When you ask someone to describe the physical sensation of love, chances are you’ll get an answer like falling head-over-heels, having butterflies in the stomach or walking on sunshine. As it turns out, and as described in a recent Stanford study, those intense, consuming feelings of love can do more than make you happy: They appear to block pain in ways similar to painkillers or illicit drugs.

In honor of Valentine’s Day, we’ve asked Sean Mackey, MD, PhD, senior author of that study, to respond to your questions about the analgesic effects of love – and he’s happy to answer general questions about pain research, too.

Mackey’s research is focused on explaining the mechanisms of pain perception and control using neuroimaging techniques such as virtual reality and functional magnetic resonance imaging (fMRI). He has shown that chronic pain sufferers may be able to reduce pain levels by studying their own live brain images, and he is working with colleagues to develop a diagnostic tool that uses patterns of brain activity to give an objective assessment of whether someone is in pain. He also recently served on an Institute of Medicine committee that issued a report calling for coordinated, national efforts to tackle the chronic-pain epidemic.

To submit your questions to Mackey about the pain-relieving effects of love and the science of pain, send an @reply message to @SUMedicine and include the hashtag #AskSUMed in your tweet. (Not a Twitter user? Then please submit a comment below.) We’ll collect questions until Friday at 5 pm. In submitting questions, please abide by the following ground rules:

- Stay on topic
- Be respectful to the person answering your questions
- Be respectful to one another in submitting questions
- Do not monopolize the conversation or post the same question repeatedly
- Kindly ignore disrespectful or off-topic comments
- Twitter handles and/or names may be used in the responses

Medical school experts taking questions on the @SUMedicine feed will answer a selection of the questions submitted, but not all of them.
Finally – and you may have already guessed this – an answer to any question submitted as part of this feature is meant to offer medical information, not medical advice. These answers are not a basis for any action or inaction, and they’re also not meant to replace the evaluation and determination of your doctor, who will address your specific medical needs and can make a diagnosis and give you the appropriate care.

Previously: A call to fight chronic-pain epidemic, Stanford scientists work towards developing a “painometer”. Stanford’s Sean Mackey discusses recent advances in pain research and treatment, Relieving Pain in America: A new report from the Institute of Medicine, Long-term love may dull pain, study shows, Love blocks pain, Stanford study shows and Oh what a pain

Photo by Ryan Weisgerber

24 Responses to “Ask Stanford Med: Neuroscientist taking questions on pain and love’s analgesic effects”

1. Scary Boots Says:
   February 13th, 2012 at 1:35 pm

   has anyone found a physiological basis for masochism? I’d be interested to know if there’s a genetic difference in the way masochists are weird, if it’s a purely psychological effect, or indeed if it’s not a measurable phenomenon.

2. Frank Says:
   February 13th, 2012 at 3:13 pm

   Dr. Mackey: What’s the difference between chronic pain and acute pain?

3. Dave Says:
   February 13th, 2012 at 5:59 pm

   My question is, what happens when someone’s heart is broken? Does it intensify the feeling of pain?

4. Cyndy Says:
   February 13th, 2012 at 8:12 pm

   Can we do a study on a chronic pain patient who has suffered for 13 years from TOS, RSD, CRPS, RLS, etc… including psychological effects from the pain, losing one’s career, financial freedom, drug sensitivities and adverse reactions?

5. AfternoonNapper Says:
   February 13th, 2012 at 9:23 pm

   It’s been a while, but I once read some studies about the effect of handholding between spouses. What I remember is that handholding has a SIGNIFICANT ability to reduce stress and pain and that this is an effect seen in all couples. Can you discuss this research and what new research along these lines has been/is being done?

6. Frank R Says:
   February 14th, 2012 at 9:43 am

   In regards to the Tennyson quote, ‘Tis better to have loved and lost than to never have loved at all,” does a love lost and particularly a first love or the greatest love of one’s life, and the sense of longing the loss creates, benefit one psychologically by making one stronger or weaken the individual? In other words do feelings of resolve or feelings of surrender to defeat have a measurable effect on a person? Has this ever been studied?

7. Nandini Says:
February 14th, 2012 at 8:15 pm

Does romantic love actually works as a painkiller or its just a distraction by the feeling for a time being?

8. **Surya** Says:
   February 14th, 2012 at 8:41 pm

   Love make a person happy. But is any research done to show that they appear to block pain in ways similar to painkillers or illicit drugs?

9. **vinay kumar** Says:
   February 15th, 2012 at 7:23 am

   what is success ratio in between male and female gender?

10. **Chandana Ch** Says:
    February 15th, 2012 at 7:45 pm

    Does love have affect on stress, migraine, or any other physiological ailments?

11. **Ruju P** Says:
    February 15th, 2012 at 8:45 pm

    Does a broken heart intensify an existing pain in a person? or can somebody’s love help to feel better in existing pain?

12. **Monica B** Says:
    February 16th, 2012 at 11:03 am

    ‘love provides pain relief’,How exactly does feeling of love decrease your internal pain?,Can you explian me the mechanism by which this works?

13. **mark maginn** Says:
    February 16th, 2012 at 3:38 pm

    I’ve been in harrowing pain for 48 years. It has been better controlled in the last few years with a multi-modal approach including an opioid medicine. Recently adopted a rescue dog that stays by my side constantly. I’m head over heals about my pup and swear that when with him, I don’t experience much pain. Is this the same mechanism as love for a human? If it is, more dogs to the people!

14. **Tarang** Says:
    February 16th, 2012 at 11:33 pm

    How many subjects were there in this research???

15. **Sruthi.S** Says:
    February 17th, 2012 at 12:28 am

    “Chronic pain sufferers may be able to reduce pain levels by studying their own live brain images”
    How does pain decrease by by studying their own live brain images?

16. **Kritika** Says:
    February 17th, 2012 at 12:30 am

    My doubt is concerning the research conducted by Dr Mackey, on chronic pain sufferers who were able to reduce their level of pain by studying their own live brain images!
17. preethi Says:
   February 17th, 2012 at 9:49 am

   Do you ever think or feel… Love Break is a most painful feelings in our life? Why love failure is so pain full killer?

18. preethi Says:
   February 17th, 2012 at 9:51 am

   Love is life. Is it really true? Why love failure is so pain full killer?

19. preethi Says:
   February 17th, 2012 at 9:52 am

   Please ignore the above question

20. Mrudhula G Says:
   February 17th, 2012 at 12:16 pm

   In your studies, you have mentioned about the "Love" between partners, not about the love from others especially parents. Do you think the same effect occurs when kids suffer pain from injuries and parents are affectionate to them.

21. Gina Libby Says:
   February 17th, 2012 at 12:57 pm

   During the 2/14/12 US Senate Health, Education, Labor & Pension (HELP) Committee meeting, the chair, US Senator Tom Harkin, held up one of Dr. John Sarno’s books, The Divided Mind, and inquired of the panelists how much emphasis was given to Sarno-type research in their recent IOM report that was being discussed in the hearing. Can you please discuss the similarities in the type of research you are doing with that of Dr. Sarno’s work with psychosomatic illness.

22. Niloufer Says:
   February 23rd, 2012 at 12:07 am

   I believe love is something which gives u pain as well as relieves you from pain. I dont think i have any questions about this.!!

23. Bhargavi Mandava Says:
   February 26th, 2012 at 11:05 pm

   Love makes us live up …at the same time it helps with healing a person from depression, Love isn’t a pain in my view, it depends on how the person takes it to his/her heart, I see Sean Mackey is doing a great job answering to the questions of pain research too..so i dont think i want to raise a question here as i am very clear.

24. srikanth gandra Says:
   April 30th, 2012 at 10:32 am

   intresting topic to discuss. people have asked many questions on this… I am satisfied with the answers i have few to ask but ill end with some….have you faced pain in love? if so what you did to overcome?

Comment

   Name (required)

   Mail (required, but will not be published)
Ask Stanford Med: Neuroscientist taking questions on pain and love’s an... http://scopeblog.stanford.edu/2012/02/13/ask-stanford-med-anesthesiolog...