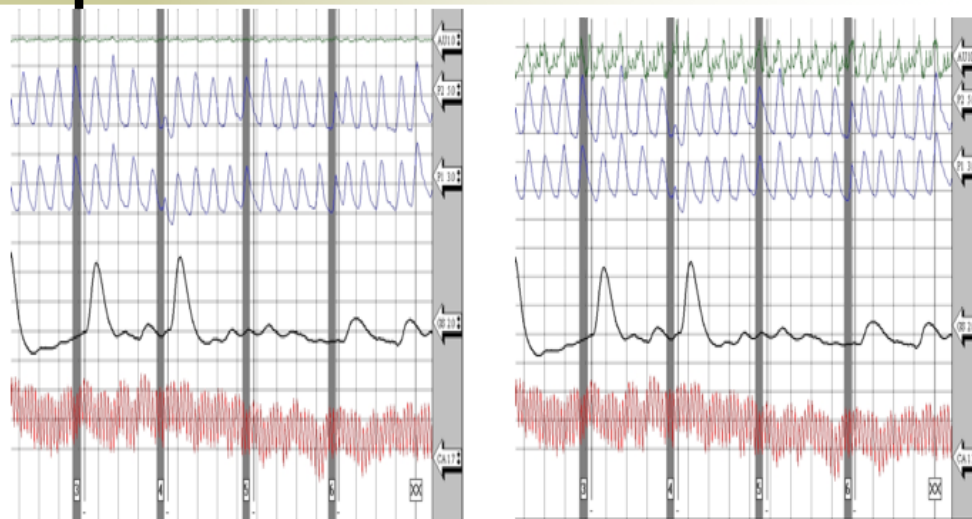
MSD 2010



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- This slide depicts the Lafayette Instrument Company's MSD for feet, arms & seat.
- They now sell a pneumatic system.
- All polygraph companies sell at least the seat sensor.

How to determine the sensitivity setting?

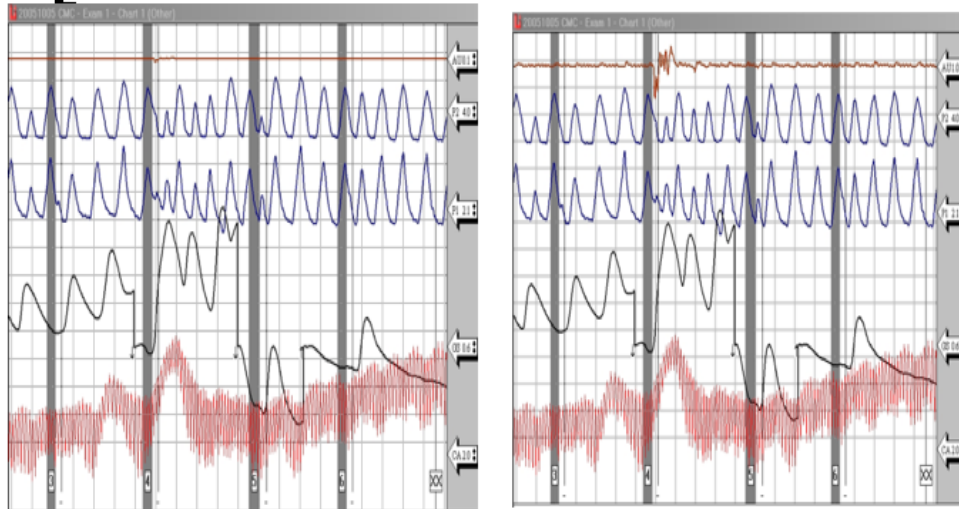


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- Note that the green color makes the sensor difficult to see.
- Black and Bold it.
- Find sufficient sensitivity necessary to observe movement.
- Note: The left screen is at 1 SU & the right screen is at 10 SU.
 - The correct setting can be determined by asking the examinee to sit up straight or by observation when they move.
 - If a deflection is easily observed – the setting is correct.

Sensitivity – Which tracing is appropriate?

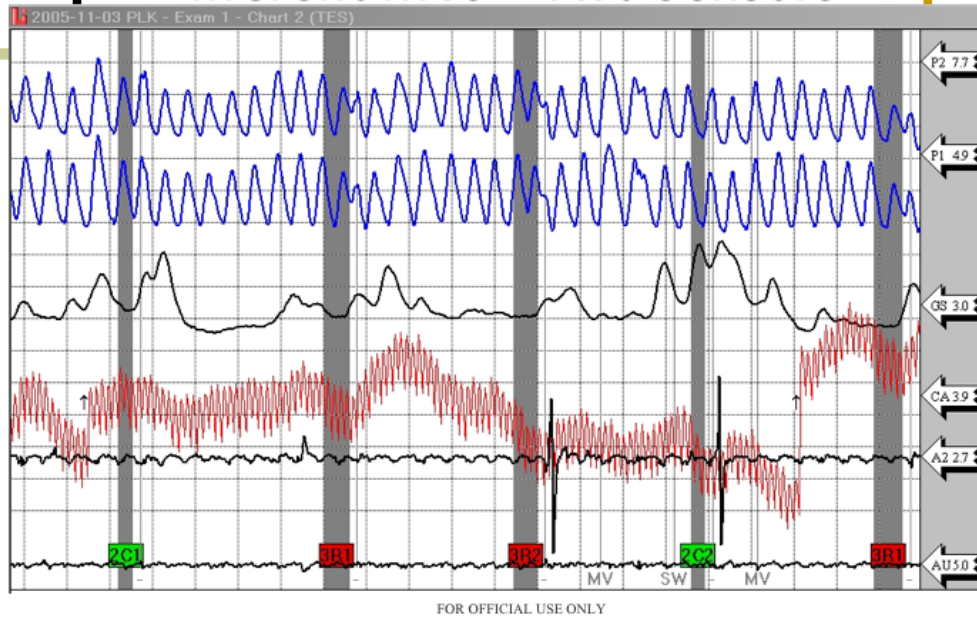


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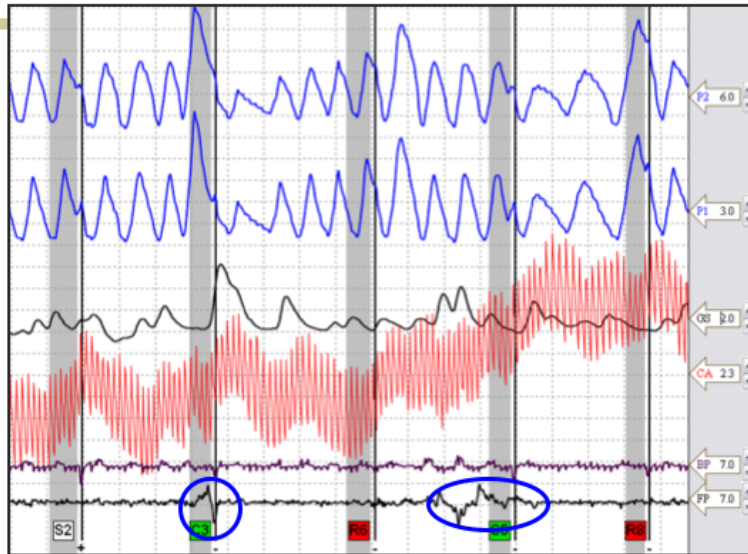
50

- The left window is at 0.1 SU. The one on the right is at 10 SU.
- Side note: The individual in this test performed a yoga maneuver called “mula-bandh”.
 - Also called root lock, anchoring your spine in alignment with your legs.
 - It is a tightening of sex organs, anus & navel.
 - Simple term for us is anal sphincter.
- What other CM signatures do you see?
- If there was not movement in the sensor would this be considered a good peak at the ACQT key?
 - Discussion

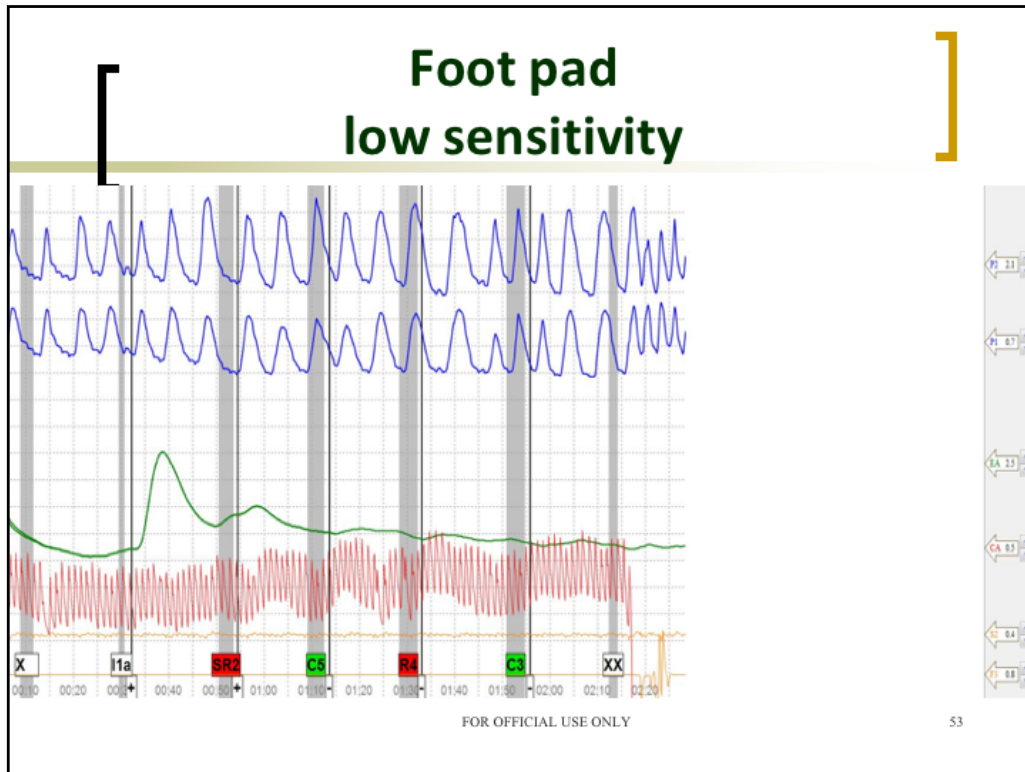
Different MVs – Two Sensors



Foot Sensor Added

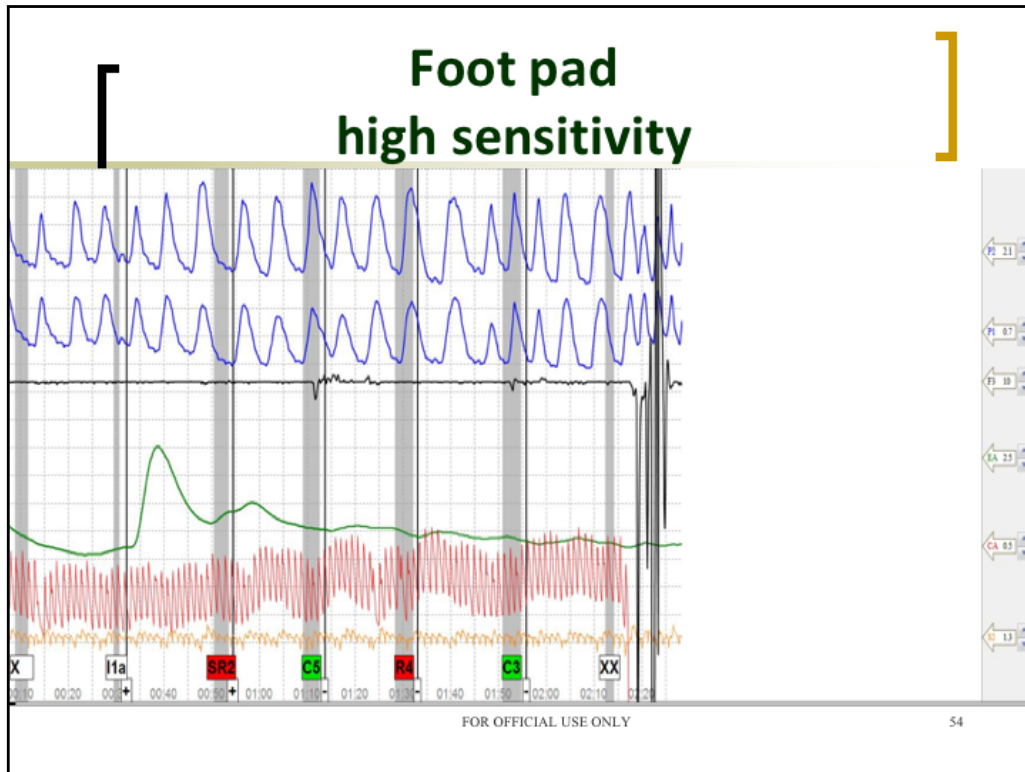


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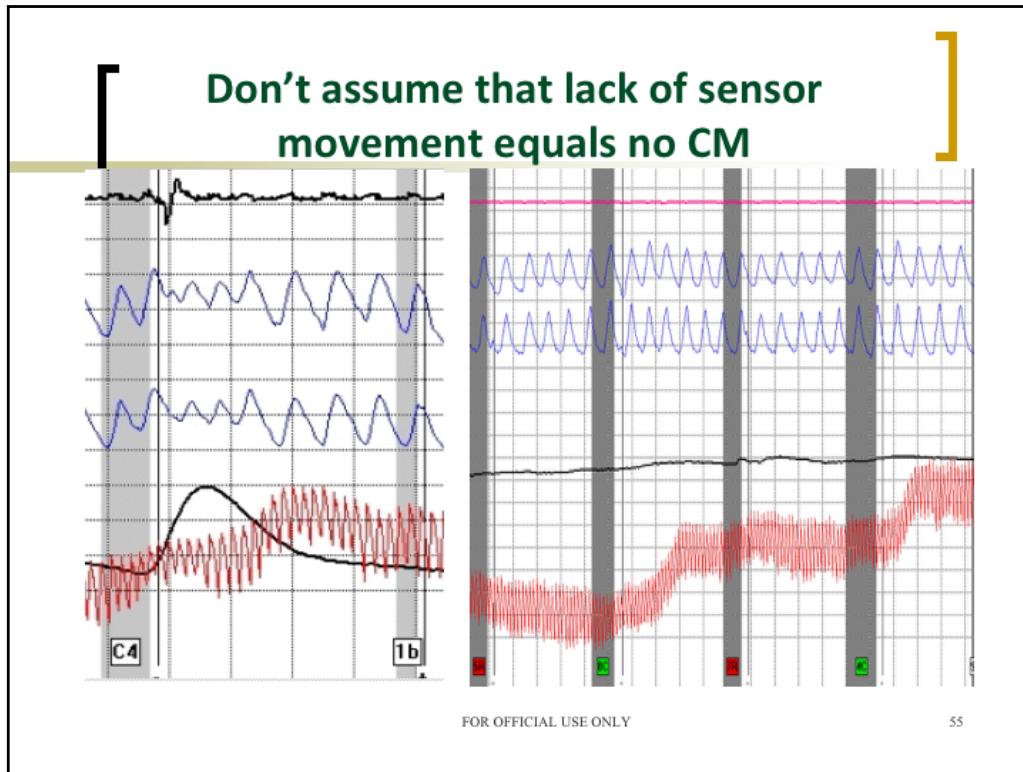


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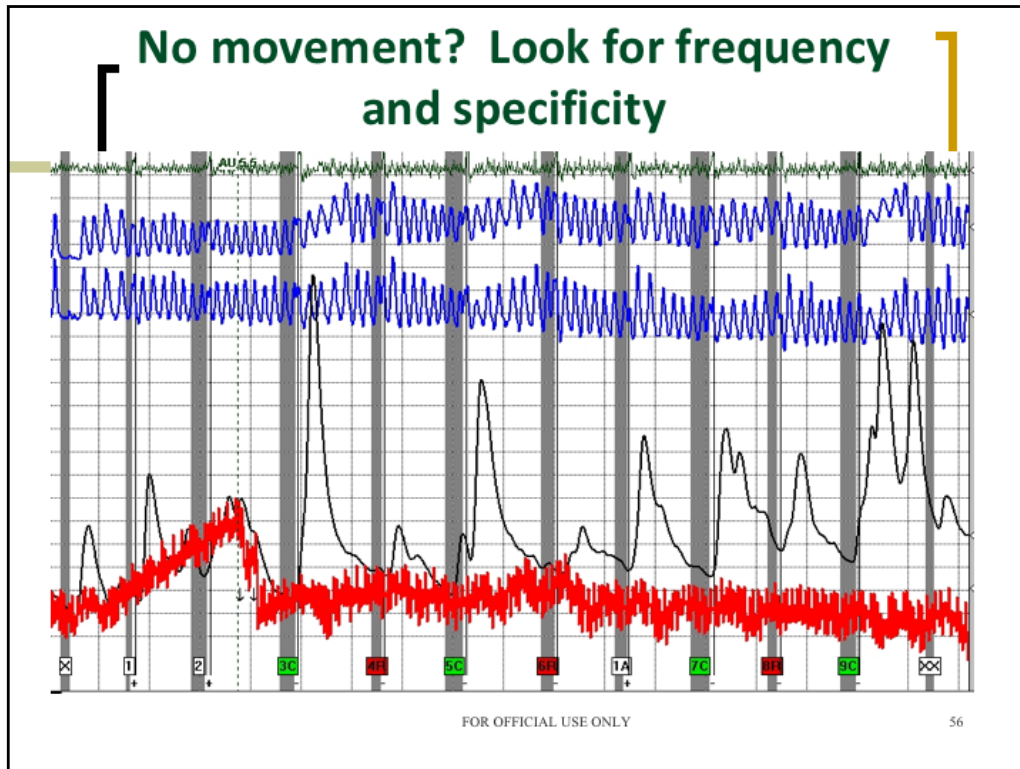
- Research project with two sensor pads (one for feet and the other for seat)
- The examiner chose to run the seat pad at 0.4 and the foot pad at 0.8 plus both pads light yellow tracing.
- See next chart



- This is the same chart that was on the last slide
- Moved the foot pad to the center and bolded the tracing and changed the color to black
- The sensitivity was changed from 0.8 SU to 10.0 SU.
 - Note that MV is taking place at both comparison questions.



- Left panel – Anal Sphincter.
- Right panel – mental CM.



- Slide reduced by 50%.
- Examinee biting his lip



Countermeasures Exercise

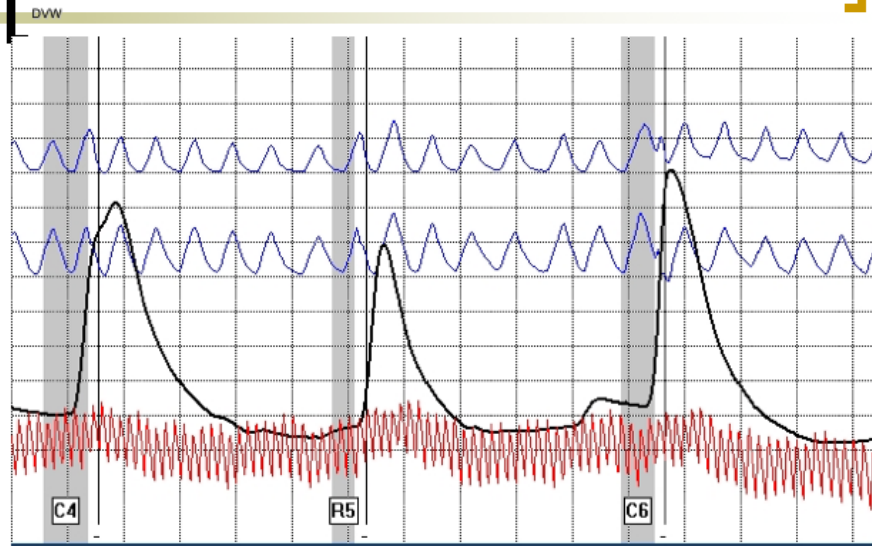
**Why anti-polygraph folks have
had to change tactics**

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- The point of this exercise is to show that physical CM activity does not always appear obvious in the test data
- This exercise should be self-explanatory as to why MV sensors are needed during the polygraph process.

Best Guess #1

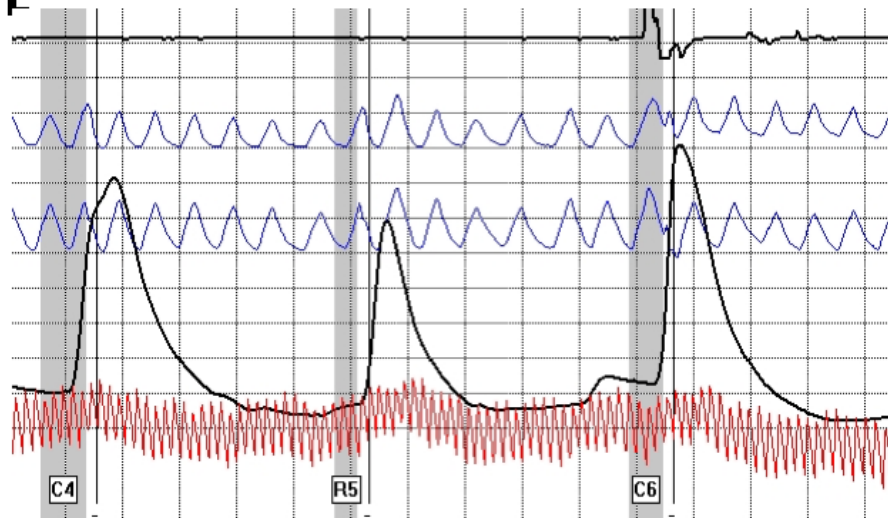


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Best Guess #1 – Do you see a CM?

- **What do you see? Does anything in the test data catch your eye?**

Answer #1



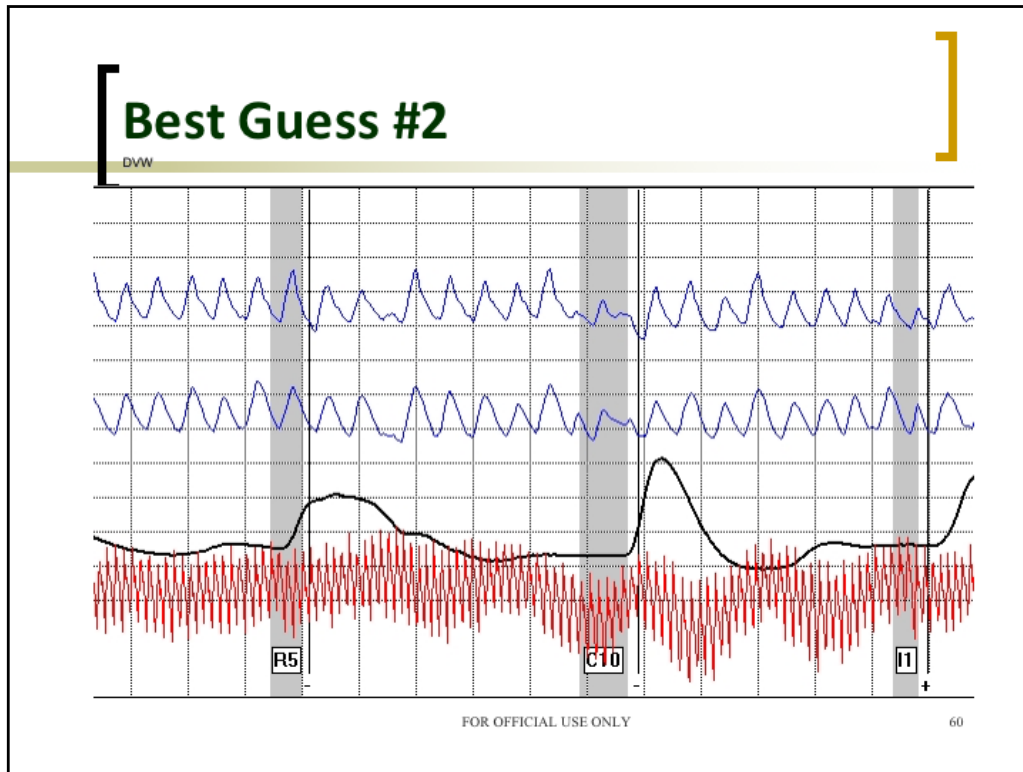
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Answer #1

- We can see from the MV sensor that an AS took place during the question asking.
- Do you see any changes in the test data?

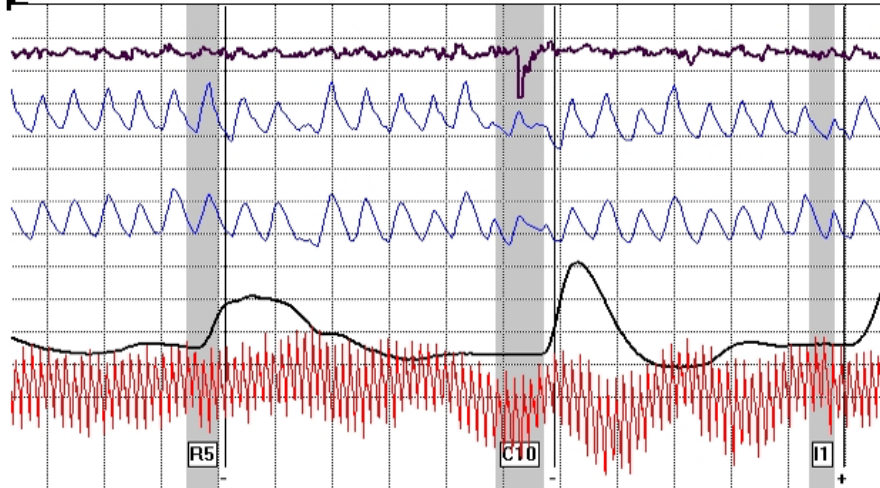
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Best Guess #2

What do you see? Would you evaluate this?

Answer #2



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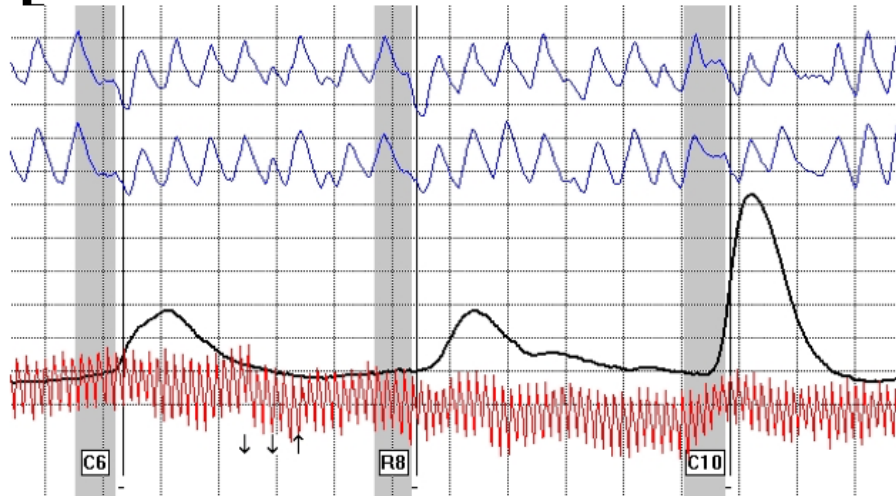
61

Answer #2

- Anal Sphincter MV during the asking of the question
- Did the MV affect the other channels? Explain.

Best Guess #3

DVW



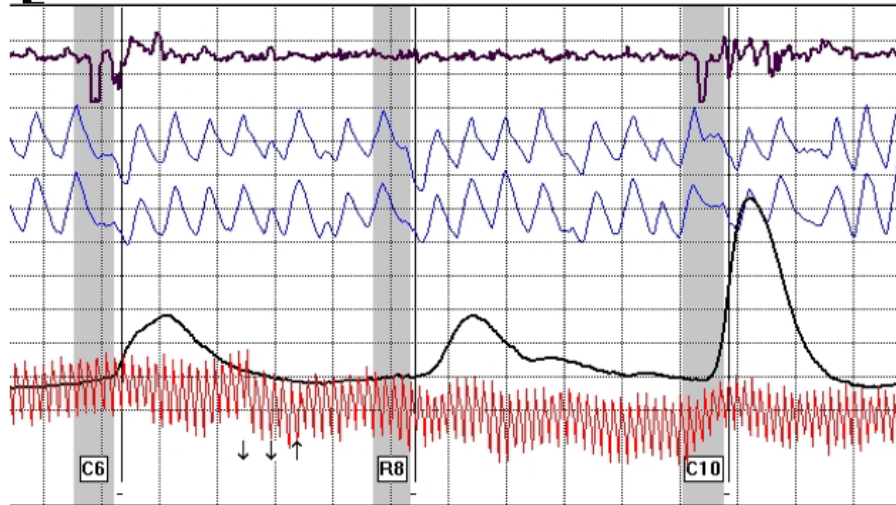
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Best Guess #3

- What do you see?

Answer #3

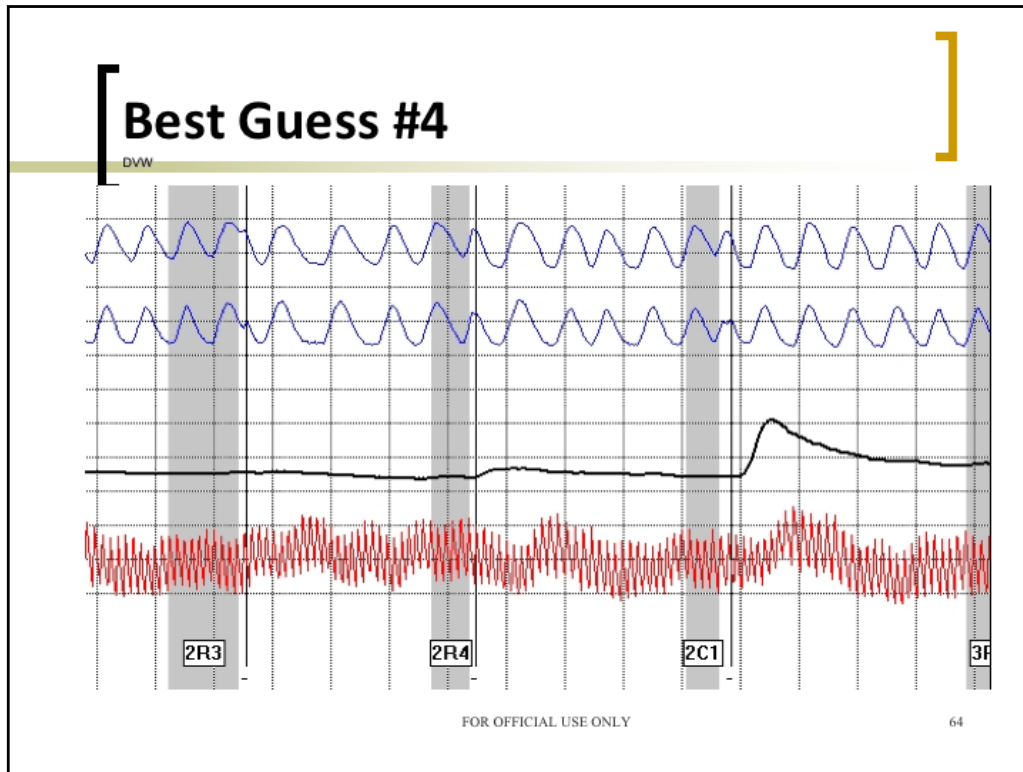


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Answer #3

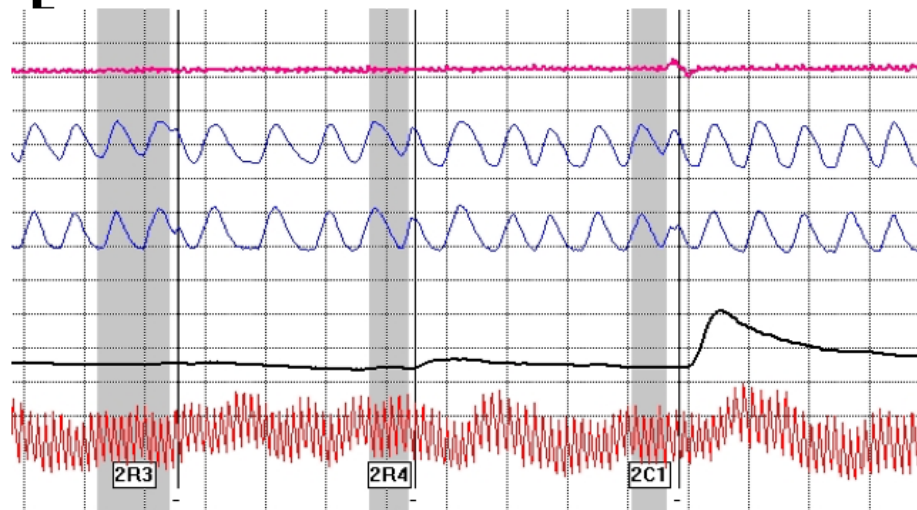
- Anal Sphincter
- Does anything in the test data look atypical? Explain



Best Guess #4

- What do you see?

Answer #4



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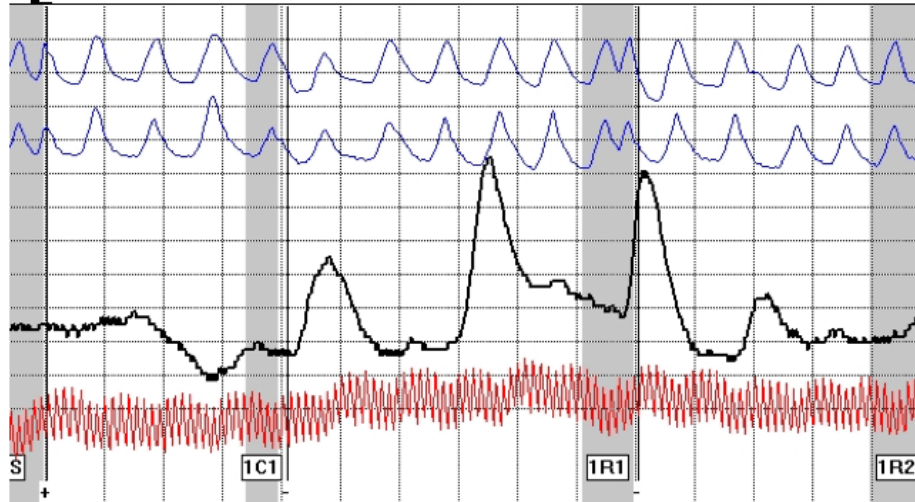
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Answer #4

- Toe Press
- Do you think a simple toe press is sufficient to create an EDA and CV response that might over power a relevant issue in a screening examination?
- The focus of this discussion should be:
 - Multiple issue tests are not as sensitive as single issue tests
 - If multiple issues are not fully scoped with discrepancies being challenged – can be over powered by CM

Best Guess #5

DVW



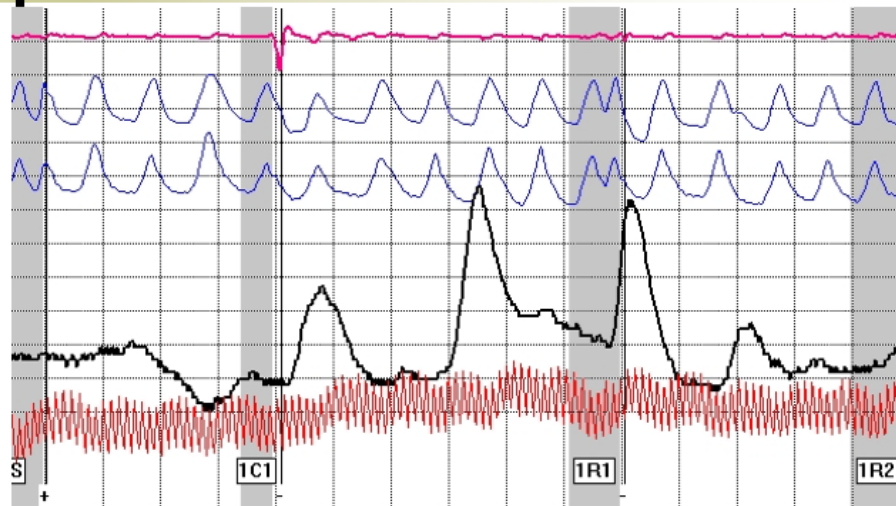
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Best Guess #5

- What do you see?

Answer #5



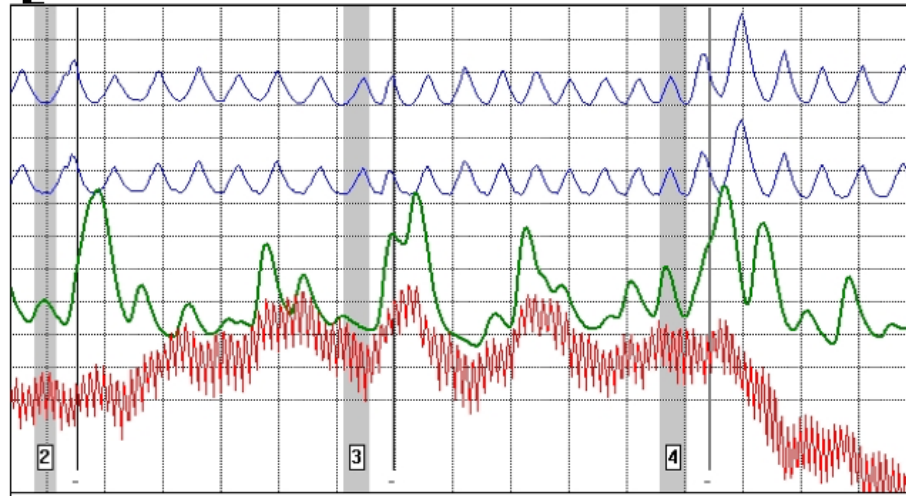
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Answer #5

- Do you see anything in the test data to indicate CM activity?

Best Guess #6



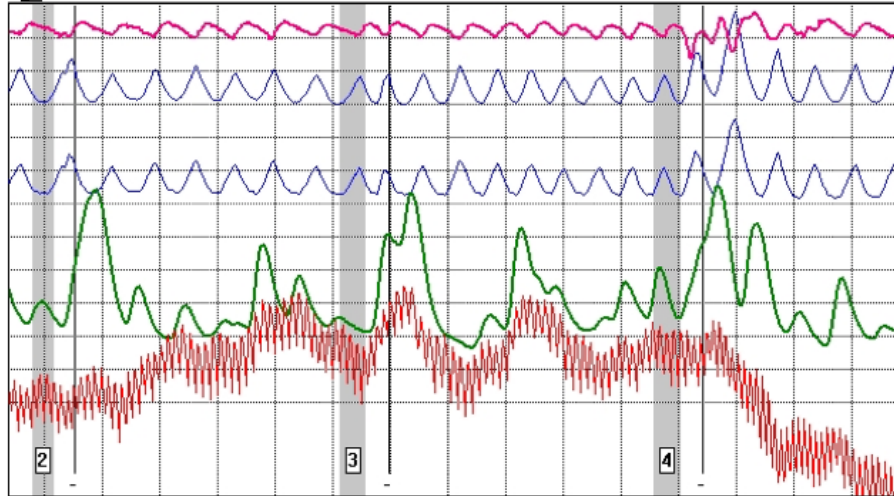
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Best Guess #6

- What do you see?

Answer #6



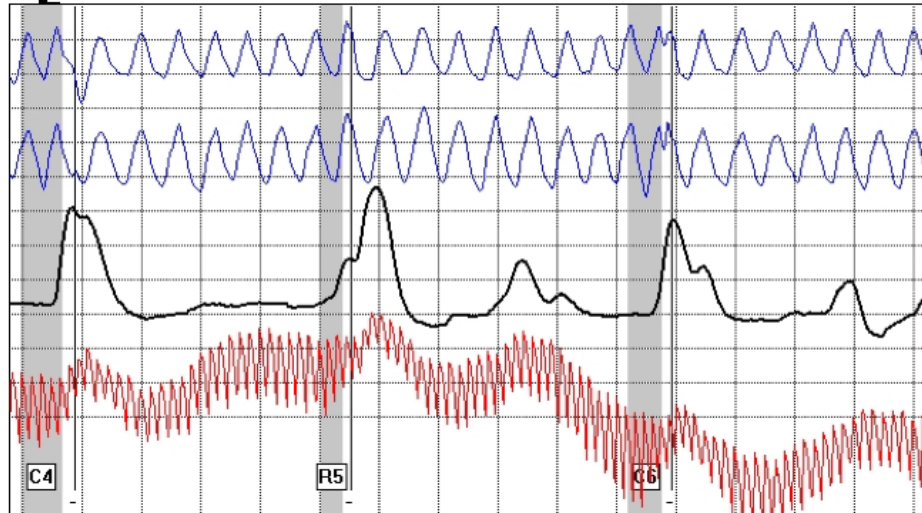
69

Answer #6

- Do you see atypical physiology?

Best Guess #7

DVW



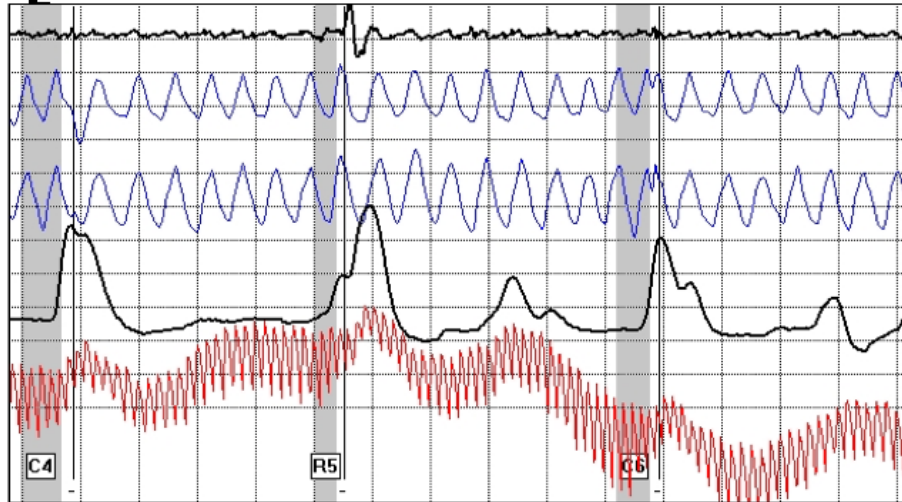
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Best Guess #7

- What do you see?

Answer #7

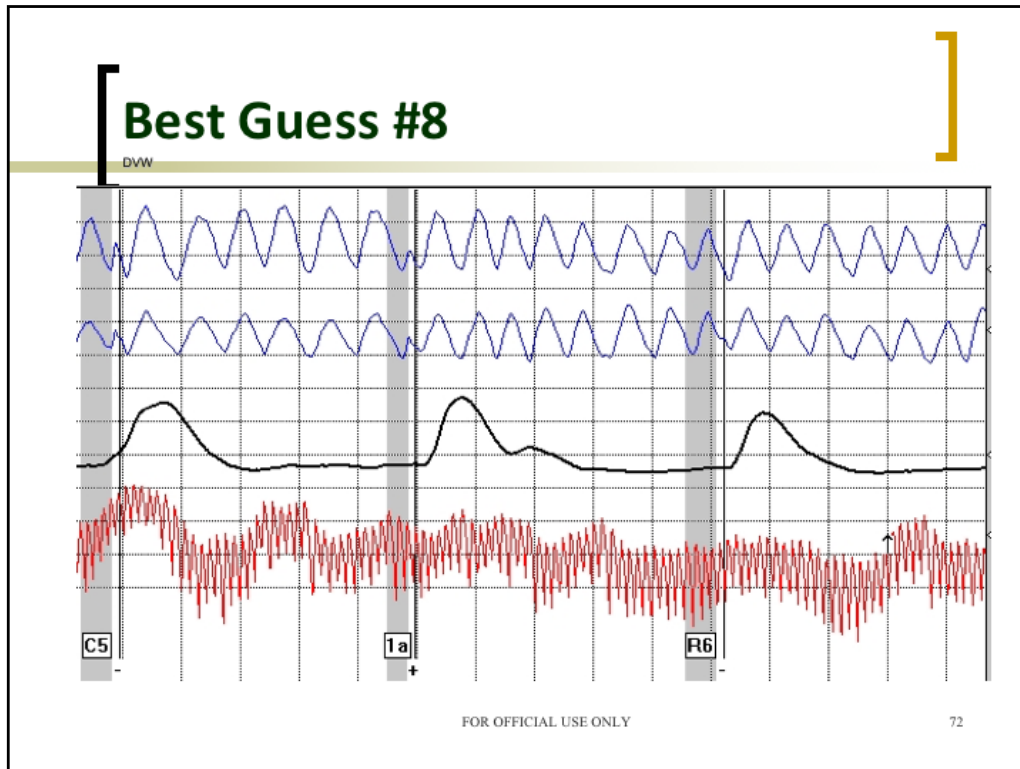


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Answer #7

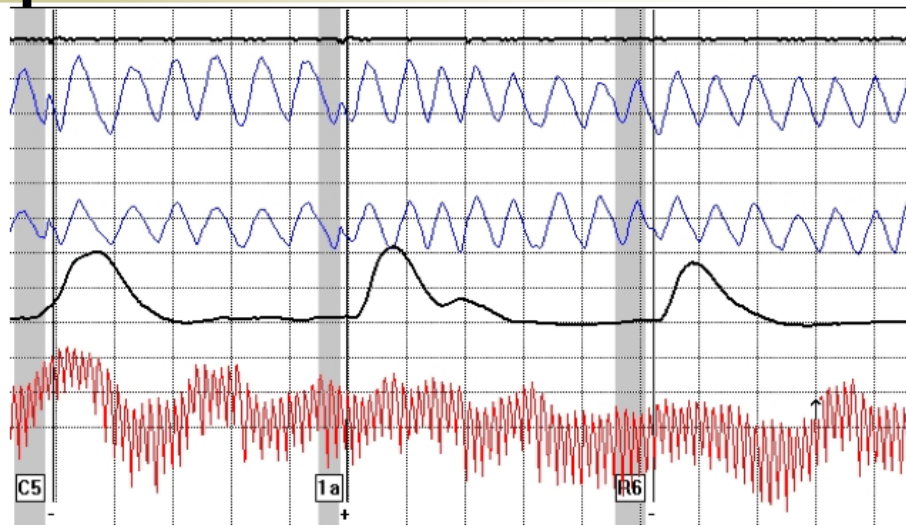
- What do you do when examinee performs CM at the relevant question?
- Interrogate



Best Guess #8

- Nothing to see

Are you paranoid?! No CM



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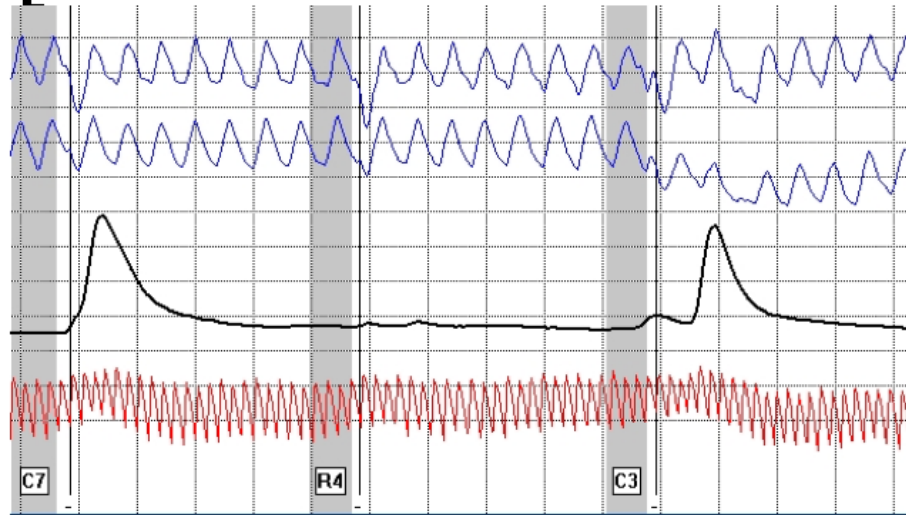
73

Answer #8

- No CM activity in the sensor.

Best Guess #9

DVW

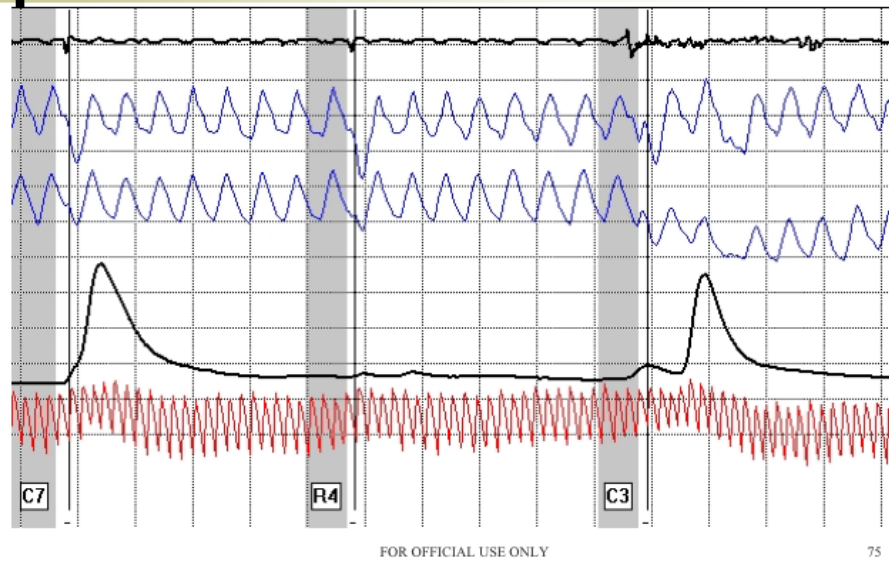


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Best Guess #9

- Hopefully you don't need a sensor cushion to see the CM

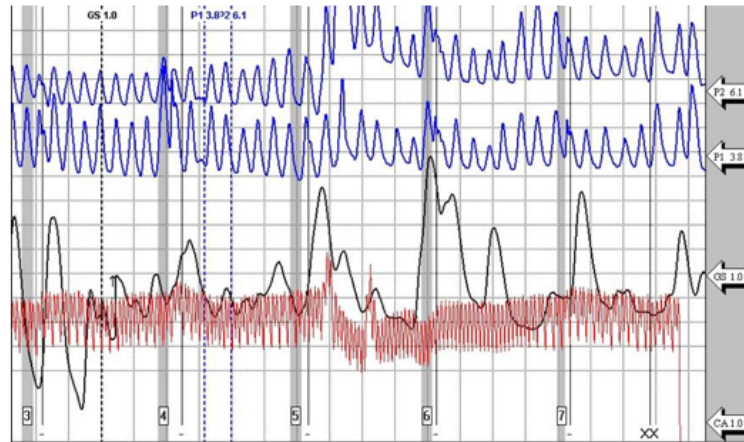
Answer #9



Answer #9

- Discuss the signatures

Best Guess #10



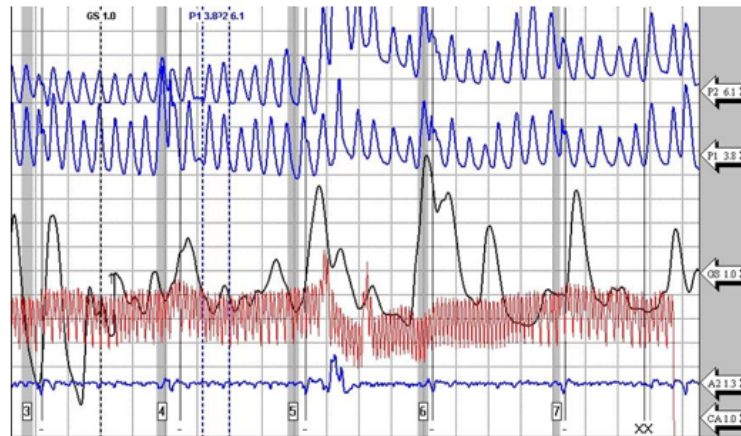
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Best Guess #10

- What stands out as atypical?

[Answer #10]



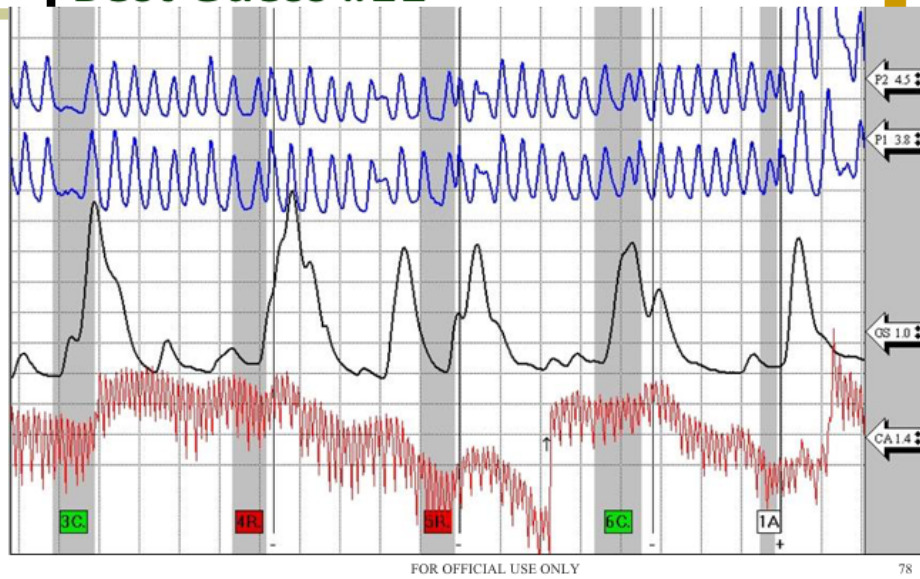
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Answer #10

- Point out the PVCs and the CM signatures

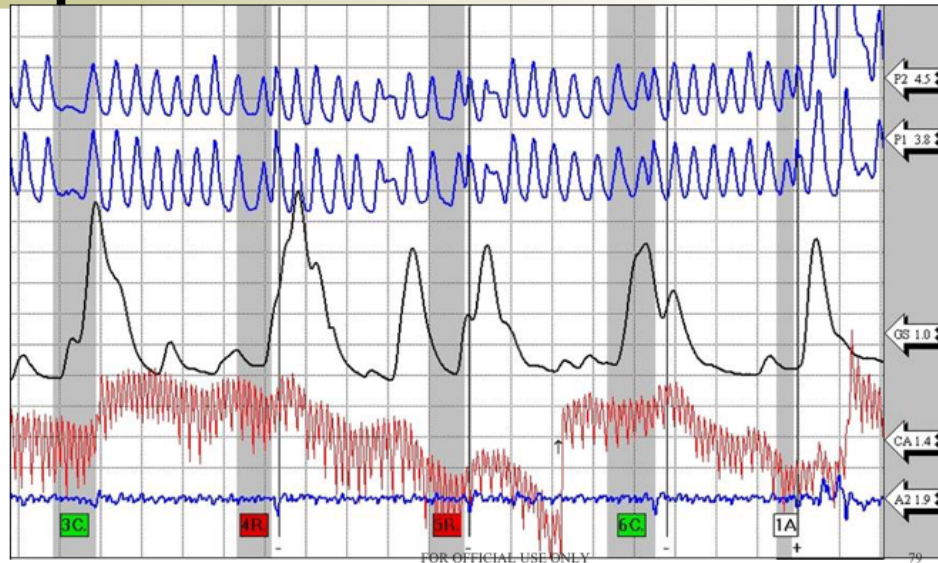
Best Guess #11



Best Guess #11

- What do you see?

Answer #11



Answer #11

- 3C & 6C are toe presses & 1A is an anal sphincter.
- If you identified some of the CM activity it was because you saw something different.

Summary

- **Clean test data make it easier to identify CM activity**
- **Returning to basics (not cutting corners) will assist in obtaining clean test data**
- **MSDs help identify physical CM – must have proper sensitivity and placement**