

WEBVTT

NOTE duration:"00:11:03"

NOTE recognizability:0.902

NOTE language:en-us

NOTE Confidence: 0.956704867142857

00:00:00.000 --> 00:00:03.640 Hi everyone, my name is Julia Joseph.

NOTE Confidence: 0.956704867142857

00:00:03.640 --> 00:00:05.726 I'm a current third year internal medicine

NOTE Confidence: 0.956704867142857

00:00:05.726 --> 00:00:07.638 resident at Yale New Haven Hospital.

NOTE Confidence: 0.956704867142857

00:00:07.640 --> 00:00:09.432 I created this video with the help

NOTE Confidence: 0.956704867142857

00:00:09.432 --> 00:00:10.999 of our palliative faculty member,

NOTE Confidence: 0.956704867142857

00:00:11.000 --> 00:00:12.960 Doctor Persik in order to

NOTE Confidence: 0.956704867142857

00:00:12.960 --> 00:00:14.920 discuss non opioid pain options,

NOTE Confidence: 0.956704867142857

00:00:14.920 --> 00:00:17.360 especially from an inpatient perspective.

NOTE Confidence: 0.956704867142857

00:00:17.360 --> 00:00:18.840 I remember being an intern,

NOTE Confidence: 0.956704867142857

00:00:18.840 --> 00:00:20.640 especially on nights, and not having

NOTE Confidence: 0.956704867142857

00:00:20.640 --> 00:00:23.270 an idea of what the options were to

NOTE Confidence: 0.956704867142857

00:00:23.270 --> 00:00:25.316 treat pain before reaching for opioids.

NOTE Confidence: 0.956704867142857

00:00:25.320 --> 00:00:27.320 So hopefully this will

NOTE Confidence: 0.956704867142857

00:00:27.320 --> 00:00:29.320 help build a framework.
NOTE Confidence: 0.956704867142857

00:00:29.320 --> 00:00:31.280 We will first start with a case,
NOTE Confidence: 0.956704867142857

00:00:31.280 --> 00:00:33.280 then go over basic principles,
NOTE Confidence: 0.956704867142857

00:00:33.280 --> 00:00:36.584 dive into the non opioid pain options before
NOTE Confidence: 0.956704867142857

00:00:36.584 --> 00:00:39.477 concluding with our case and learning points.
NOTE Confidence: 0.956704867142857

00:00:39.480 --> 00:00:42.040 So we'll start off with a familiar situation.
NOTE Confidence: 0.956704867142857

00:00:42.040 --> 00:00:43.695 Imagine you're the overnight intern
NOTE Confidence: 0.956704867142857

00:00:43.695 --> 00:00:46.118 and you get woken up with a page.
NOTE Confidence: 0.956704867142857

00:00:46.120 --> 00:00:47.835 Hey doc patient in room 5 two
NOTE Confidence: 0.956704867142857

00:00:47.835 --> 00:00:50.076 O 8 is having a lot of pain.
NOTE Confidence: 0.956704867142857

00:00:50.080 --> 00:00:51.880 Can you give him something?
NOTE Confidence: 0.956704867142857

00:00:51.880 --> 00:00:54.560 What do you do?
NOTE Confidence: 0.956704867142857

00:00:54.560 --> 00:00:57.344 One acronym that can be helpful
NOTE Confidence: 0.956704867142857

00:00:57.344 --> 00:00:59.450 to assess pain is OPQRST,
NOTE Confidence: 0.956704867142857

00:00:59.450 --> 00:01:00.950 which many of you may have
NOTE Confidence: 0.956704867142857

00:01:00.950 --> 00:01:02.520 been taught in medical school.

NOTE Confidence: 0.956704867142857
00:01:02.520 --> 00:01:05.355 It will remind you to ask about the onset,
NOTE Confidence: 0.956704867142857
00:01:05.360 --> 00:01:06.650 the provoking factors,
NOTE Confidence: 0.956704867142857
00:01:06.650 --> 00:01:08.800 the quality of the pain,
NOTE Confidence: 0.956704867142857
00:01:08.800 --> 00:01:10.800 whether the pain radiates anywhere,
NOTE Confidence: 0.956704867142857
00:01:10.800 --> 00:01:12.640 the severity of the pain,
NOTE Confidence: 0.956704867142857
00:01:12.640 --> 00:01:14.920 and the timing and duration of the pain.
NOTE Confidence: 0.96540747
00:01:18.600 --> 00:01:20.520 As you gather this information,
NOTE Confidence: 0.96540747
00:01:20.520 --> 00:01:23.360 it's helpful to classify the type of pain.
NOTE Confidence: 0.96540747
00:01:23.360 --> 00:01:25.635 There are several types of pain syndromes,
NOTE Confidence: 0.96540747
00:01:25.640 --> 00:01:27.650 but I've included three major types
NOTE Confidence: 0.96540747
00:01:27.650 --> 00:01:29.880 of syndromes that you may encounter.
NOTE Confidence: 0.96540747
00:01:29.880 --> 00:01:32.421 No sceptive pain is pain that arises
NOTE Confidence: 0.96540747
00:01:32.421 --> 00:01:34.741 from the activation of no sceptors due
NOTE Confidence: 0.96540747
00:01:34.741 --> 00:01:37.080 to a pain impulse that was detected
NOTE Confidence: 0.96540747
00:01:37.080 --> 00:01:38.920 as demonstrated here. For example,
NOTE Confidence: 0.96540747

00:01:38.920 --> 00:01:40.960 when you stick your hand on a nail,
NOTE Confidence: 0.96540747

00:01:40.960 --> 00:01:42.725 the no sceptors transduce the
NOTE Confidence: 0.96540747

00:01:42.725 --> 00:01:45.026 signal back to your brain which
NOTE Confidence: 0.96540747

00:01:45.026 --> 00:01:46.878 registers the painful impulse.
NOTE Confidence: 0.96540747

00:01:46.880 --> 00:01:49.640 Neuropathic pain is actual damage to
NOTE Confidence: 0.96540747

00:01:49.640 --> 00:01:51.480 the somatosensory nervous system.
NOTE Confidence: 0.96540747

00:01:51.480 --> 00:01:53.398 You will commonly see this in patients
NOTE Confidence: 0.96540747

00:01:53.398 --> 00:01:55.154 with long standing diabetes and have
NOTE Confidence: 0.96540747

00:01:55.154 --> 00:01:56.918 sustained nerve damage in their feet,
NOTE Confidence: 0.96540747

00:01:56.920 --> 00:01:57.970 for example.
NOTE Confidence: 0.96540747

00:01:57.970 --> 00:02:00.595 Finally, nosey plastic pain arises
NOTE Confidence: 0.96540747

00:02:00.595 --> 00:02:02.840 from altered perception of pain.
NOTE Confidence: 0.96540747

00:02:02.840 --> 00:02:05.017 While there's no evidence of tissue damage
NOTE Confidence: 0.96540747

00:02:05.017 --> 00:02:07.320 as you might see a nociceptive pain,
NOTE Confidence: 0.96540747

00:02:07.320 --> 00:02:09.945 they are experiencing pain from
NOTE Confidence: 0.96540747

00:02:09.945 --> 00:02:11.520 dysregulated sensory processing.

NOTE Confidence: 0.96540747

00:02:11.520 --> 00:02:14.820 You may see this in conditions

NOTE Confidence: 0.96540747

00:02:14.820 --> 00:02:15.920 like fibromyalgia.

NOTE Confidence: 0.96540747

00:02:15.920 --> 00:02:18.152 All right, so let's dive into

NOTE Confidence: 0.96540747

00:02:18.152 --> 00:02:20.560 our non opioid pain modalities.

NOTE Confidence: 0.96540747

00:02:20.560 --> 00:02:22.910 So the first medication we'll

NOTE Confidence: 0.96540747

00:02:22.910 --> 00:02:24.320 discuss is acetaminophen.

NOTE Confidence: 0.96540747

00:02:24.320 --> 00:02:25.776 Acetaminophen is very effective

NOTE Confidence: 0.96540747

00:02:25.776 --> 00:02:27.596 for mild to moderate pain,

NOTE Confidence: 0.96540747

00:02:27.600 --> 00:02:29.526 but can also help with severe

NOTE Confidence: 0.96540747

00:02:29.526 --> 00:02:31.360 pain when combined with opioids.

NOTE Confidence: 0.96540747

00:02:31.360 --> 00:02:33.520 It works by inhibiting prostaglandins,

NOTE Confidence: 0.96540747

00:02:33.520 --> 00:02:35.500 which decreases pain signaling

NOTE Confidence: 0.96540747

00:02:35.500 --> 00:02:37.480 and tamps down fevers.

NOTE Confidence: 0.96540747

00:02:37.480 --> 00:02:39.454 IV Tylenol has the same efficacy

NOTE Confidence: 0.96540747

00:02:39.454 --> 00:02:41.360 as rectal and oral Tylenol,

NOTE Confidence: 0.96540747

00:02:41.360 --> 00:02:42.242 but works quicker.
NOTE Confidence: 0.96540747

00:02:42.242 --> 00:02:44.300 It can be hard to get approved
NOTE Confidence: 0.96540747

00:02:44.360 --> 00:02:46.400 though because of the higher cost.
NOTE Confidence: 0.96540747

00:02:46.400 --> 00:02:48.445 Rectal and IV administration can
NOTE Confidence: 0.96540747

00:02:48.445 --> 00:02:50.490 especially be useful for patients
NOTE Confidence: 0.96540747

00:02:50.555 --> 00:02:52.550 at end of life or patients who
NOTE Confidence: 0.96540747

00:02:52.550 --> 00:02:54.400 can't take oral Tylenol safely.
NOTE Confidence: 0.96540747

00:02:54.400 --> 00:02:56.665 The absolute Max that's recommended
NOTE Confidence: 0.96540747

00:02:56.665 --> 00:02:58.002 is 4G a day,
NOTE Confidence: 0.96540747

00:02:58.002 --> 00:03:00.607 but for those patients who have a history
NOTE Confidence: 0.96540747

00:03:00.607 --> 00:03:03.475 of cirrhosis or chronically used Tylenol,
NOTE Confidence: 0.96540747

00:03:03.480 --> 00:03:06.312 you should really consider a reduced
NOTE Confidence: 0.96540747

00:03:06.312 --> 00:03:10.039 maximum of two to three grams per day.
NOTE Confidence: 0.96540747

00:03:10.040 --> 00:03:11.930 You should be careful when keeping
NOTE Confidence: 0.96540747

00:03:11.930 --> 00:03:13.605 a patient on scheduled acetaminophen
NOTE Confidence: 0.96540747

00:03:13.605 --> 00:03:16.118 when you want to avoid masking fevers,

NOTE Confidence: 0.96540747

00:03:16.120 --> 00:03:17.872 such as when you are taking

NOTE Confidence: 0.96540747

00:03:17.872 --> 00:03:19.040 care of neutropenic patients.

NOTE Confidence: 0.96540747

00:03:19.040 --> 00:03:21.392 You should also be careful prescribing

NOTE Confidence: 0.96540747

00:03:21.392 --> 00:03:23.397 too much acetaminophen and patients

NOTE Confidence: 0.96540747

00:03:23.397 --> 00:03:25.605 who are at risk of accumulating

NOTE Confidence: 0.96540747

00:03:25.605 --> 00:03:27.199 the toxic metabolite nap Qi.

NOTE Confidence: 0.96540747

00:03:27.200 --> 00:03:30.248 These include patients with low glutathione

NOTE Confidence: 0.96540747

00:03:30.248 --> 00:03:32.280 stores like malnourished patients,

NOTE Confidence: 0.96540747

00:03:32.280 --> 00:03:34.560 patients with ongoing alcohol use,

NOTE Confidence: 0.96540747

00:03:34.560 --> 00:03:36.750 or patients who are on medications

NOTE Confidence: 0.96540747

00:03:36.750 --> 00:03:40.720 that are CYP 450 inducers.

NOTE Confidence: 0.96540747

00:03:40.720 --> 00:03:41.720 Acetaminophen,

NOTE Confidence: 0.969102594

00:03:41.720 --> 00:03:43.680 as you can see here, gets metabolized

NOTE Confidence: 0.969102594

00:03:43.680 --> 00:03:46.656 to nap Qi by the CYP 450 enzyme.

NOTE Confidence: 0.969102594

00:03:46.656 --> 00:03:48.898 So you can imagine that if you

NOTE Confidence: 0.969102594

00:03:48.898 --> 00:03:50.962 have medications that Rev up the
NOTE Confidence: 0.969102594

00:03:50.962 --> 00:03:53.296 activity of the CYP 450 enzyme,
NOTE Confidence: 0.969102594

00:03:53.296 --> 00:03:56.320 you will then accumulate more nap Qi.
NOTE Confidence: 0.969102594

00:03:56.320 --> 00:03:58.610 You also need glutathione in
NOTE Confidence: 0.969102594

00:03:58.610 --> 00:04:00.336 order to inactivate nap Qi.
NOTE Confidence: 0.969102594

00:04:00.336 --> 00:04:02.184 So in patients who are malnourished
NOTE Confidence: 0.969102594

00:04:02.184 --> 00:04:03.733 or don't have enough glutathione
NOTE Confidence: 0.969102594

00:04:03.733 --> 00:04:06.190 stores you can imagine then you will
NOTE Confidence: 0.969102594

00:04:06.254 --> 00:04:08.078 have more accumulated nap Qi that
NOTE Confidence: 0.969102594

00:04:08.078 --> 00:04:10.120 will lead to toxic liver damage.
NOTE Confidence: 0.814282684615385

00:04:12.040 --> 00:04:15.085 ENASAS are the next class of medications
NOTE Confidence: 0.814282684615385

00:04:15.085 --> 00:04:16.390 which have anti-inflammatory
NOTE Confidence: 0.814282684615385

00:04:16.460 --> 00:04:18.479 properties unlike acetaminophen.
NOTE Confidence: 0.814282684615385

00:04:18.480 --> 00:04:20.976 They work by inhibiting Cox enzymes in both
NOTE Confidence: 0.814282684615385

00:04:20.976 --> 00:04:23.119 the peripheral and central nervous system.
NOTE Confidence: 0.814282684615385

00:04:23.120 --> 00:04:26.136 Toradol is an example of a non selective

NOTE Confidence: 0.814282684615385
00:04:26.136 --> 00:04:28.999 NSAID while selecoxib is a Cox two
NOTE Confidence: 0.814282684615385
00:04:28.999 --> 00:04:31.400 selective NSAID by inhibiting Cox two.
NOTE Confidence: 0.814282684615385
00:04:31.400 --> 00:04:34.830 Selecoxib confers a degree of
NOTE Confidence: 0.814282684615385
00:04:34.830 --> 00:04:37.574 gastric protection by only
NOTE Confidence: 0.814282684615385
00:04:37.574 --> 00:04:40.519 working on the Cox 2 enzyme.
NOTE Confidence: 0.814282684615385
00:04:40.520 --> 00:04:40.928 Unfortunately,
NOTE Confidence: 0.814282684615385
00:04:40.928 --> 00:04:43.784 NSAID's overall have an increased risk of
NOTE Confidence: 0.814282684615385
00:04:43.784 --> 00:04:46.638 MIS and strokes as well as risk of AKI.
NOTE Confidence: 0.814282684615385
00:04:46.640 --> 00:04:48.920 The risk of AKI is particularly
NOTE Confidence: 0.814282684615385
00:04:48.920 --> 00:04:51.320 high in the 1st 30 days.
NOTE Confidence: 0.814282684615385
00:04:51.320 --> 00:04:53.525 Cox two inhibitors do have more GI
NOTE Confidence: 0.814282684615385
00:04:53.525 --> 00:04:55.291 protective effects but unfortunately still
NOTE Confidence: 0.814282684615385
00:04:55.291 --> 00:04:57.958 have the other serious side effects noted.
NOTE Confidence: 0.814282684615385
00:04:57.960 --> 00:04:58.422 In general,
NOTE Confidence: 0.814282684615385
00:04:58.422 --> 00:04:59.808 you should avoid in patients who
NOTE Confidence: 0.814282684615385

00:04:59.808 --> 00:05:00.960 are at risk of bleed,
NOTE Confidence: 0.814282684615385

00:05:00.960 --> 00:05:03.092 significant cardiac history or
NOTE Confidence: 0.814282684615385

00:05:03.092 --> 00:05:04.158 renal impairment.
NOTE Confidence: 0.878022895

00:05:06.600 --> 00:05:08.656 This is an NSAID reference table that you
NOTE Confidence: 0.878022895

00:05:08.656 --> 00:05:10.636 can pause if you'd like to learn more.
NOTE Confidence: 0.878022895

00:05:10.640 --> 00:05:12.360 The ones pointed out are some
NOTE Confidence: 0.878022895

00:05:12.360 --> 00:05:14.152 common NSAID that you may come
NOTE Confidence: 0.878022895

00:05:14.152 --> 00:05:15.640 across such as Motrin and Toradol,
NOTE Confidence: 0.878022895

00:05:15.640 --> 00:05:17.194 which you could see in the hospital,
NOTE Confidence: 0.878022895

00:05:17.200 --> 00:05:18.856 especially Toradol because it's
NOTE Confidence: 0.878022895

00:05:18.856 --> 00:05:21.340 a non selective NSAID that comes
NOTE Confidence: 0.878022895

00:05:21.407 --> 00:05:23.160 in IV or IM formulation. There's
NOTE Confidence: 0.845120491111111

00:05:23.160 --> 00:05:25.200 Meloxicam which is a relatively
NOTE Confidence: 0.845120491111111

00:05:25.200 --> 00:05:26.832 Cox two selective NSAID,
NOTE Confidence: 0.895916171428571

00:05:26.840 --> 00:05:28.919 although it has some Cox one activity.
NOTE Confidence: 0.895916171428571

00:05:28.920 --> 00:05:30.514 And then there's Sela Coxib which

NOTE Confidence: 0.895916171428571

00:05:30.514 --> 00:05:32.398 is a Cox two selective NSAID.

NOTE Confidence: 0.9033059

00:05:33.280 --> 00:05:35.996 Next, let's talk about some topical options.

NOTE Confidence: 0.9033059

00:05:36.000 --> 00:05:37.728 Diclofenac is a topical NSAID that

NOTE Confidence: 0.9033059

00:05:37.728 --> 00:05:40.118 can be used up to four times a day.

NOTE Confidence: 0.9033059

00:05:40.120 --> 00:05:42.448 You can use 2G for each upper extremity

NOTE Confidence: 0.9033059

00:05:42.448 --> 00:05:45.118 joint and 4G for each lower extremity joint.

NOTE Confidence: 0.9033059

00:05:45.120 --> 00:05:46.465 You should not use more

NOTE Confidence: 0.9033059

00:05:46.465 --> 00:05:48.120 than 32 grams in one day.

NOTE Confidence: 0.9033059

00:05:48.120 --> 00:05:50.184 The systemic exposure from gel form

NOTE Confidence: 0.9033059

00:05:50.184 --> 00:05:52.956 is on average 6% of the oral form.

NOTE Confidence: 0.9033059

00:05:52.956 --> 00:05:55.400 It carries the same risk profiles oral

NOTE Confidence: 0.9033059

00:05:55.400 --> 00:05:57.794 NSAID's, but it overall is better tolerated.

NOTE Confidence: 0.9033059

00:05:57.800 --> 00:05:59.405 Capsaicin cream is derived from

NOTE Confidence: 0.9033059

00:05:59.405 --> 00:06:01.468 Hot Chili Peppers and works by

NOTE Confidence: 0.9033059

00:06:01.468 --> 00:06:03.076 desensitizing no seceptive fibers.

NOTE Confidence: 0.9033059

00:06:03.080 --> 00:06:05.320 It can also be useful in neuropathic pain.
NOTE Confidence: 0.9033059

00:06:05.320 --> 00:06:07.039 You can dose up to four times a day,
NOTE Confidence: 0.9033059

00:06:07.040 --> 00:06:08.450 but it may take several weeks
NOTE Confidence: 0.9033059

00:06:08.450 --> 00:06:09.800 before you see an effect.
NOTE Confidence: 0.9033059

00:06:09.800 --> 00:06:11.963 Stinging and burning at the site of
NOTE Confidence: 0.9033059

00:06:11.963 --> 00:06:13.719 application has also been reported.
NOTE Confidence: 0.9033059

00:06:13.720 --> 00:06:15.610 Finally, lidocaine is an anaesthetic
NOTE Confidence: 0.9033059

00:06:15.610 --> 00:06:17.920 agent that comes in several forms.
NOTE Confidence: 0.9033059

00:06:17.920 --> 00:06:20.602 You can dose 3 patches of 5% lidocaine
NOTE Confidence: 0.9033059

00:06:20.602 --> 00:06:23.178 in one setting with a 12 hour on
NOTE Confidence: 0.9033059

00:06:23.178 --> 00:06:25.078 period and 12 hour off period.
NOTE Confidence: 0.9033059

00:06:25.080 --> 00:06:26.908 Systemic exposure is approximately
NOTE Confidence: 0.9033059

00:06:26.908 --> 00:06:29.180 less than 5% with this regimen,
NOTE Confidence: 0.9033059

00:06:29.180 --> 00:06:30.680 so systemic side effects are
NOTE Confidence: 0.8255829333333333

00:06:30.680 --> 00:06:34.079 overall relatively rare.
NOTE Confidence: 0.8255829333333333

00:06:34.080 --> 00:06:36.000 Gabapentinoids are the next class of

NOTE Confidence: 0.8255829333333333
00:06:36.000 --> 00:06:37.640 medications that we'll talk about.
NOTE Confidence: 0.8255829333333333
00:06:37.640 --> 00:06:39.530 They were initially developed as
NOTE Confidence: 0.8255829333333333
00:06:39.530 --> 00:06:41.420 anti seizure agents because they
NOTE Confidence: 0.8255829333333333
00:06:41.481 --> 00:06:43.225 suppress neuronal excitability by
NOTE Confidence: 0.8255829333333333
00:06:43.225 --> 00:06:45.405 working on voltage gated calcium
NOTE Confidence: 0.8255829333333333
00:06:45.405 --> 00:06:47.360 channels as shown in this diagram.
NOTE Confidence: 0.8255829333333333
00:06:47.360 --> 00:06:49.946 They can also be used to
NOTE Confidence: 0.8255829333333333
00:06:49.946 --> 00:06:51.239 treat neuropathic pain.
NOTE Confidence: 0.8255829333333333
00:06:51.240 --> 00:06:54.120 These are both commonly used gabapentinoids.
NOTE Confidence: 0.8255829333333333
00:06:54.120 --> 00:06:56.952 Pregabalin is more potent and more
NOTE Confidence: 0.8255829333333333
00:06:56.952 --> 00:06:58.840 predictably absorbed than gabapentin.
NOTE Confidence: 0.8255829333333333
00:06:58.840 --> 00:07:00.680 Peak blood concentration occurs
NOTE Confidence: 0.8255829333333333
00:07:00.680 --> 00:07:03.440 within an hour of taking pregabalin,
NOTE Confidence: 0.8255829333333333
00:07:03.440 --> 00:07:05.280 but can take approximately
NOTE Confidence: 0.8255829333333333
00:07:05.280 --> 00:07:07.120 3 hours with gabapentin.
NOTE Confidence: 0.8255829333333333

00:07:07.120 --> 00:07:08.920 Due to being a scheduled
NOTE Confidence: 0.8255829333333333

00:07:08.920 --> 00:07:10.360 class 5 controlled substance,
NOTE Confidence: 0.8255829333333333

00:07:10.360 --> 00:07:13.504 Pregabalin is not as easy to
NOTE Confidence: 0.8255829333333333

00:07:13.504 --> 00:07:15.076 prescribe as gabapentin.
NOTE Confidence: 0.8255829333333333

00:07:15.080 --> 00:07:16.226 When prescribing pregabalin,
NOTE Confidence: 0.8255829333333333

00:07:16.226 --> 00:07:20.060 you can start at 50 to 150 milligrams a day,
NOTE Confidence: 0.8255829333333333

00:07:20.060 --> 00:07:22.880 usually in two to three divided doses.
NOTE Confidence: 0.8255829333333333

00:07:22.880 --> 00:07:23.516 From there,
NOTE Confidence: 0.8255829333333333

00:07:23.516 --> 00:07:25.424 you can up titrate every week
NOTE Confidence: 0.8255829333333333

00:07:25.424 --> 00:07:27.760 to a maximum of 300 to 600
NOTE Confidence: 0.8255829333333333

00:07:27.760 --> 00:07:30.229 milligrams per day in two to three
NOTE Confidence: 0.8255829333333333

00:07:30.229 --> 00:07:32.154 divided doses to reach effect.
NOTE Confidence: 0.8255829333333333

00:07:32.160 --> 00:07:32.920 With gabapentin,
NOTE Confidence: 0.8255829333333333

00:07:32.920 --> 00:07:35.960 you can start at 300 milligrams every day,
NOTE Confidence: 0.8255829333333333

00:07:35.960 --> 00:07:38.320 usually in three divided doses.
NOTE Confidence: 0.8255829333333333

00:07:38.320 --> 00:07:41.514 You can up titrate to a maximum of 3600

NOTE Confidence: 0.8255829333333333
00:07:41.514 --> 00:07:44.118 milligrams every day to reach effect
NOTE Confidence: 0.8681082425
00:07:46.480 --> 00:07:48.755 CNS. Depression is a common
NOTE Confidence: 0.8681082425
00:07:48.755 --> 00:07:50.120 problem with gabapentinoids,
NOTE Confidence: 0.8681082425
00:07:50.120 --> 00:07:52.720 especially when used alongside opioids.
NOTE Confidence: 0.8681082425
00:07:52.720 --> 00:07:54.620 Toxicity can especially be seen
NOTE Confidence: 0.8681082425
00:07:54.620 --> 00:07:56.520 in patients with renal impairment,
NOTE Confidence: 0.8681082425
00:07:56.520 --> 00:07:59.256 so be cautious in those with Akis or
NOTE Confidence: 0.8681082425
00:07:59.256 --> 00:08:01.757 history of CKD if stopped suddenly.
NOTE Confidence: 0.8681082425
00:08:01.760 --> 00:08:03.396 Withdrawal syndromes have been
NOTE Confidence: 0.8681082425
00:08:03.396 --> 00:08:05.032 described with gabapentinoids similar
NOTE Confidence: 0.8681082425
00:08:05.032 --> 00:08:06.999 to alcohol and benzo withdrawal,
NOTE Confidence: 0.8681082425
00:08:07.000 --> 00:08:07.762 including seizures.
NOTE Confidence: 0.8681082425
00:08:07.762 --> 00:08:10.048 So in admitting a patient on
NOTE Confidence: 0.8681082425
00:08:10.048 --> 00:08:12.240 high doses of these medications,
NOTE Confidence: 0.8681082425
00:08:12.240 --> 00:08:14.697 be careful not to stop them immediately
NOTE Confidence: 0.8681082425

00:08:14.697 --> 00:08:16.440 to avoid precipitating withdrawal,
NOTE Confidence: 0.8681082425

00:08:16.440 --> 00:08:19.432 which can occur within 12 hours to
NOTE Confidence: 0.8681082425

00:08:19.432 --> 00:08:22.440 seven days after discontinuing.
NOTE Confidence: 0.8681082425

00:08:22.440 --> 00:08:23.120 The last
NOTE Confidence: 0.88992536375

00:08:23.120 --> 00:08:25.850 non opioid medication we will discuss
NOTE Confidence: 0.88992536375

00:08:25.850 --> 00:08:28.724 is duloxetine, a type of SNRI.
NOTE Confidence: 0.88992536375

00:08:28.724 --> 00:08:30.197 Of all antidepressants,
NOTE Confidence: 0.88992536375

00:08:30.200 --> 00:08:31.960 duloxetine has the largest evidence
NOTE Confidence: 0.88992536375

00:08:31.960 --> 00:08:34.678 base to support its use in pain relief.
NOTE Confidence: 0.88992536375

00:08:34.680 --> 00:08:36.570 It has been FDA approved for several
NOTE Confidence: 0.88992536375

00:08:36.570 --> 00:08:38.623 types of pain syndromes but unfortunately
NOTE Confidence: 0.88992536375

00:08:38.623 --> 00:08:40.999 comes with several noted side effects.
NOTE Confidence: 0.88992536375

00:08:41.000 --> 00:08:41.957 As listed here.
NOTE Confidence: 0.88992536375

00:08:41.957 --> 00:08:44.556 You can start duloxetine at 20 to 30
NOTE Confidence: 0.88992536375

00:08:44.556 --> 00:08:46.948 milligrams a day for one week and then
NOTE Confidence: 0.88992536375

00:08:46.948 --> 00:08:48.978 from their up titrate until receiving

NOTE Confidence: 0.88992536375

00:08:48.978 --> 00:08:51.314 a maximum of 60 to 120 milligrams.

NOTE Confidence: 0.88992536375

00:08:51.314 --> 00:08:53.673 You should see pain improvement as early

NOTE Confidence: 0.88992536375

00:08:53.673 --> 00:08:55.957 as the first week of implementation.

NOTE Confidence: 0.88992536375

00:08:55.960 --> 00:08:58.210 You can especially consider SNR is

NOTE Confidence: 0.88992536375

00:08:58.210 --> 00:09:00.198 like duloxetine for those patients

NOTE Confidence: 0.88992536375

00:09:00.198 --> 00:09:02.718 who have comorbid depression and pain.

NOTE Confidence: 0.87343775

00:09:04.840 --> 00:09:06.724 Easy measures that can be implemented

NOTE Confidence: 0.87343775

00:09:06.724 --> 00:09:09.155 and that are often forgotten in the

NOTE Confidence: 0.87343775

00:09:09.155 --> 00:09:11.393 inpatient setting include using heater ice,

NOTE Confidence: 0.87343775

00:09:11.400 --> 00:09:13.758 physical therapy to help with mobility,

NOTE Confidence: 0.87343775

00:09:13.760 --> 00:09:15.960 and using foam support or

NOTE Confidence: 0.87343775

00:09:15.960 --> 00:09:18.160 pillows to help with elevation.

NOTE Confidence: 0.87343775

00:09:18.160 --> 00:09:20.358 Now let's get back to our case.

NOTE Confidence: 0.87343775

00:09:20.360 --> 00:09:21.785 You were the overnight intern

NOTE Confidence: 0.87343775

00:09:21.785 --> 00:09:23.518 paged about a patient's pain.

NOTE Confidence: 0.87343775

00:09:23.520 --> 00:09:25.544 You do a quick chart review and note
NOTE Confidence: 0.87343775

00:09:25.544 --> 00:09:27.409 your patient has a history of type 2
NOTE Confidence: 0.87343775

00:09:27.409 --> 00:09:29.160 diabetes and is on a blood thinner.
NOTE Confidence: 0.87343775

00:09:29.160 --> 00:09:31.600 Their labs are otherwise unremarkable.
NOTE Confidence: 0.87343775

00:09:31.600 --> 00:09:33.676 Your sign out says that he
NOTE Confidence: 0.87343775

00:09:33.676 --> 00:09:35.254 responds to Oxy at bedside.
NOTE Confidence: 0.87343775

00:09:35.254 --> 00:09:37.123 Your patient tells you that he is
NOTE Confidence: 0.87343775

00:09:37.123 --> 00:09:38.903 having burning pain in his feet that
NOTE Confidence: 0.87343775

00:09:38.903 --> 00:09:40.800 is making it hard for him to sleep.
NOTE Confidence: 0.87343775

00:09:40.800 --> 00:09:42.480 He already received 650
NOTE Confidence: 0.87343775

00:09:42.480 --> 00:09:44.160 milligrams of acetaminophen.
NOTE Confidence: 0.87343775

00:09:44.160 --> 00:09:45.680 That didn't seem to help.
NOTE Confidence: 0.87343775

00:09:45.680 --> 00:09:47.680 So what can you do?
NOTE Confidence: 0.87343775

00:09:47.680 --> 00:09:49.552 You determine that this is a
NOTE Confidence: 0.87343775

00:09:49.552 --> 00:09:50.800 neuropathic pain syndrome based
NOTE Confidence: 0.87343775

00:09:50.852 --> 00:09:52.360 on the patient's description.

NOTE Confidence: 0.87343775

00:09:52.360 --> 00:09:54.760 You can give additional acetaminophen

NOTE Confidence: 0.87343775

00:09:54.760 --> 00:09:56.680 or trial topical agents,

NOTE Confidence: 0.87343775

00:09:56.680 --> 00:09:58.786 but given that this is likely

NOTE Confidence: 0.87343775

00:09:58.786 --> 00:09:59.839 underlying peripheral neuropathy,

NOTE Confidence: 0.87343775

00:09:59.840 --> 00:10:02.430 you could consider trialing a low dose

NOTE Confidence: 0.87343775

00:10:02.430 --> 00:10:04.400 gabapentinoid or switching to duloxetine,

NOTE Confidence: 0.87343775

00:10:04.400 --> 00:10:07.074 especially if he's already on an SSRI.

NOTE Confidence: 0.87343775

00:10:07.080 --> 00:10:09.117 In this case you should avoid ENSAES,

NOTE Confidence: 0.87343775

00:10:09.120 --> 00:10:11.484 especially because he's on a blood

NOTE Confidence: 0.87343775

00:10:11.484 --> 00:10:13.786 thinner and opioids would not be

NOTE Confidence: 0.87343775

00:10:13.786 --> 00:10:15.754 first line in this pain syndrome.

NOTE Confidence: 0.87343775

00:10:15.760 --> 00:10:17.188 So to summarize,

NOTE Confidence: 0.87343775

00:10:17.188 --> 00:10:19.568 we discussed 3 pain syndromes

NOTE Confidence: 0.87343775

00:10:19.568 --> 00:10:20.520 including nociceptive,

NOTE Confidence: 0.87343775

00:10:20.520 --> 00:10:24.400 neuropathic and NOC plastic pain.

NOTE Confidence: 0.87343775

00:10:24.400 --> 00:10:27.277 OPQRST is an approach to assess pain.

NOTE Confidence: 0.87343775

00:10:27.280 --> 00:10:29.430 Acetaminophen should cautiously be used

NOTE Confidence: 0.87343775

00:10:29.430 --> 00:10:31.980 in patients with low glutathione stores

NOTE Confidence: 0.87343775

00:10:31.980 --> 00:10:36.239 and if they're taking CYP 450 inducers.

NOTE Confidence: 0.87343775

00:10:36.240 --> 00:10:37.505 NSAID's can be non selective

NOTE Confidence: 0.87343775

00:10:37.505 --> 00:10:38.517 or Cox two selective,

NOTE Confidence: 0.87343775

00:10:38.520 --> 00:10:41.061 but overall their use can still be

NOTE Confidence: 0.87343775

00:10:41.061 --> 00:10:43.119 limited by several side effects.

NOTE Confidence: 0.87343775

00:10:43.120 --> 00:10:44.745 Topical options that we talked

NOTE Confidence: 0.87343775

00:10:44.745 --> 00:10:45.720 through include diclofenac,

NOTE Confidence: 0.87343775

00:10:45.720 --> 00:10:47.322 capsaicin and lidocaine.

NOTE Confidence: 0.87343775

00:10:47.322 --> 00:10:48.390 Gabapentinoids including

NOTE Confidence: 0.87343775

00:10:48.390 --> 00:10:50.526 pregabalin and gabapentin can

NOTE Confidence: 0.87343775

00:10:50.526 --> 00:10:52.958 be useful for neuropathic pain,

NOTE Confidence: 0.87343775

00:10:52.960 --> 00:10:55.822 and duloxetine is an SNRI that

NOTE Confidence: 0.87343775

00:10:55.822 --> 00:10:58.800 also has pain relieving properties.

NOTE Confidence: 0.87343775

00:10:58.800 --> 00:11:00.004 And if you're interested,

NOTE Confidence: 0.87343775

00:11:00.004 --> 00:11:01.509 here are the many sources

NOTE Confidence: 0.87343775

00:11:01.509 --> 00:11:02.999 that I used for this talk.