

Laughter therapy in dialysis: exercise, activity and wellness

Dr. Paul Bennett

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SATELLITE
HEALTHCARE
DIALYSIS • WELLBOUND • RESEARCH

Thanks to our speaker!



Dr. Paul Bennett

- Dr. Paul Bennett is an Honorary Professor at Deakin University, Melbourne, Australia
- Director of Medical & Clinical Affairs at Satellite Healthcare
- Paul's recent research has focused on laughter therapy, resistance and aerobic exercise, home dialysis, e-learning, communication techniques, imagery, and workforce models.

POLL 1: ABOUT YOU

What best describes you (you can choose more than one)?

- I have kidney disease but not on dialysis yet
- I am on dialysis or have had a transplant
- I have a friend/loved one with kidney disease
- I am a nephrology health professional
- I am a non-nephrology health professional

Write in the chat box if you are none of the above!

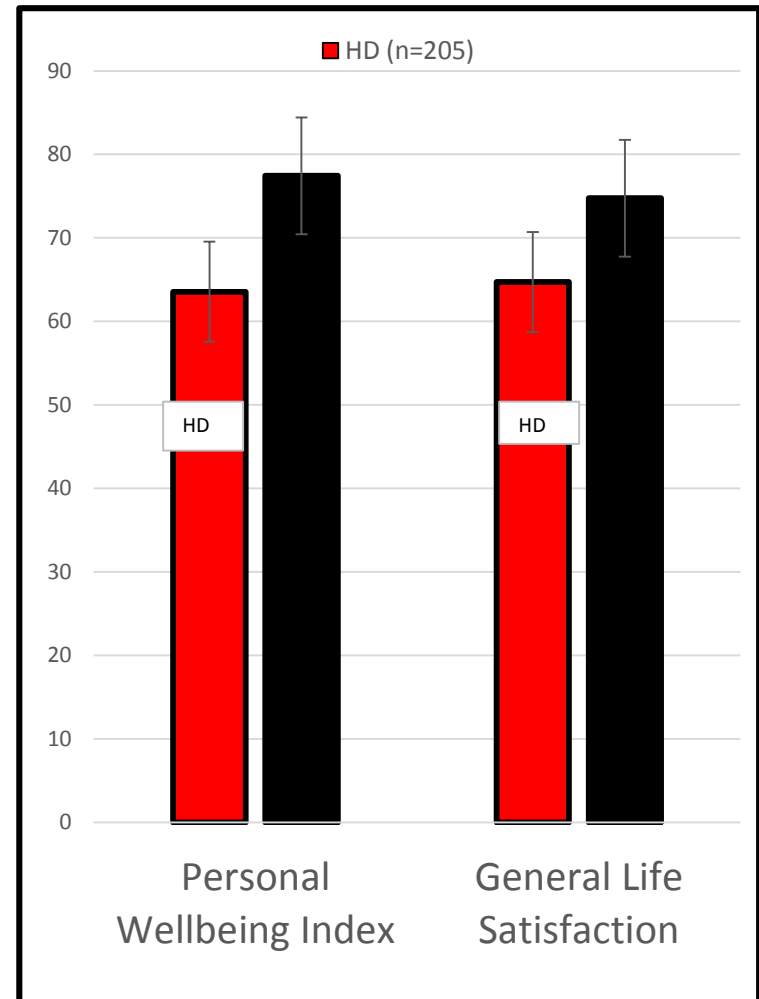
POLL 2: YOUR HAPPINESS

- How happy are you right now?
- Please choose a number that represents how happy you are right now.
- 1 is unhappiest and 5 is happiest.

(UN)HAPPINESS IN DIALYSIS

- Hemodialysis patients report lower happiness compared to the general population

Bennett, P.N., Weinberg, M., Bridgman, T. & Cummins, B. (2015) The happiness and subjective wellbeing of people on haemodialysis. *Journal of Renal Care* 41:3 156-161



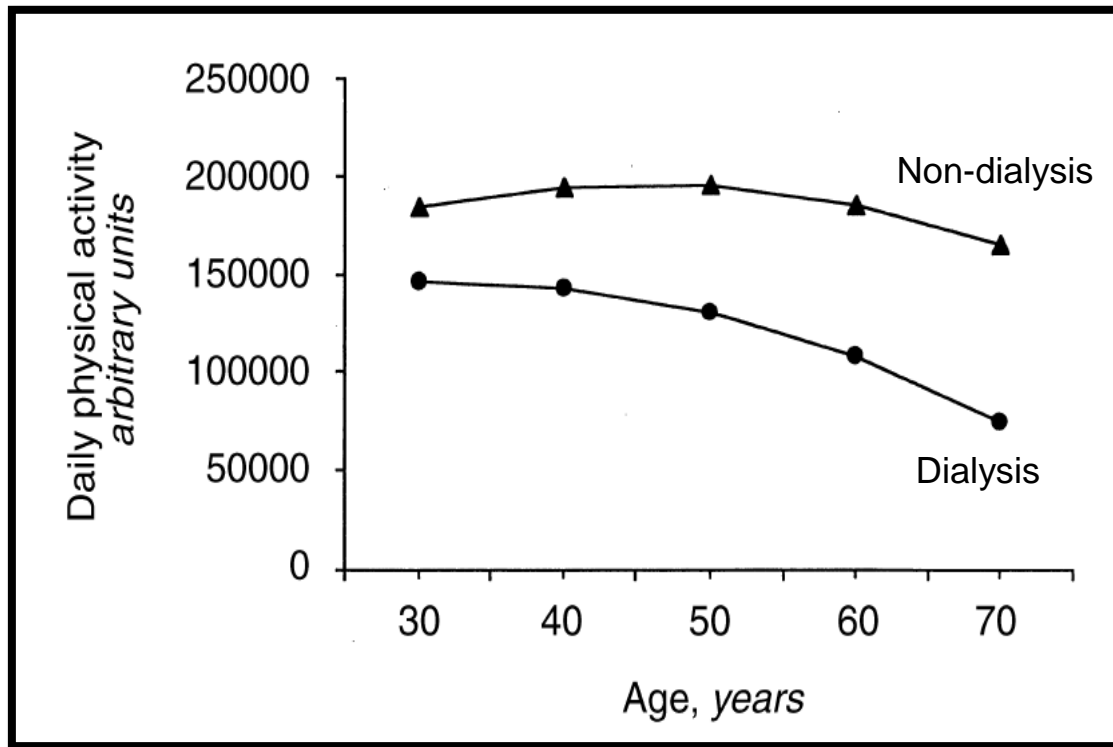
WHAT WE ARE GOING TO TALK ABOUT

- The (un)happiness of dialysis
- The inactivity of people on dialysis
- Laughter therapy in health care
- Laughter in dialysis
- Laugh Out Loud Hemodialysis (LOL-HD)





PHYSICAL (IN)ACTIVITY IN DIALYSIS

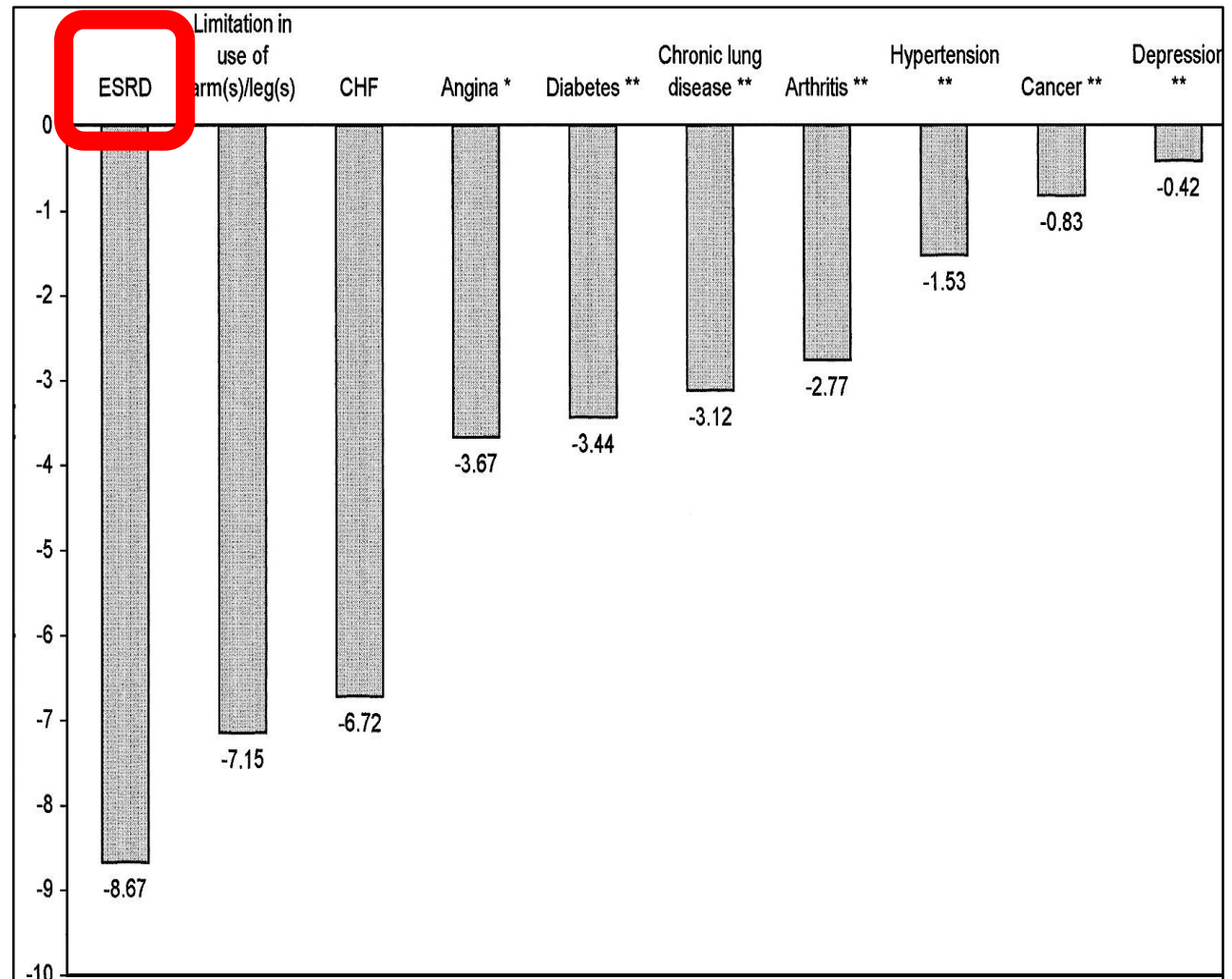


- Dialysis patient activity declines at a high rate as people age

Johansen, K. L., Chertow, G. M., Ng, A. V., Mulligan, K., Carey, S., Schoenfeld, P. Y., & Kent-Braun, J. A. (2000). Physical activity levels in patients on hemodialysis and healthy sedentary controls. *Kidney international*, 57(6), 2564-2570

EFFECT OF CHRONIC DISEASES ON PHYSICAL COMPOSITE SCORE

- People with End Stage Renal Disease (ESRD) report lower physical capacity than all other chronic conditions



Sanjeev K. Mittal, Lori Ahern, Edith Flaster, John K. Maesaka, Steven Fishbane; Self-assessed physical and mental function of haemodialysis patients. Nephrol Dial Transplant 2001;16 (7): 1387-1394

DIALYSIS PHYSICAL DETERIORATION (Getting worse physically)

Kidney disease and
co-morbidities
(other related
diseases)



Sitting for 12
hours per week



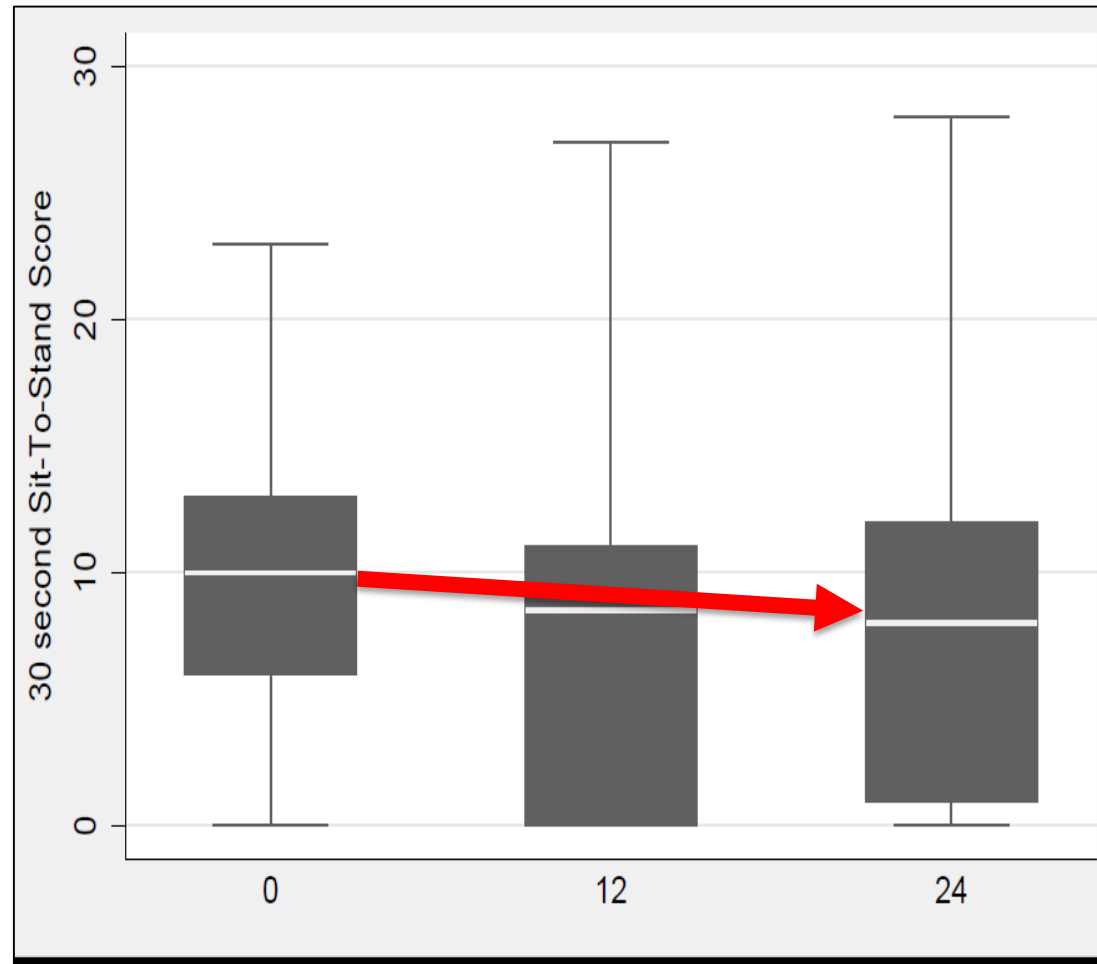
Decreased physical
social outings



30 Second Sit to Stand



- Over 24 weeks (6 months) patients deteriorate by 20% in how many sit to stands they can do (from 10 to 8 sit to stand repetitions)



Sutcliffe, B., Bennett, PN, Fraser, S., Mohebbi, M The deterioration in physical function of people with end-stage kidney disease on hemodialysis. *In Press HDI-17-0033*

POLL 3: EXERCISE

How often do you do 30 minutes (or more) of exercise?

- Every day
- Greater than 3 times per week
- 1 to 3 days per week
- Never

WHAT EXERCISE?

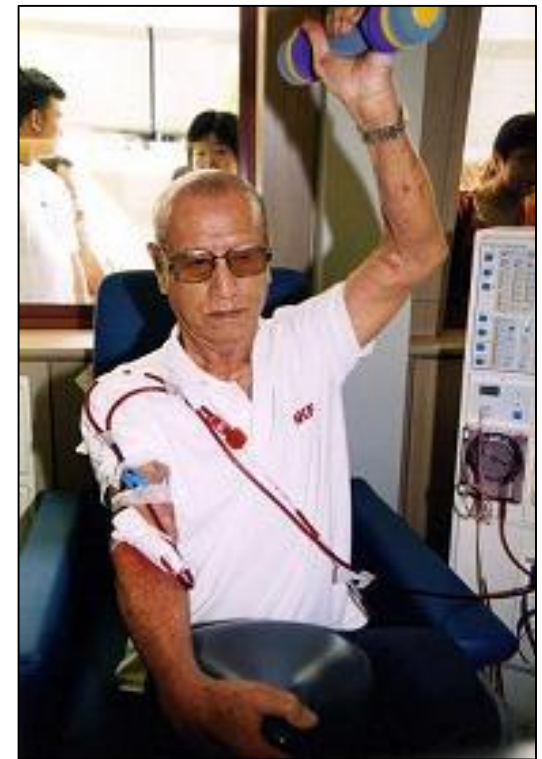
ANAEROBIC (RESISTANCE)



AEROBIC (CARDIOVASCULAR)



SINGAPORE



UNITED KINGDOM



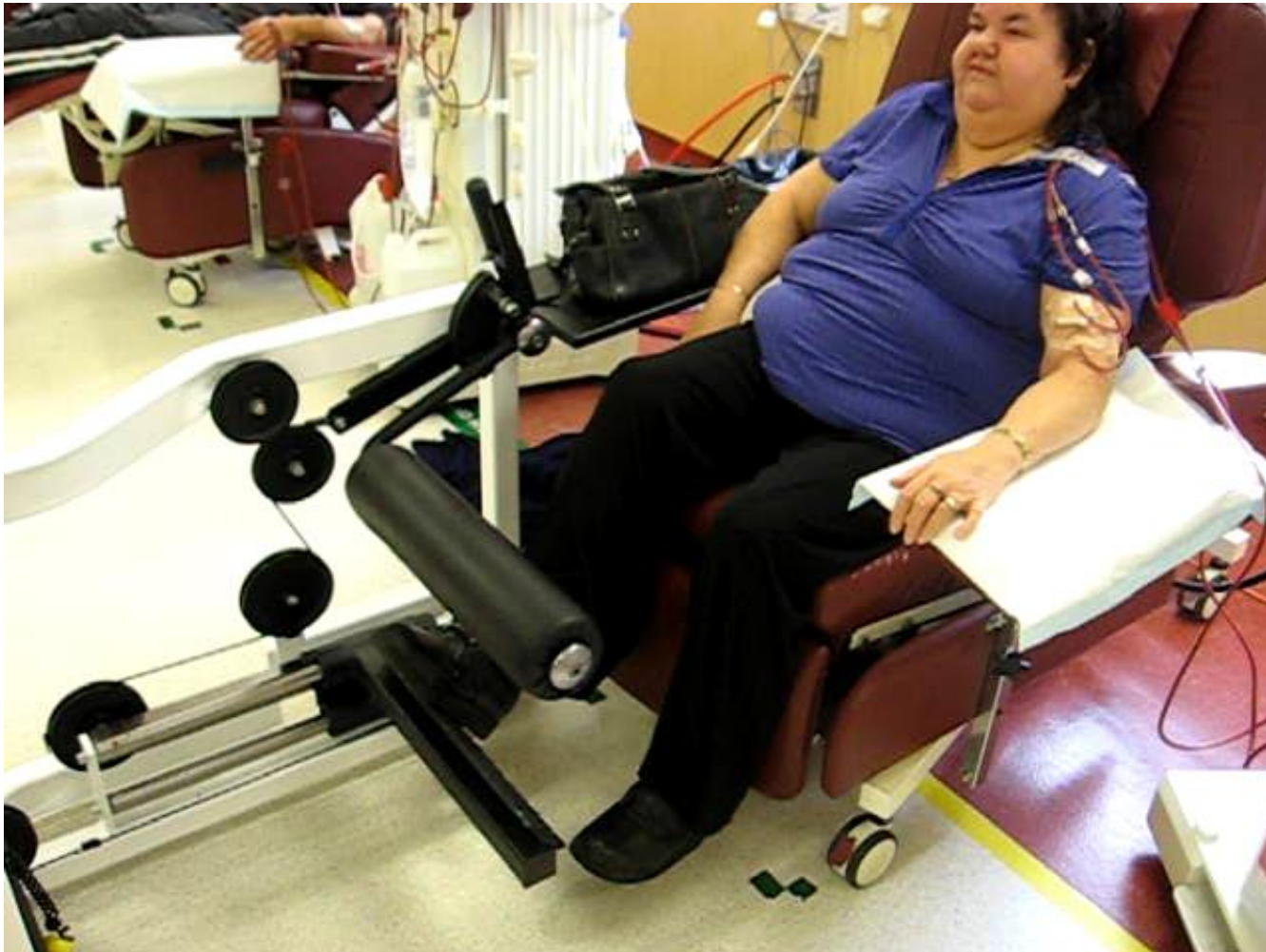
SWEDEN



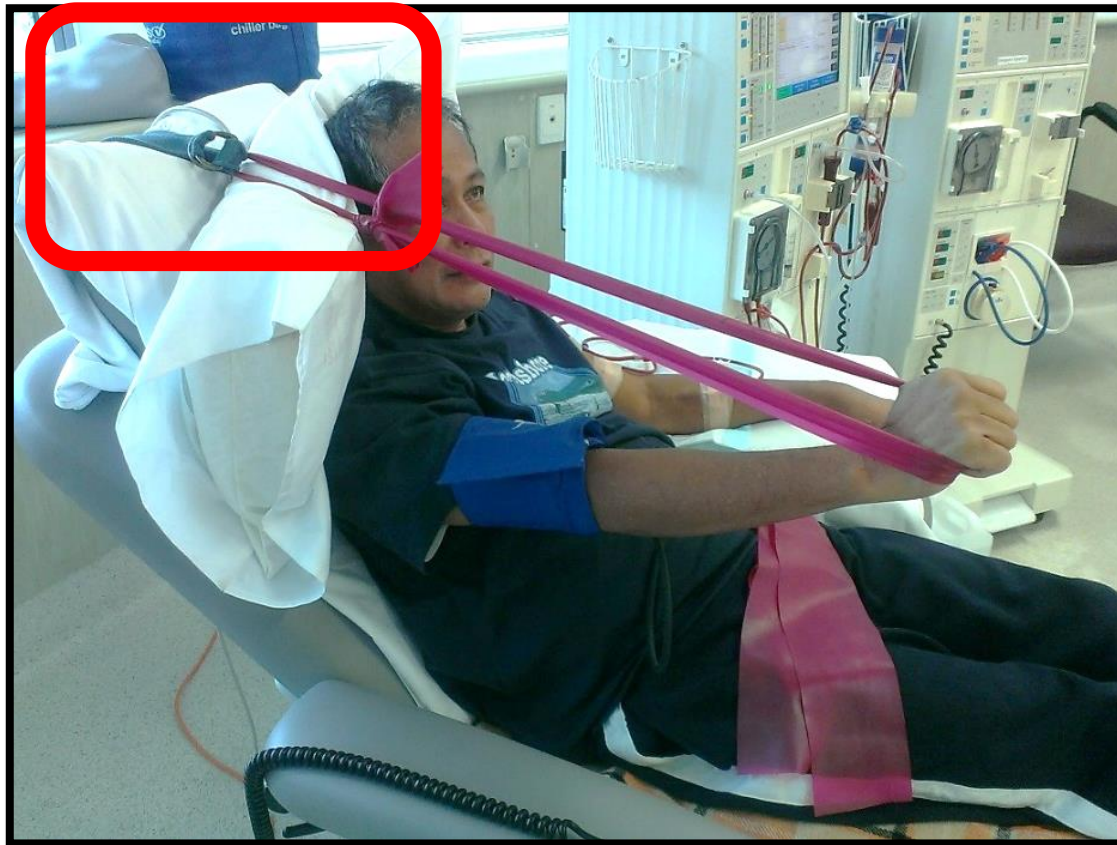
AUSTRALIA



DIALYSIS RESISTANCE MACHINE

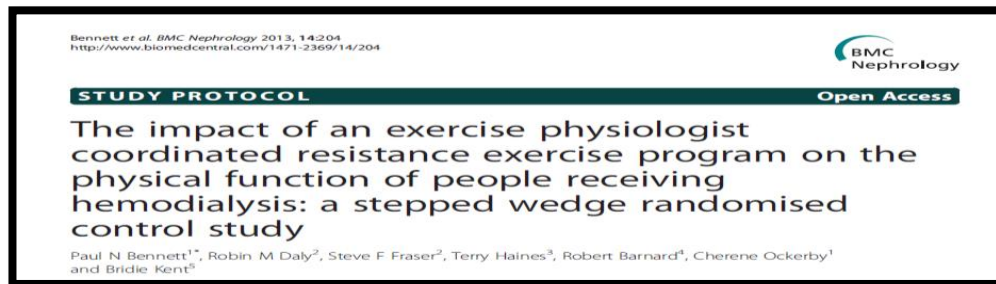


RESISTANCE EXERCISE - BANDS



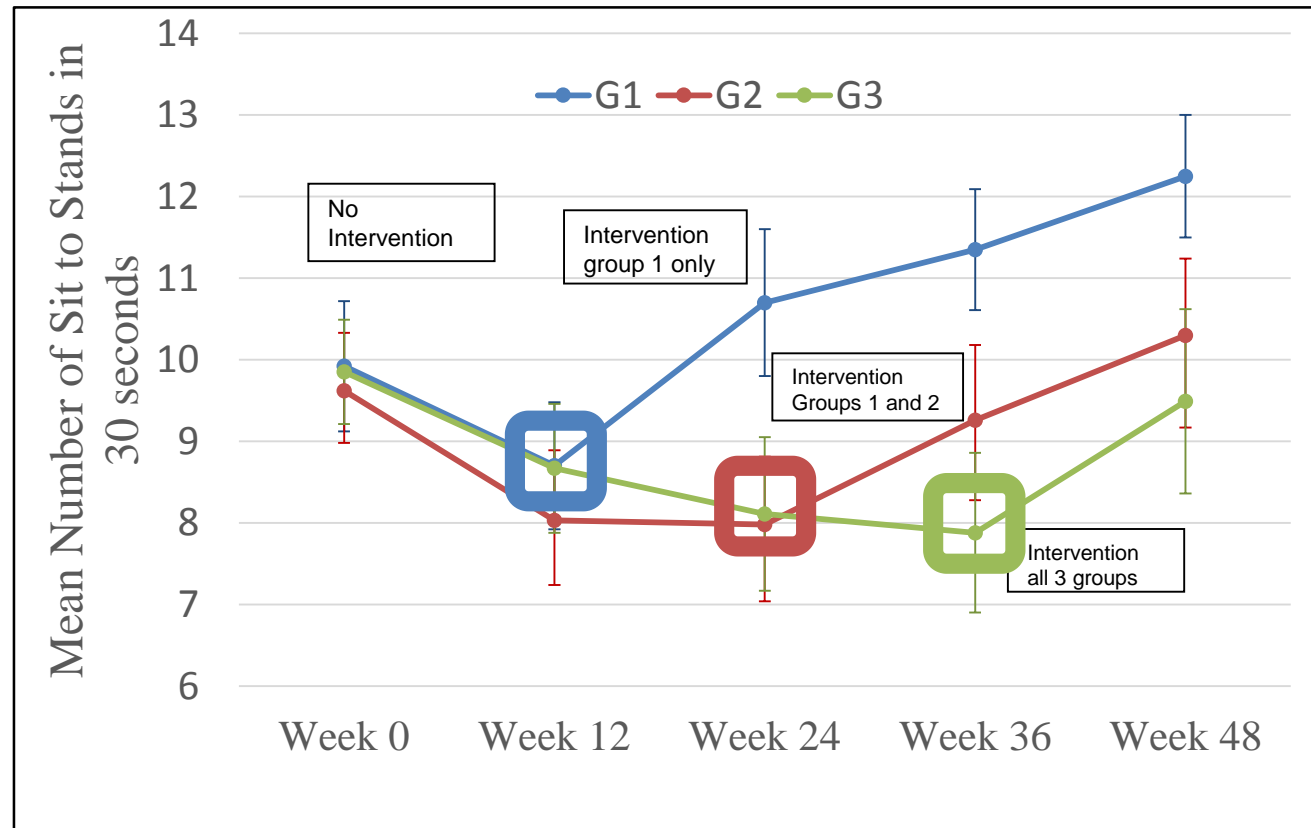
30 SECOND SIT TO STAND

- 15 Melbourne (Australia) Dialysis Clinics (n=216)
- Band Exercises with Physical Therapists 1 to 2 days per week
- Primary Outcome
 - 30 second sit to stand test



30 SECOND SIT TO STAND (N=216)

Physical function improved when each dialysis patient group started exercise

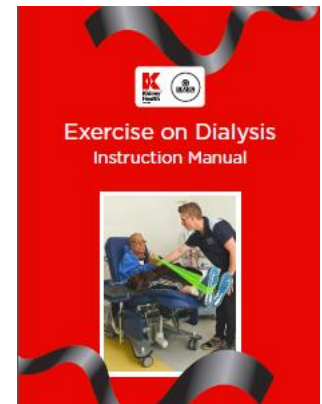
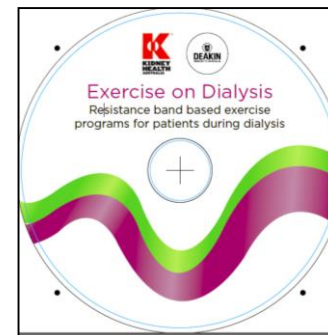
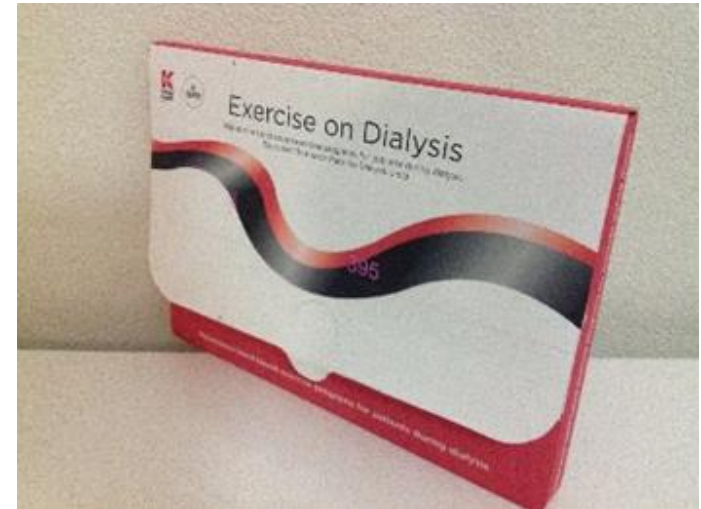


WHO WOULD HAVE THOUGHT



EXERCISE DURING DIALYSIS RESOURCES

- 2 x Therabands
- DVD
- 10 Brochures for Professionals
- 10 Brochures for Patients
- 20 page Instruction Booklet
- Website “Exercise in Dialysis”
resource page - kidney.org.au
- All resources (except therabands)
free online



Dialysis Exercise Prompt Card

Below are pictures of the resistance exercises you can undertake whilst completing dialysis using the Resistance Bands provided. These are detailed further in the 'Dialysis Exercise Description Booklet'. It is intended that you gradually increase the amount of exercise you undertake - working up to completing 6-10 repetitions of each exercise, 3 times per session to maintain and increase strength, muscle mass and function.

Chest press



Shoulder press



Tricep extension



Straight arm shoulder flexion



Shoulder horizontal abduction



Neutral seated row



Supine grip seated row



Prone grip seated row



Be careful not to be too eager with your movement, though, as rocking through your pelvis can dislodge your dialysis needles.

Bicep curl



Leg curl



Calf press



Bent knee calf press



Leg press



Hip abductions



Straight leg raise



ABC drawing with toes



Abdominal leg extensions



Be careful not to be too eager with your movement, though, as rocking through your pelvis can dislodge your dialysis needles.

WHAT ABOUT LAUGHTER AS A FORM OF EXERCISE? VIDEO 6



Poll 4: Your Happiness - AGAIN

- Now you have seen some happy videos...
- Please choose a number that represents how happy you are right now.
- 1 is unhappiest and 5 is happiest.

5 TYPES OF LAUGHTER

1. Spontaneous – (joke)
2. Induced (laughing gas)
3. Pathological (very rare)
4. Stimulated (tickling)
5. Intentional (on purpose)
 - (laughter therapy, laughter yoga)



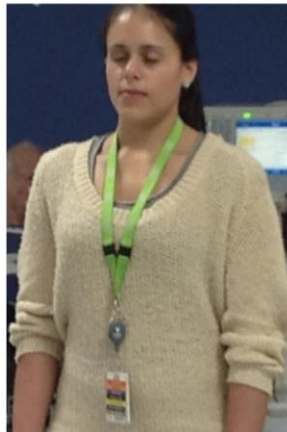
LAUGHTER THERAPY

- Consists of controlled breathing, relaxation techniques, clapping, deep breathing exercises, gentle neck and shoulder stretches, limb exercises, facilitated laugh and smile exercises

Intentional Laughter



Yogic Breathing



Exercises



LAUGHTER BREATHING WARM UP EXERCISE

1. Put your hand on your stomach
2. Take a big breath, hold for 3 seconds, and then breathe out
3. Put your hand flat on your chest
4. Say Ha, Ha, Ha (similar to laughing)
5. Place you index finger and thumb around your windpipe (trachea) at the front of your neck
6. Say hee, hee, hee
7. COULD YOU FEEL THE AIR FLOWING?

LAUGHTER BENEFITS

- Improved heart and blood vessel health
- Improved breathing and lung function
- Improved immune system
- Decreased pain
- Improved mental health
 - Stress, anxiety, depression, mood



LAUGHTER EXERCISE (N=27) IMPROVED GLYCOSYLATED HEMOGLOBIN (HBA1C) IN DIABETICS

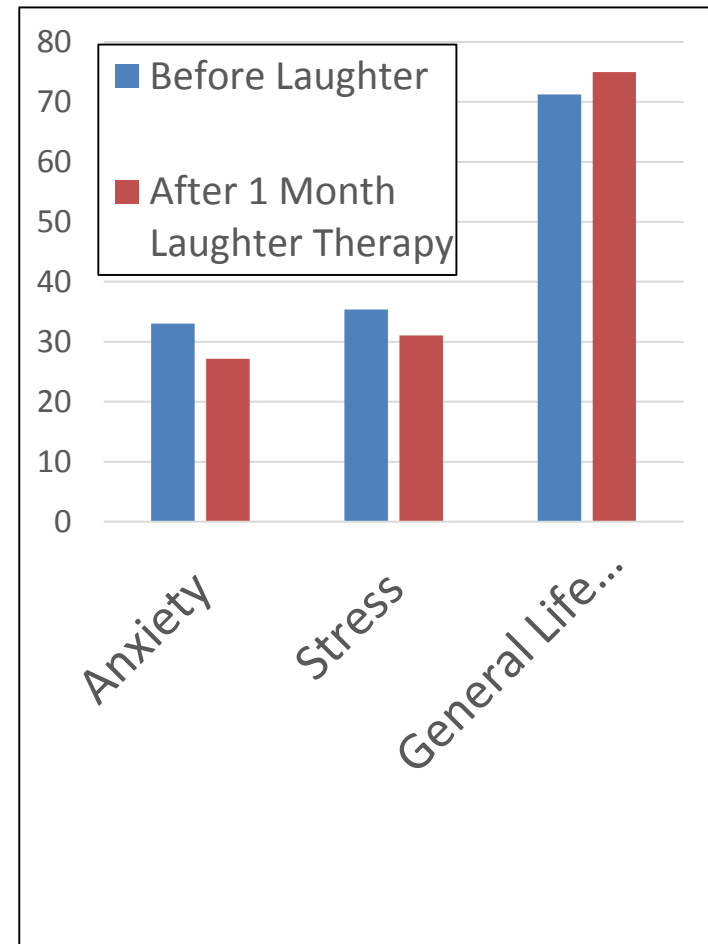
	Baseline Mean \pm SD	3 months Mean \pm SD
HbA _{1c} (%)		
Immediate treatment	5.26 \pm 0.57	5.14 \pm 0.60
Delayed treatment	5.00 \pm 0.32	5.07 \pm 0.37
Glucose (mg/dL)		
Immediate treatment	131.9 \pm 32.3	121.1 \pm 61.1
Delayed treatment	120.0 \pm 36.3	112.9 \pm 22.1

- Average HbA_{1c} decreased from 5.26 to 5.14 in Laughter Group

Hirosaki M, Ohira T, Kajiura M, Kiyama M, Kitamura A, Sato S, Iso H: Effects of a laughter and exercise program on physiological and psychological health among community-dwelling elderly in Japan: randomized controlled trial. *Geriatr Gerontol Int* 13:152–60, 2013

LAUGHTER THERAPY IN DIALYSIS

- Increased happiness (General life satisfaction)
- Decreased anxiety
- Decreased stress



UNEXPECTED RESULTS

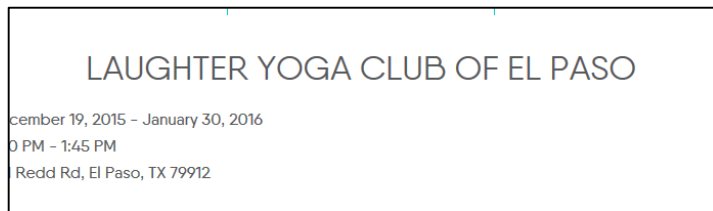
- Decrease in episodes of low blood pressure during dialysis
- No changes in blood pressure after dialysis
- No change in lung function
- No increased cramps or needle issues
- Laughter therapy had a positive impact on patients' and the dialysis staff



BUT THAT IS AUSTRALIA...THIS IS THE USA



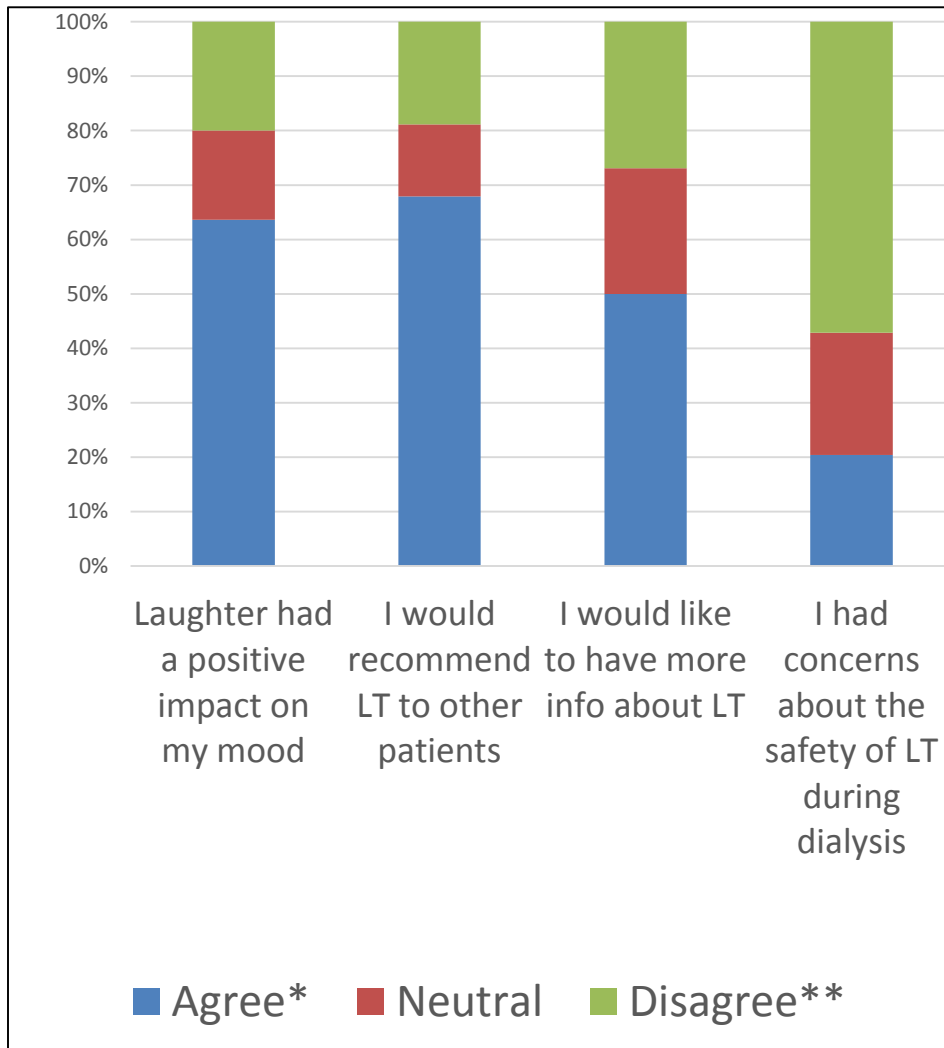
WORLDWIDE LAUGHTER COMMUNITIES



SATELLITE LAUGHTER THERAPY **VIDEO 11**



USA – PATIENT EXPERIENCE

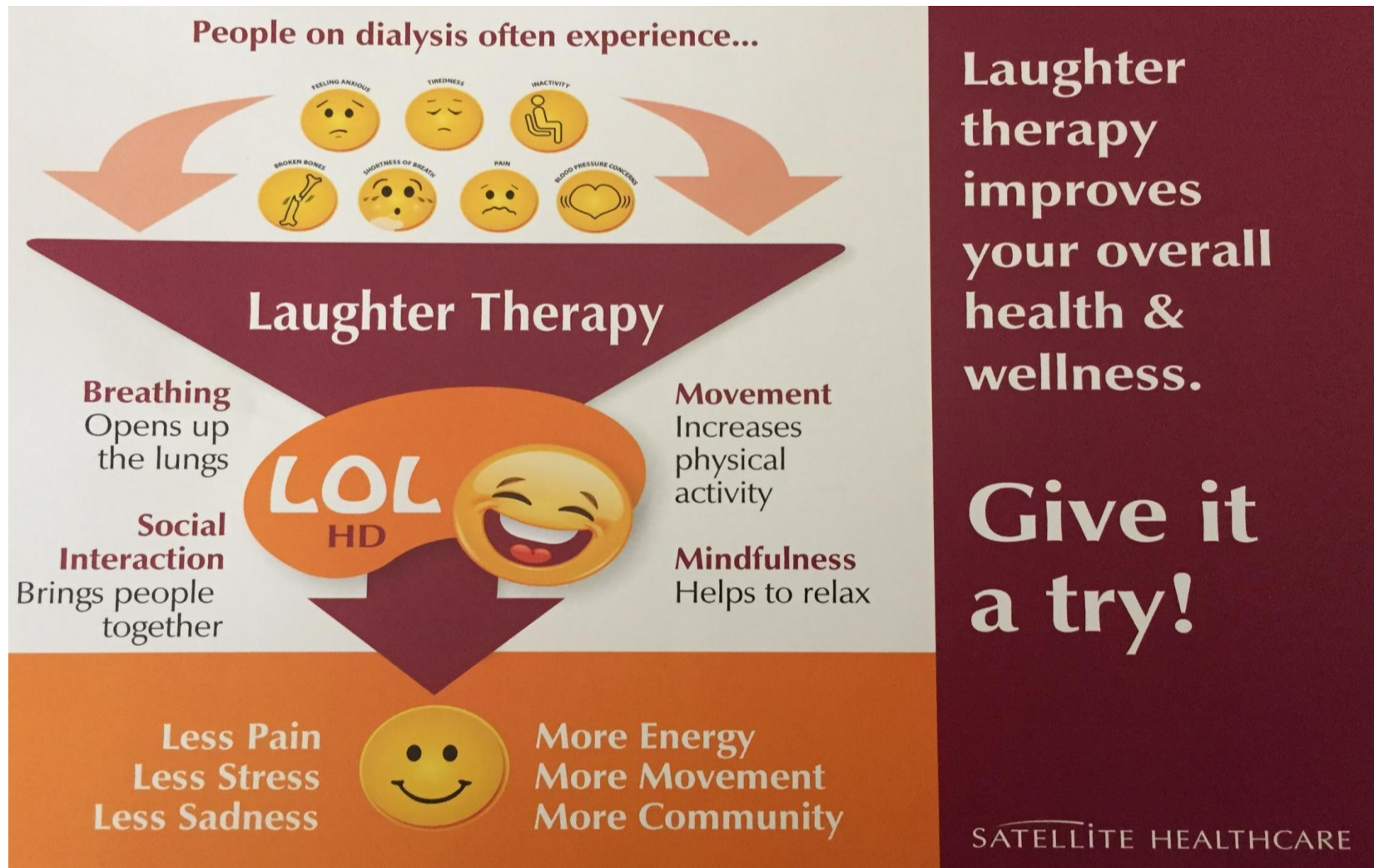


SAM FROM SACRAMENTO

“...so he doesn’t have any family, yet he was able to laugh and actually you saw huge changes in him. The biggest smile on him and even the patients around him commented about the changes. They said have you seen him, look at his smile, I mean this as a gentleman who would come in and just do his dialysis and basically sleep the whole treatment”



EDUCATION POSTERS



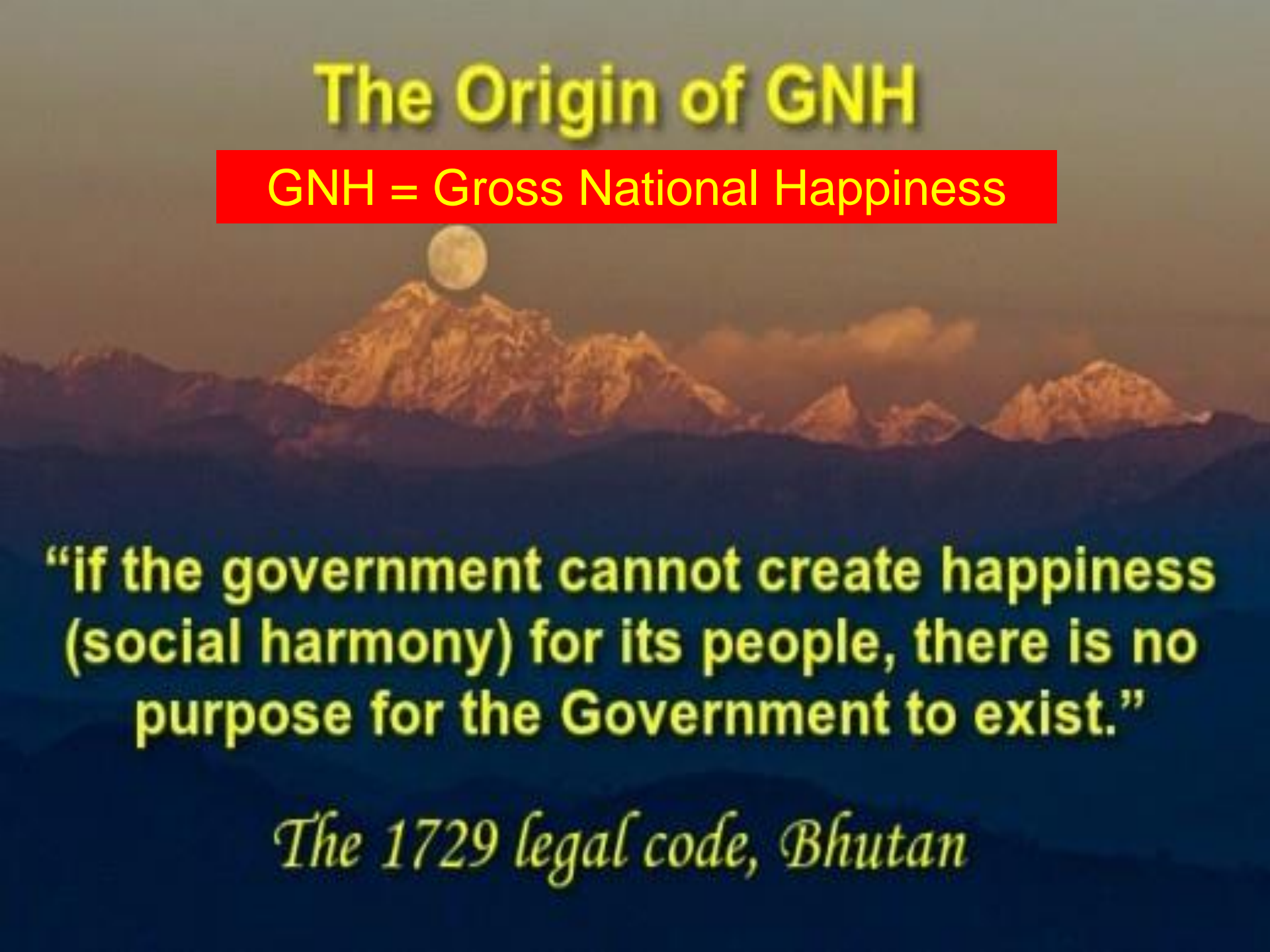
COULD LAUGHTER OR EXERCISE WORK FOR YOU OR YOUR CENTER?

- Could exercise or laughter work for you, your colleagues or in your center? Or just want to know more?
- Bennettp@satellitehealth.com



The Origin of GNH

GNH = Gross National Happiness


A scenic view of a mountain range with a full moon rising behind the peaks. The mountains are covered in snow and the sky is a mix of orange and blue, suggesting a sunset or sunrise. The foreground is dark and out of focus.

**“if the government cannot create happiness
(social harmony) for its people, there is no
purpose for the Government to exist.”**

The 1729 legal code, Bhutan

The Origin of GNH

GNH = Gross National Happiness



“if Dialysis Providers cannot create improvements (social harmony) for its people, there is no purpose for Dialysis Providers to exist.”

The 1729 legal code, Bhutan

SUMMARY: WHAT WE TALKED ABOUT

- The (un)happiness of people on dialysis
- The inactivity of people on dialysis
- Laughter therapy in health care
- 5 forms of laughter
- Laughter in dialysis
- Laugh Out Loud Hemodialysis (LOL-HD)

QUESTIONS?

Join us for next month's webinar!

August 2017



Steve and Heather Winfree
AKF advocates

Stepping up to the plate: the value of living donation

Patient advocates Steve and Heather Winfree will join us to share about:

- Their journey as a couple as Steve has battled kidney disease
- Heather's decision to donate her kidney to her husband Steve, and the process of becoming a donor
- The importance of living donation

Visit www.KidneyFund.org/webinars to
learn more and register!