

Evidence In Practice Webinar Series Lecture #6

No One's Perfect How Flawed is Fatally Flawed?

Doug Gross, PhD, PT

The University of Alberta respects the sovereignty, lands, histories, languages,
knowledge systems, and cultures of First Nations, Métis and Inuit

Leading with Purpose.



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Sir Francis Bacon (1561-1626)
Lord Verulam

*Read not to contradict and confute; nor to
believe and take for granted; nor to find talk
and discourse; but to weigh and consider.*

2



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and discourse; but to weigh and consider.*

Most studies have something
that we can use or learn from

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'Fatal flaws' are often in study interpretation rather than the methods

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HEALTH & MEDICAL, SCIENCE & TECHNOLOGY

Scientists find potential cure for arthritis pain — by using electricity to regrow cartilage

JANUARY 17, 2022

 by Study Finds

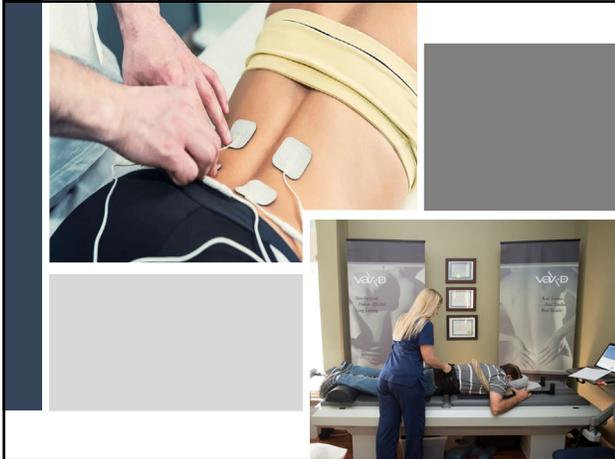
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STORRS, Conn. — A new method of regrowing cartilage by zapping the bone could bring pain relief to millions of people who suffer from arthritis. The technique, which researchers at the University of Connecticut have successfully **tested on rabbits**, uses small electric shocks to stimulate cartilage growth.

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But sometimes they are in the methods

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A prospective randomized controlled study of VAX-D and TENS for the treatment of chronic low back pain

Eugene Sherry*, Peter Kitchener† and Russell Smart‡

*Senior Lecturer in Orthopedics, Sydney University, †Consultant Radiologist
‡Medical Director, VAX-D Australasia Pty Ltd, NSW, Australia

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Eugene Sherry*, Peter Kitchener† and Russell Smart‡

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‡Medical Director, VAX-D Australasia Pty Ltd, NSW, Australia

Results Too Favourable

Successful outcome was defined as a 50% reduction in pain utilizing a 10 cm Visual Analog Pain Scale and an improvement in the level of functioning as measured by patient-nominated disability ratings. Patients were randomly assigned to VAX-D or to TENS which was used as a control treatment or placebo. The TENS treatment demonstrated a success rate of 0%, while VAX-D demonstrated a success rate of 68.4%

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DISCLOSURE

Dr Russell Smart is contracted to and a shareholder in VAX-D Australasia Pty. Ltd., a private company that delivers VAX-D service in Australia.

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Patients randomized to TENS therapy received treatment at one of the four VAX-D clinics. Electrodes were placed according to the manufacturer's instructions. Patients lay prone on a treatment table and received TENS for 30 min daily for 20 days then once a week for 4 weeks. All TENS patients were monitored by a technician.

Control Group Designed to Fail

In the VAX-D group all patients recorded some improvement in their pain levels whereas in the TENS group 13/21 recorded an increase in pain.

More Unrealistic Results

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SUMMARY

Fatal flaws are usually in study interpretation

Watch for Conflict of Interest
+ Unrealistic Results

Leading with Purpose. UNIVERSITY OF ALBERTA

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