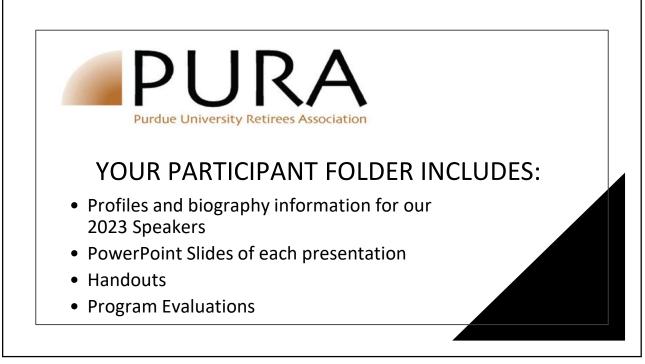
Purdue University Retirees Association Annual Spring Conference

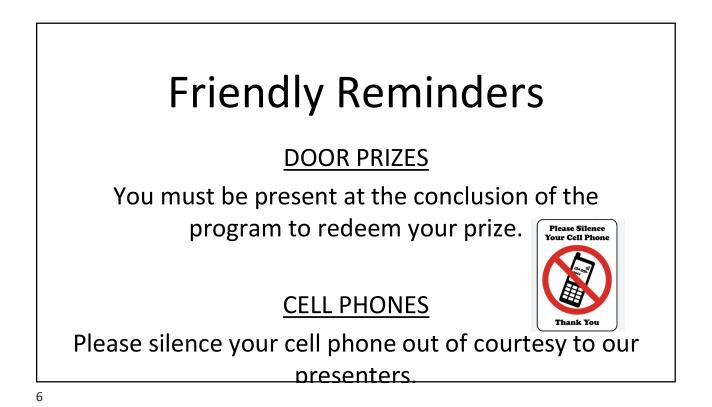
















LIVING WITH CHRONIC PAIN WITHOUT FEAR OF **ADDICTION**

Matthew Ward, PhD

Assistant Professor of Biomedical Engineering, Purdue University Adj. Assistant Professor of Clinical Medicine, IUSM

April 19, 2023



MEET THE PURDUE **BIOCOM** LAB TEAM











Rahaf Salim



Damen Wilson



5/3/2023 9

Peter Zoss



Maria Feucht



Angie Baron









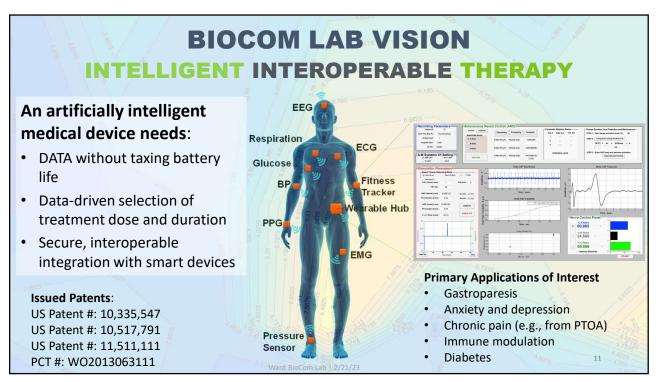
Meredith Hedtke

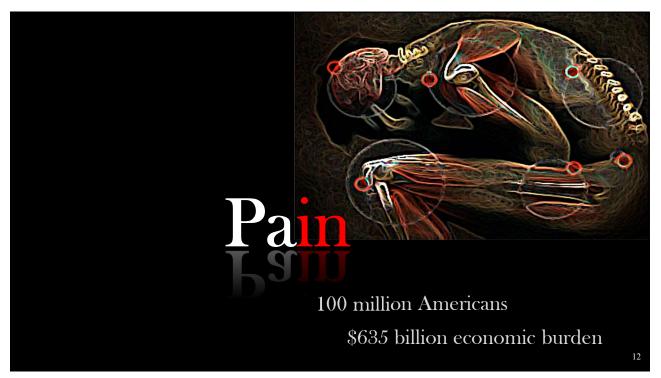


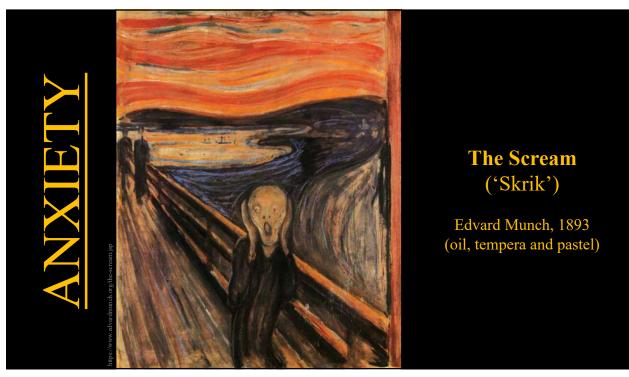




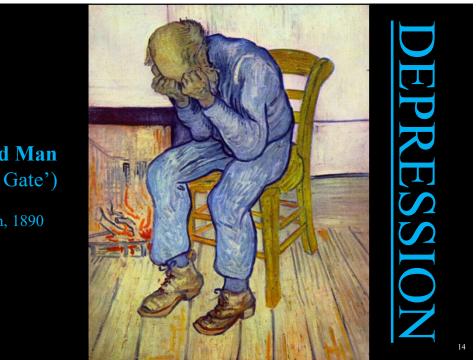
*TOP ROW: Graduate Students (alphabetical order). BOTTOM ROW: Undergraduate Students (alphabetical order)











Sorrowing Old Man ('At Eternity's Gate')

Vincent van Gogh, 1890

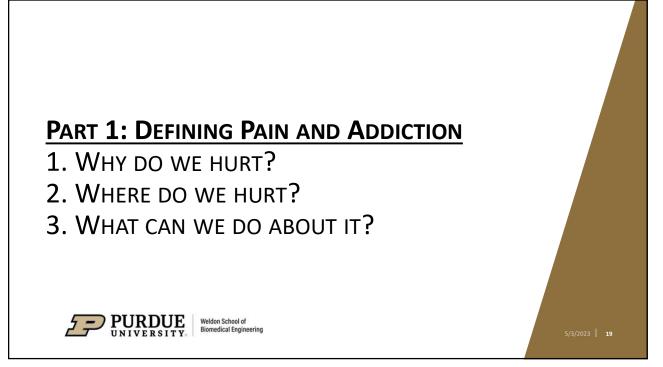


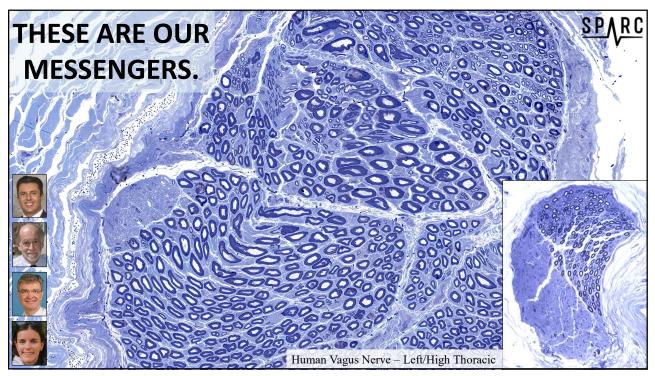


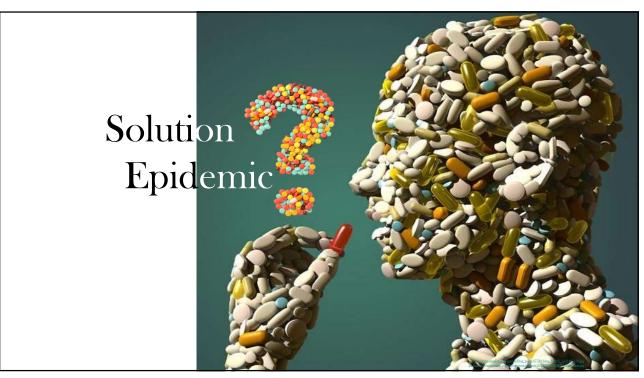


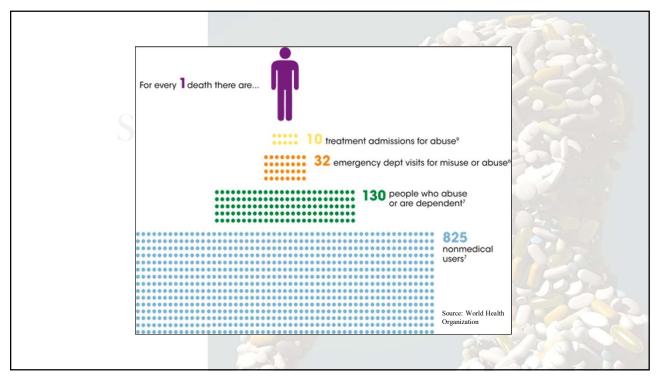


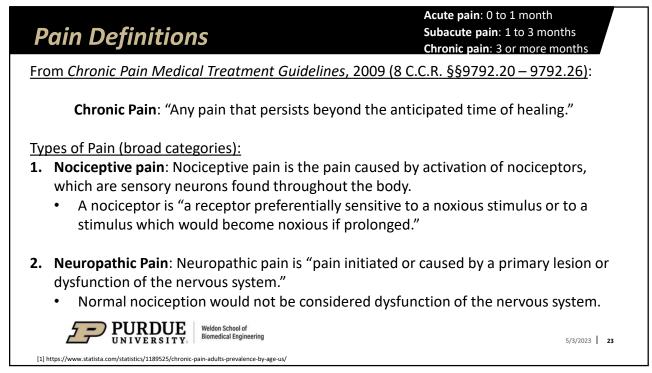
...so that we can get back to what matters most.



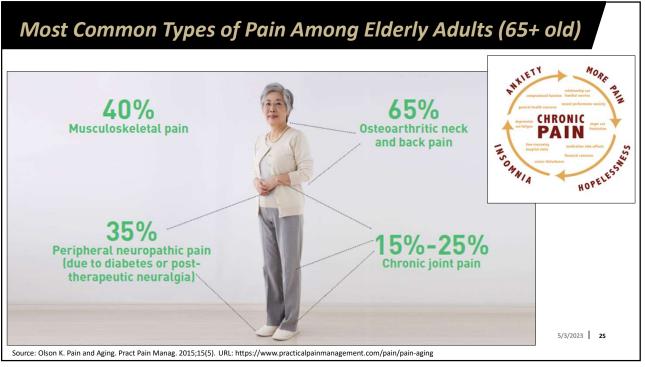


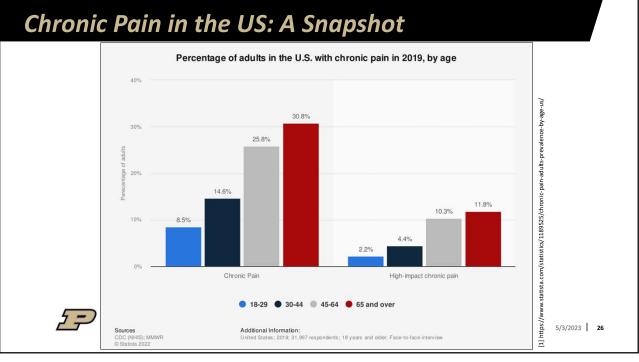


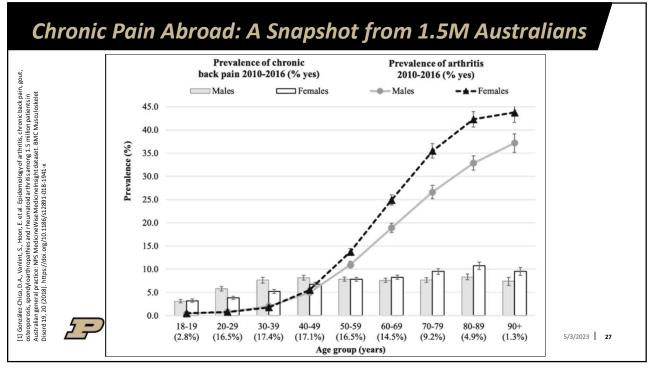


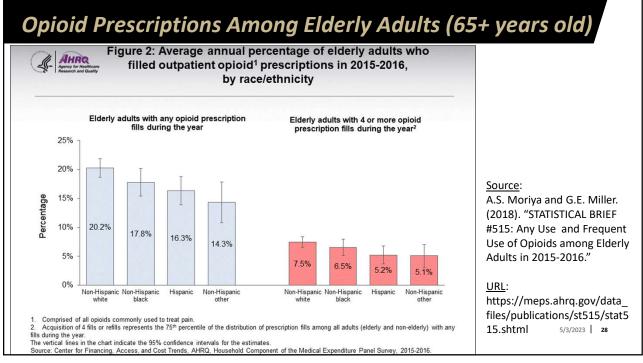




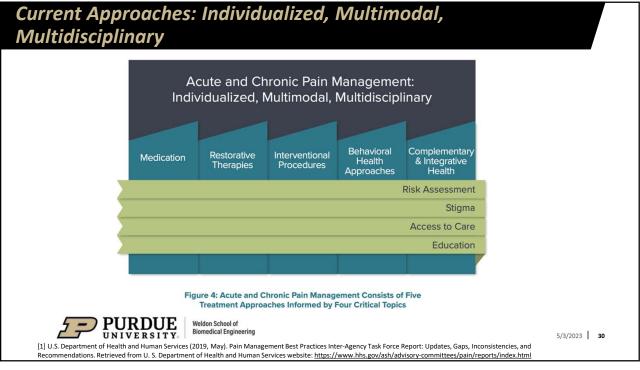


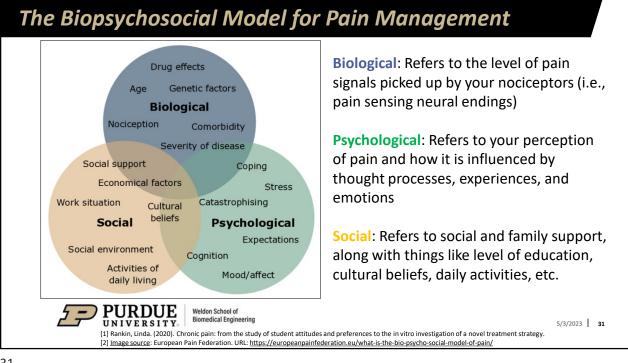




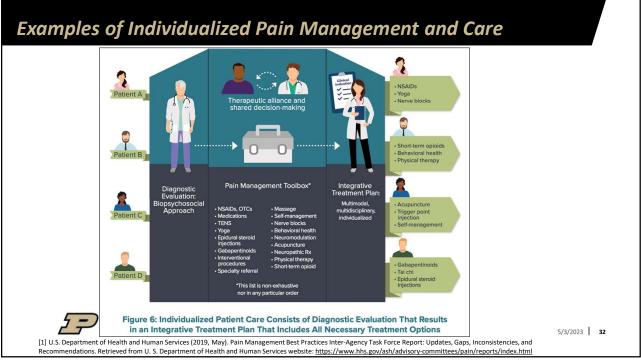


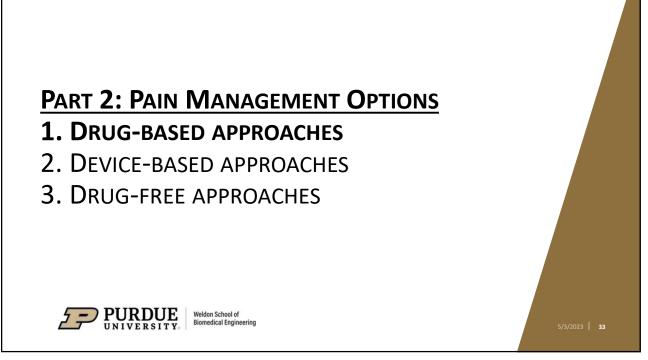
Tal	ble 1. Barriers to Geriatric Pain Management
Patient-Related Factors	Misconceptions: increasing disease, pain as part of aging, non-treatable, medicines should be a last resort
	Fears: addiction, treatment will mask disease progression, being labeled as a weak or bad patient, adverse effects from drugs, loss of independence
	Personality: noncompliance, not wanting to be a complainer, denial, negative attitude towards younger practitioners
	Personal: cultural and religious beliefs, language, monetary status, comfort with health care setting, ambulatory status, social support
	Comorbidities: depression, dementia, altered cognition, etc
	Accessibility: distance, transportation, insurance coverage, economics, social support, etc
Medication/ Intervention-	Insurance coverage
Related Factors	Geographic availability
	Medicine: availability, polypharmacy, complex dosage regimen, adverse effects, generic vs brand name medications, packaging
	Off-label usage of medications or interventions











Pharmacokinetics of Step I Analgesics by Product						
Product Name	Typical Dose	Approximate Equivalent	Onset of Effect (min)	Peak Effect (min)	Duration Effect (hr)	
Advil (ibuprofen)	200mg	Aspirin 650mg	30	60-120	4	
Aspirin (acetylsalicylic acid)	600mg	Morphine 2mg IM	30	60	3-4	
Clinoril (sulindac)	200mg		1-2 days	60-120	Unknown	
Dolobid (Diflunisal)	500mg	Aspirin 650mg	60	120-180	8-12	
Feldene (piroxicam)	20mg		60	180-300	>12	
Indocin (indomethacin)	25mg	Aspirin 650mg	60	60-120	4	
Naprosyn (naproxen)	250mg	Aspirin 650mg	60	120-240	6-8	
Orudis (ketoprofen)	25mg	Aspirin 650mg	30	30-120	6	
Toradol (Ketorolac tromethamine)	30-60mg IM initially	Morphine 6-12mg IM	10	60	3-6	
Trilisate (choline magnesium trisalicylate)	2000- 3000mg	Aspirin 650mg	5-30	60-180	3-6	
Tylenol (acetaminophen)	600mg	Aspirin 600mg	30	60	3-4	

St	tep II Analg	esics: Pharmac	okinetics			
Product Name	Typical Dose	Approximate Equivalent	Onset Effect (min)	Peak Effect (min)	Duration Effect (hr)	
Opioid-Agonist Drugs						
Codeine	30-60mg	Aspirin 650mg	30-45	20-120	4	
Percocet (oxycodone with acetaminophen)	5mg	Codeine 60mg	10-15	60	3-4	
Vicodin, Lortab and others (hydrocodone)	5mg	Morphine 10mg	10-30	3-60	4-6	
Demerol (meperidine)	50mg	Aspirin 650mg	15	60-90	2-4	
Darvon	65mg	Aspirin 600mg	15-60	120	4-6	
Agonist-Antagonist Drugs						
Talwin (Pentazocine HCl	60mg	Morphine 10mg	15-20	30-60	2-3	

	Product Name	Typical Dose	Onset Effect (min)	Peak Effect (min)	Duration Effect (hr)
	Agonist Drugs				
	MS-Contin, Oromorph SR, Astramorph PF	30mg/10mg IM	20-60	120	-
	Duramorph (morphine sulfate)	5mg IV	10-30	60	4-5
	Dolophine (methodone)	20mg	30-60	90-120	4-6
	Dilaudid (hydromorphone)	7.5mg	30	90-120	4
	Numorphan (oxymorphone)	1mg IM	10-15	30-90	3-6
	Levo-Dromoran (levorphanol)	4mg	10-60	90-120	4-5
	Duragesic (fentanyl)	0.1mg IM	7-15	20-30	1-2
	Agonist-Antagonist Drugs				
	Stadol (butorphanol)	2mg IM	10-30	30-60	3-4
	Nubain (nalbuphine)	10mg IM	15	60	3-6
	Dalgan (dezocine)	10mg IM	30	60-120	3-6
	Partial Agonist Drugs				
	Buprenex (buprenorphine)	0.4mg IM	15	60	6
ll entrie	s approximate equivalent = 10 mg morphine IM Source: Kalorama Information				

Current Guidelines for Prescribing Opioids for Pain Management: Acute Pain

Key Takeaways from The 2022 CDC Clinical Practice Guideline

- Emphasizes use of non-opioid medicines or exercise for short term "acute" pain (musculoskeletal pain, neck/low back pain, headache, or minor surgeries)
 - Oral or topical NSAIDs
 - Exercise (under physician guidance)
- Opioids are recommended for acute pain when:
 - · benefits are expected to clearly outweigh risks
 - pain is moderate-to-severe and NSAIDs cannot be taken
- When opioids are prescribed:
- Recommend lowest possible dose for shortest duration
- Recommend a tapering protocol if taken for longer than a few days ٠

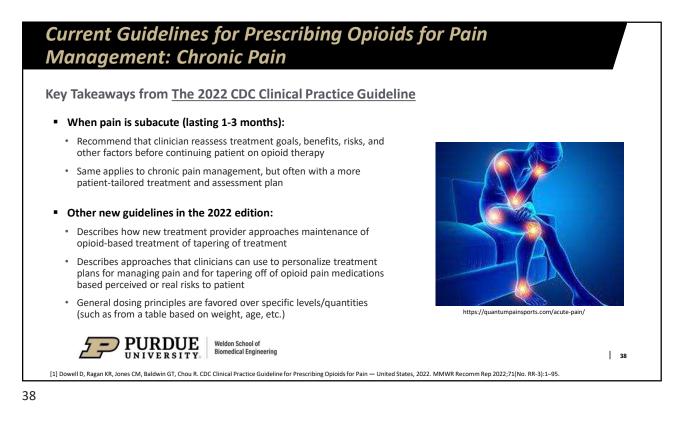


Weldon School of **Biomedical Engineering**

[1] Dowell D, Ragan KR, Jones CM, Baldwin GT, Chou R. CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022. MMWR Recomm Rep 2022;71(No. RR-3):1–95.

https://www.precisionpaincarerehab.com/blog/musculoskeletal-pain-19002.html

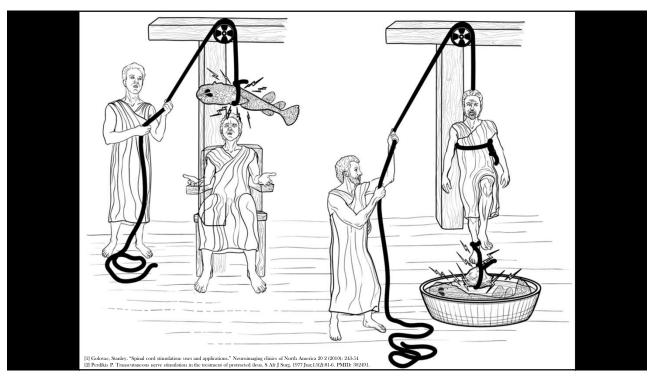
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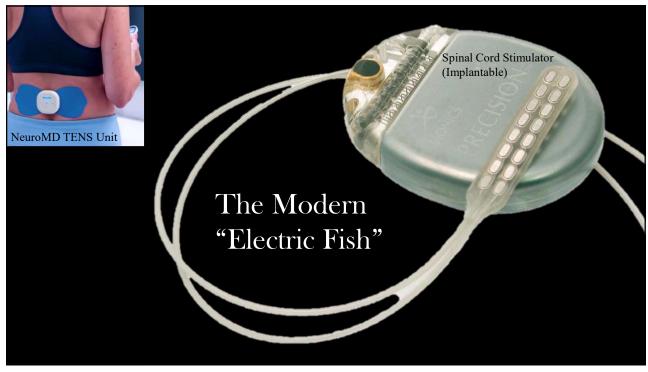


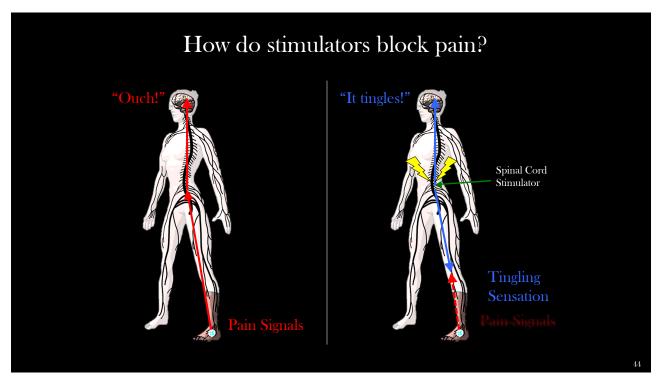


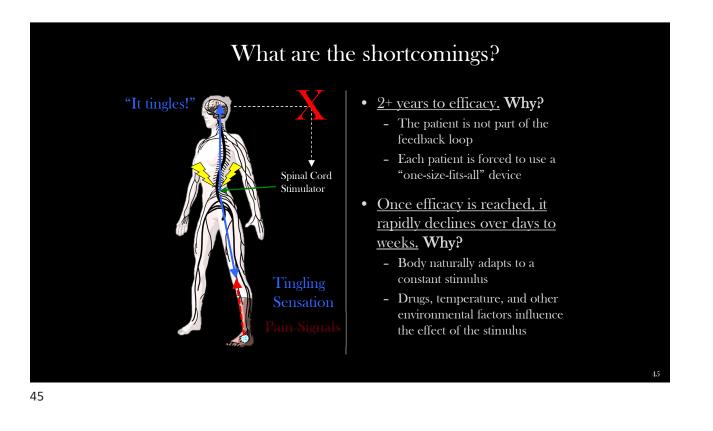


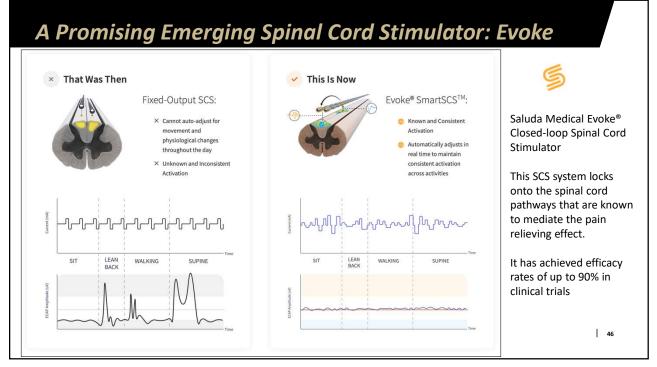


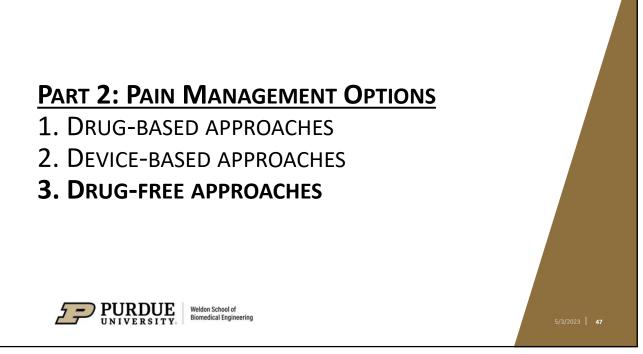












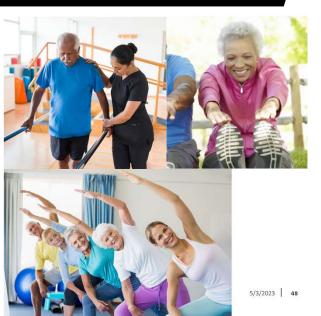
Restorative Therapies for Pain Management

Geriatric Physical Therapy: Designed to restore strength and flexibility, helping to limit musculoskeletal pain and other pains from surgery, fractures, Rheumatoid arthritis and osteoarthritis

What to expect:

- Stretching and guided exercise
- Aquatic therapy
- Hands-on therapy
- Deep tissue massage
- Electrical stimulation
- Icing, heating
- Cognitive Behavioral Therapy for Chronic Pain
 - Other custom approaches based on your need

PURDUE UNIVERSITY Weldon School of Biomedical Engineering



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Summary

The new guidelines and model for pain management have been designed to keep you in charge of your own health, but to also provide safety stops to ensure that your pain medication dose is as low as possible and duration as short as necessary.

A comprehensive approach to pain management, encompassed by the Biopsychosocial Model, will help ensure that your mental and spiritual health needs are addressed alongside your pain management needs.



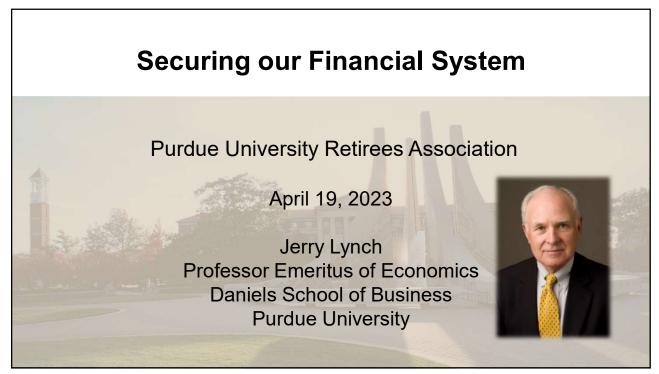
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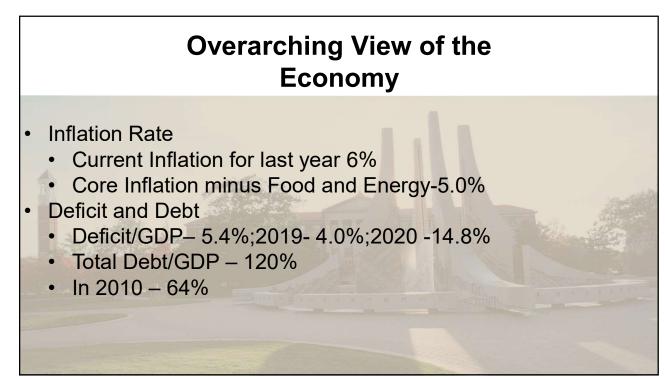
Armchair Exercises

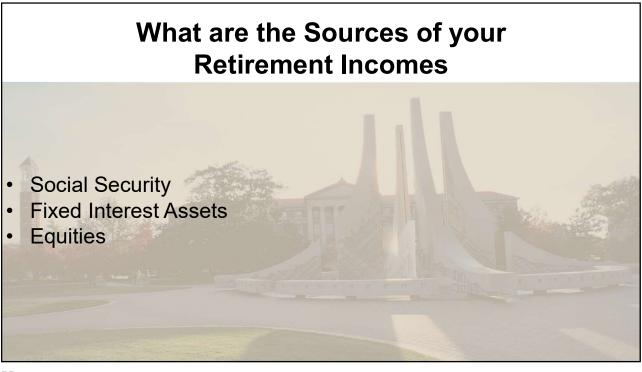
Lead by David Caldwell





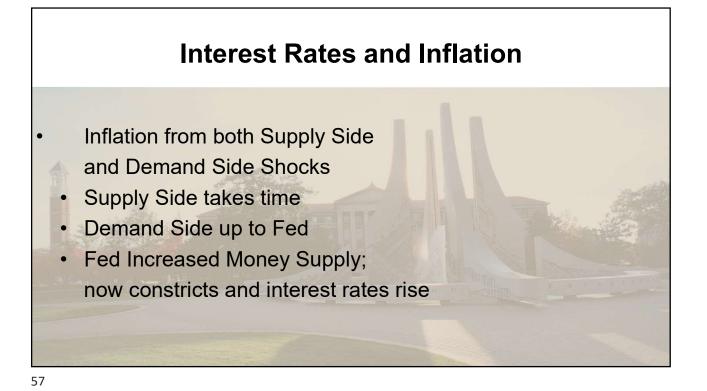
- Output and Employment
 - GDP- \$26 Trillion
 - Real GDP Growth 2.5-3.0% range not bad
- Employment-Unemployment
 - Unemployment Rate- 3.5% very low
 - Employed Labor Force Participation Rate 62.5%; in 2000 67%

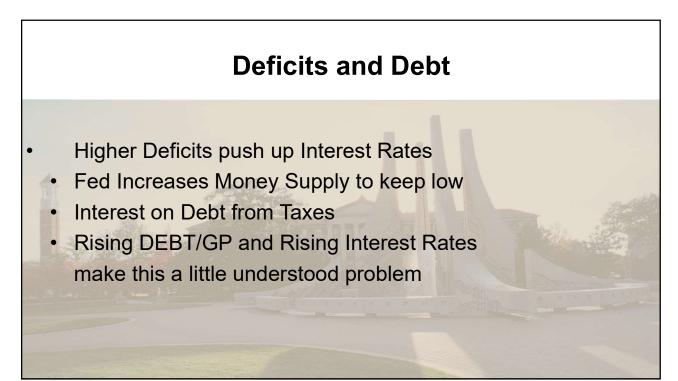


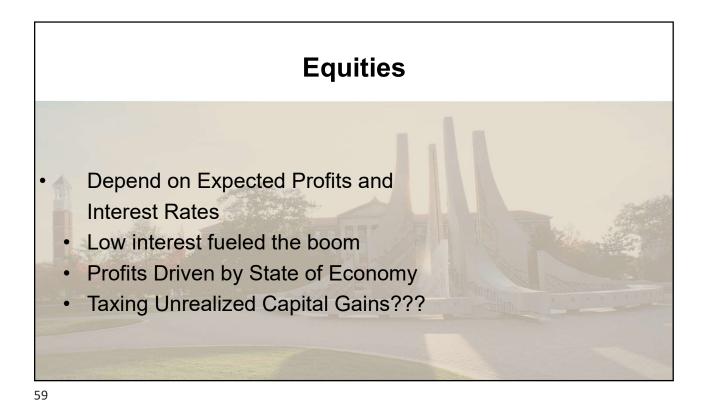




- Tied to CPI Index May Change
 - Seems to be inviolate
 - Long Term Prospects Less Certain
 - **Population Changes**
 - Potential Funding Changes









MENTAL HEALTH FOR



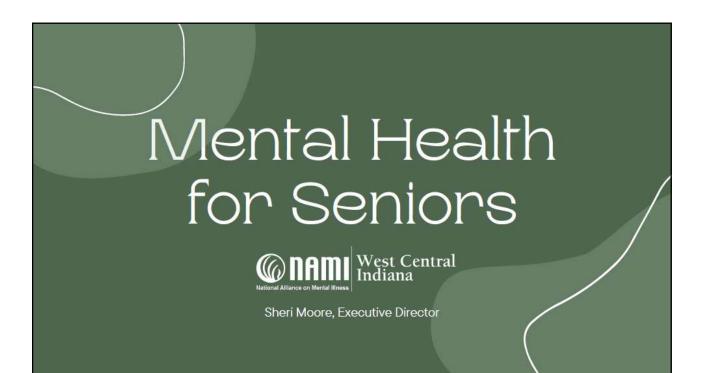
Moderated by: Sue Scholer



Presented by:

- Sheri Moore National Alliance on Mental Illness (NAMI) West Central Indiana
 - Brandi Christianson from Mental Health America
 - Søt John Yestrehsky from the Lafavette Police

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l out of 9 Seniors

Experienced a Mental Illness in 2020

Older Men are at Risk for Suicide

Mental Heatlh Crisis

Lack of providers specifically geriatric psychiatry

CANNI West Central Indiana

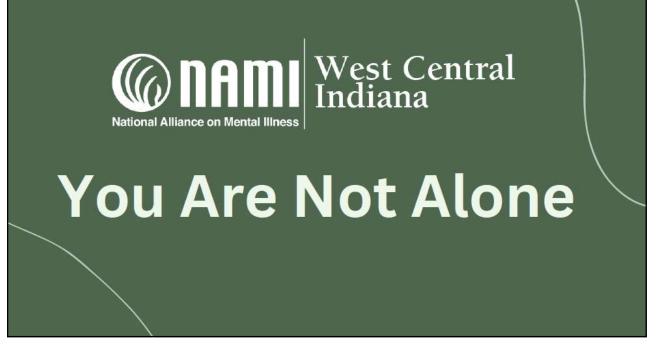
Depression

Signs

Appetite changes Confusion or disorientation Unexplained physical symptoms Changes in personal hygiene Loss of interest in activities Social isolation Substance misuse Depressed mood that lasts longer than 2 weeks

CANNI West Centra





The Landing Activities





NAMI Connection Recovery Support Group is a free, peer-led support group for adults living with mental illness. You will gain insight from hearing the challenges and successes of others, and the groups are led by NAMI-trained facilitators who've been there.

Support Group Schedule

Mondays

Tuesdays

Thursdays

NAMI LGBTQIA+ Connection Support Group 6:00 PM to 7:30 PM NAMI Connection Support Group 10:00 AM to 11:30 AM NAMI Connection Support Group 6:00 PM to 7:30 PM

Family Support Group

NAMI Family Support Group 1st & 3rd Tuesday every month 7:00 PM to 8:30 PM



Thank you!

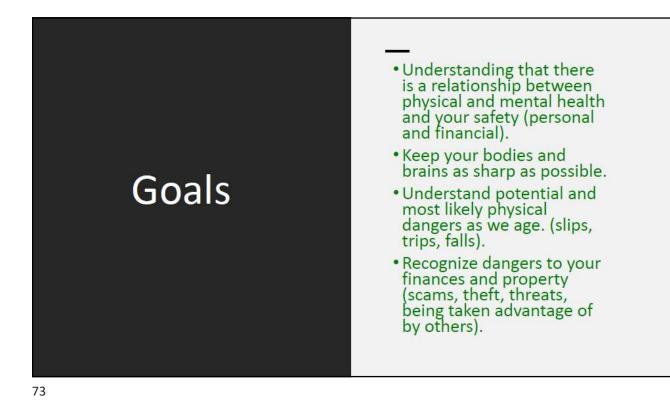
Sheri Moore 6I5 N. 18th Street, Suite 104 Lafayette, IN 4904 smoore@nami-wci.org office: 765-423-6939 cell: 765-426-2029 www.nami-wci.org https://www.facebook.com/NAMI.WCI

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Safety and Security As We Mature. Personal and Financial Safety Considerations

Canami West Central

John A. Yestrebsky



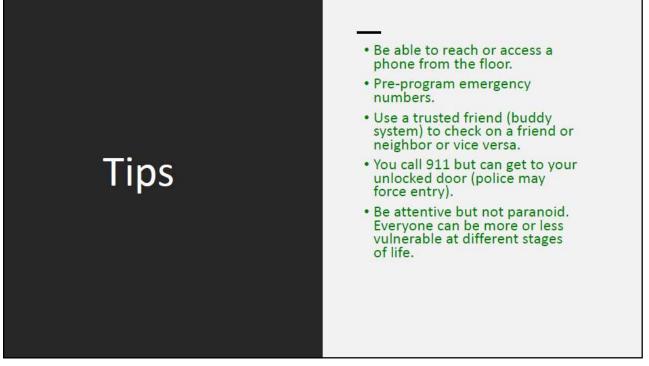
Physical Safety and Readiness

- Stay Fit...as Fit as you can.
- We all need to maintain good Balance, Endurance, Strength, Flexibility.
- Slips, Trips, Falls are preventable.
- Proper footwear and walking device (cane, walking stick). Also good for self defense.
- Good eyesight and proper vision.
- Don't be afraid to ask for help!
- Always be aware of your surroundings. (Hit by cars)

Prepare for the worst, expect the best.

· Do not get complacent. Complacency kills.

- Find good shoes and stick with them!
- Keep lights on. Trim bushes. Don't leave valuables in your car.
- Find someone to trust and let them know your whereabouts and routines.
- Be careful cooking and mitigate fire hazards. (No long sleeves when cooking, turn pot handles toward stove, us back burners)
- Stairs are an enemy! Take your time. Get railings secured.
- Know your limits (I hate ladders!)
- Do you have a fire extinguisher? Unattended candles (always a gift!)
- Flashlights are a cheap and great friend. Get several (bedside, kitchen, car)



Top 5 ways people take advantage of someone in your station of life.....

- <u>Government Impersonation Scams.</u> "Hello I'm from the IRS. I need your information. You owe \$. You have unpaid taxes. I will turn off your Social Security or Medicare payments. You need to pay me by credit card, wire transfer, send cash – to make this right.
- The imposter plays on your fear! Technology may be used to make the call come from a legitimate phone number (a spoof) or zip code (Washington D.C.) They trick you into thinking they are from a valid source.
- TIME IS ON YOUR SIDE. Do not make a rash decision. Consult friends, family, attorney. The caller will pressure you like the best salesperson ever!

Top 5 ways people take advantage of someone in your station of life.....

- <u>Sweepstakes and Lottery Scams.</u>
 "Greetings...you have won!". I need your personal information to complete your winnings and send them to you.
- They want you to send money to get the money!
- They prey on urgency. Get it now before something happens. Avoid taxes that you instantly owe.
- Too good to be true. Probably is.
- TIME IS ON YOUR SIDE. Do not make a rash decision. Consult friends, family, attorney.

Top 5 ways people take advantage of someone in your station of life.....

<u>Robocalls and Phone Scams</u>

- "Can you hear me?" You reply yes and now someone has your recorded voice and hangs up.
- The criminal then has a voice signature to authorize unwanted charges on items like stolen credit cards.
- Better reply Who is this?
- Impeding Lawsuit Scam- In this case, the victim receives an urgent, frightening call from someone claiming to be from a government or law enforcement agency (like the police). They are told if they don't pay a fine by a certain deadline, they will be sued or arrested for some made-up offense.
- Don't give out personal information on phone.

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Top 5 ways people take advantage of someone in your station of life.....

- <u>Computer Tech Support Scam</u>
- A pop-up message or blank screen usually appears on a computer or phone, telling the victim their device is damaged and needs fixing.
- You call the support number and surrender crucial information that gets you hacked.
- Or....the scammer requests to remote access your device and now they are in!
- Few legitimate companies will ever proactively seek you out to fix an issue and need your info. (Maybe bank)
- Huge loses...life savings wiped out.

Top 5 ways people take advantage of someone in your station of life.....

- Grandparent or relative scam.
- Uses your heart against you.
- Hi grandma...do you know who this is? You guess a relative and the game is on! They gain your trust and now need something.
- The fake grandchild/relative then asks for money to solve some urgent financial problem (such as overdue rent, car repairs, or jail bond).
- They may <u>beg the grandparent</u> <u>not to tell anyone</u>. Since fraudsters often ask to be paid via gift cards or money transfer, which don't always require identification to collect, the older adult may have no way of ever recovering their money.

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Top 5 ways people take advantage of someone in your station of life.....

- <u>Grandparent or relative scam</u> (Continued).
- In other versions of this scam, the caller claims to be an arresting police officer, doctor, or lawyer trying to help the grandchild. They then use high-pressure tactics that play on the emotions of their victim to get them to send cash as quickly as possible. There are even reports of scammers showing up at older adults' homes, posing as a "courier" to pick up the money.

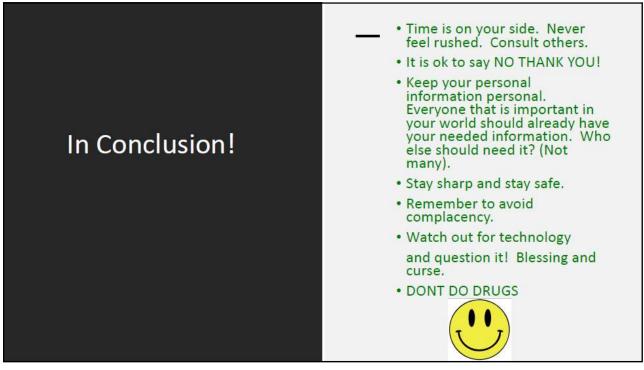
Other Scams!

Romance

- Miracle cures for illnesses (COVID-19 had 500,000 scam complaints on vaccines)
- Investment Hurry!
- Medicare and Insurance
- Text messages (appear to come from a known name and phone number).
- Make threats to harm loved one on phone unless you send money.

Most vicious of all - (They make it personal).

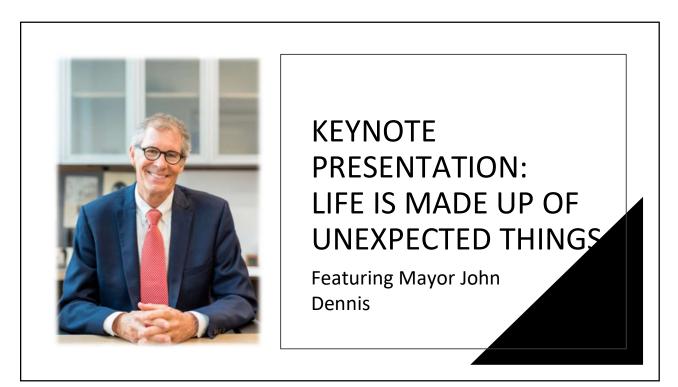
- In person
- Coming to your home for goods or services.
- Pretend to asphalt your driveway and the paint it black!
- Beg for money or food or a place to stay.
- Want you to take them to your bank for money.
- Want to borrow your phone and have a friend talk to you while someone else gets your info.
- Scopes out your house or apartment. Asks about your routine.
- Volunteers to be your helper! Befriends you.











LIBRARY SERVICES AVAILABLE

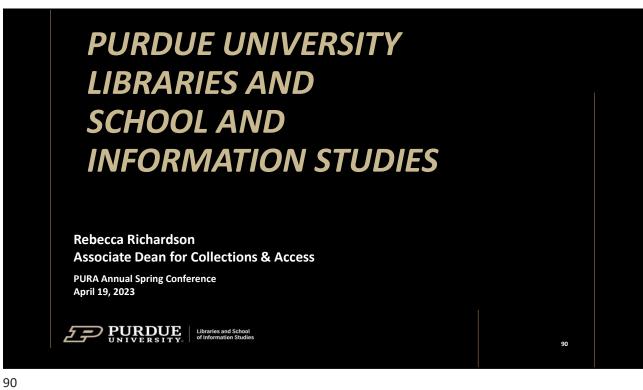


FOR SENIORS

Moderated by: Tom Turpin

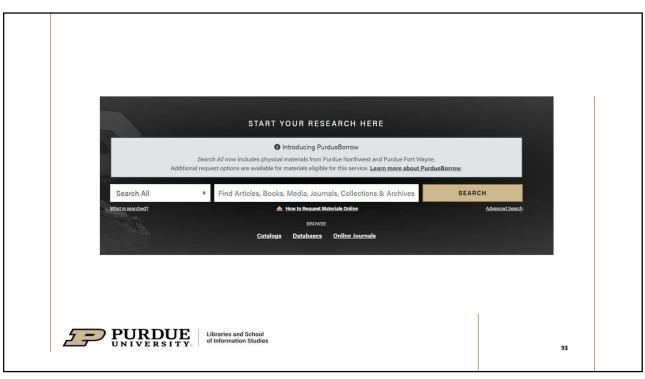
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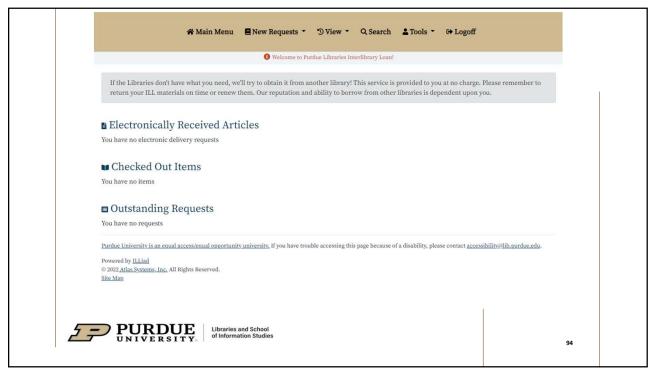
- Jos Holman from the Tippecanoe County Library
- Nick Shenkel from the West Lafayette Library
 - Rebecca Richardson from Purdue Libraries •



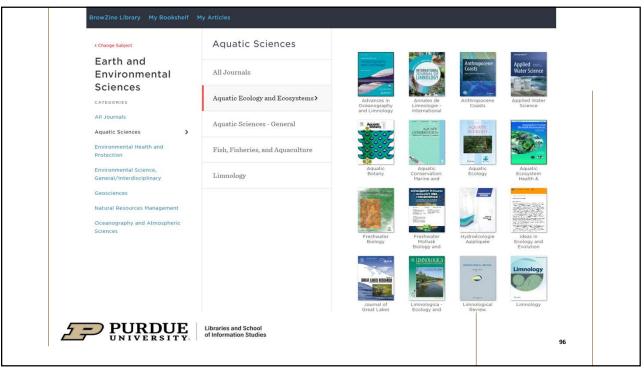
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	Home > Welcome to Purdue University Libraries > Information for Retired Paculty and Staff	
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	You are very welcome to use the Libraries. You can:	
	Visit the Libraries. Please check Libraries Hours and Directions.	
	Check out books. Please bring your Purdue ID. If you do not have a PUID as a retiree, you will want	t to visit the Purdue ID office.
	 Use the Libraries' online databases and journals on-campus. 	
	Ask reference questions though our <u>Ask a Librarian</u> service.	
	Are you an Official Retiree or Emeritus Faculty?	
	 All privileges above are included as well as access to <u>Interlibrary Loan services</u>, <u>Personal Delive</u> access the Libraries' online databases and journals off-campus using your Purdue Career Account <u>access</u>. 	
	 If you do not know your retirement status, please contact <u>Purdue HR</u>. 	
7.	If you have any questions or need help at the Libraries, don't hesitate to Contact Us.	



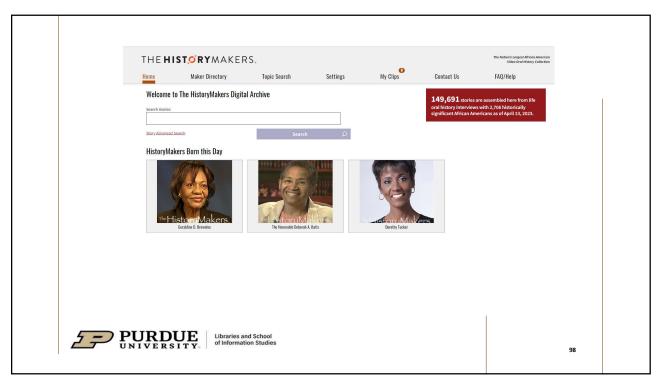




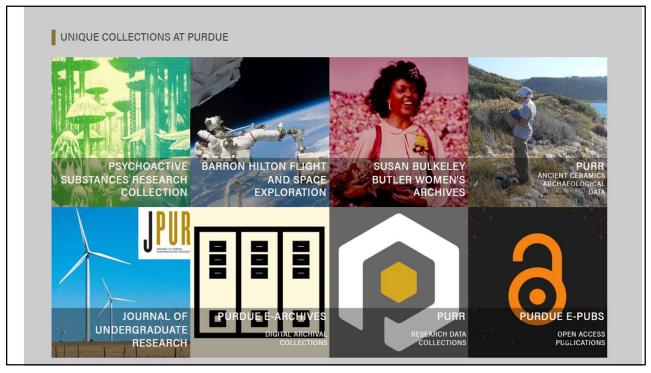
All Subjects All Database Types	All Vendors / Providers
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A-R Music Anthology @	م
Alternate Name(s): A:R Online Music Anthology, ARMA Collection of music scores and instructional articles designed for music history and music theory of	courses
AAPG Datapages Access to American Association of Petroleum Geologists publications, including AAPG Bulletin, Av Petroleum Geology, Journal of Petroleum Geology, Journal of Sedimentary Research. Also include from 1917-present.	
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ABI/INFORM Global (G) C C A business and management database for articles on business conditions, trends, management to industry-specific topics worldwide. Find research on advertising, marketing, economics, human re on 60,000+ companies.	
ABI/INFORM Trade & Industry	~



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<u>7</u>	PURDUE Libraries and School of Information Studies	97







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188	9 Jan		Mar	Apr	May		.tul	Aug	Sep		Nov	Dec	
189	0 Jan	Feb	Mar	Apr	May	Jun	301	Aug	Sep	Oct	Nov	Dec	
189	1 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug		Oct	Nov	Dec	
189	2 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug		Oct	Nov	Dec	
189	3 <u>Jan</u>	Feb	Mar	Apr	May	Jun	Tul	Aug	Sep	Oct	Nov	Dec	
189	4 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
189	5 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
189	6 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
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