

Joline[®] Medical
Inc.

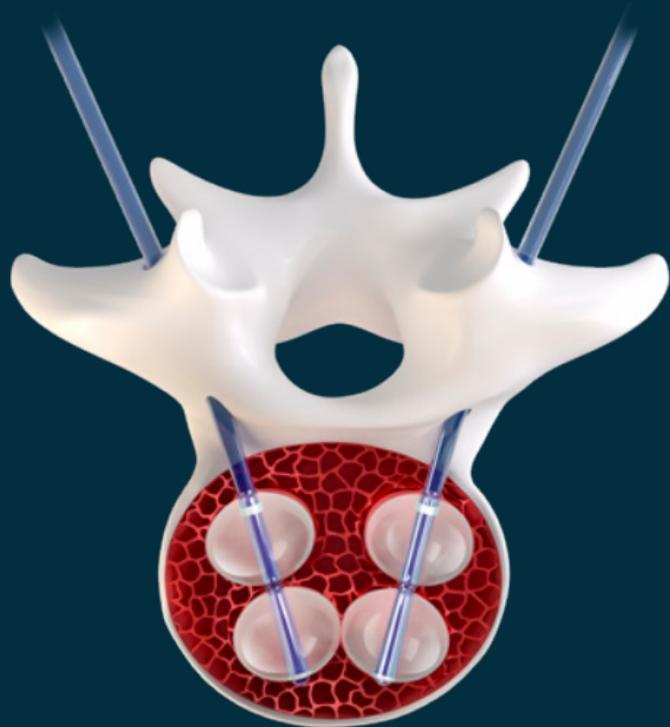
Experts in Care.

**Double Balloon
Kyphoplasty
Quattroplasty[®]**

A gentle, minimally-
invasive treatment
of vertebral
compression
fractures



Stop'n GO Double Balloon



Targeted vertebral body reconstruction with the strength of FOUR balloons

Quattroplasty®

Benefits Double Balloon

Kyphoplasty

The Double Balloon technology provides the surgeon with four balloons instead of two balloons per vertebra to restore the height of the fractured vertebra.

The pressure and volume of each single balloon can be adjusted separately. The necessary force is directed to the desired point to reconstruct the vertebral body step by step.

Double Balloon Kyphoplasty

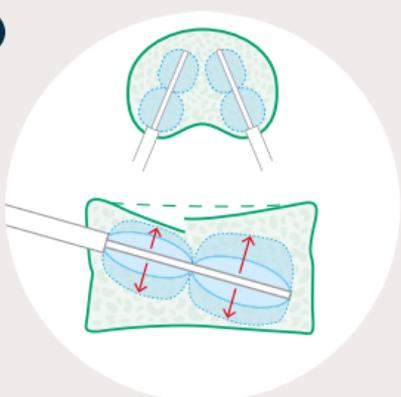
Procedure explained in four steps

1



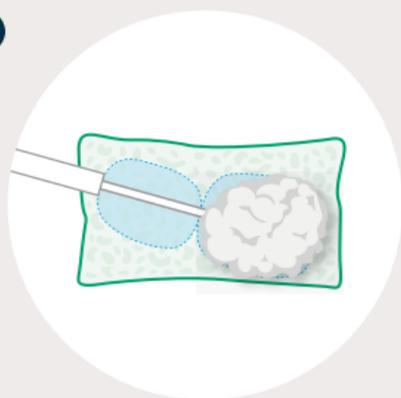
Up to four balloons can be used in the vertebral body.

2



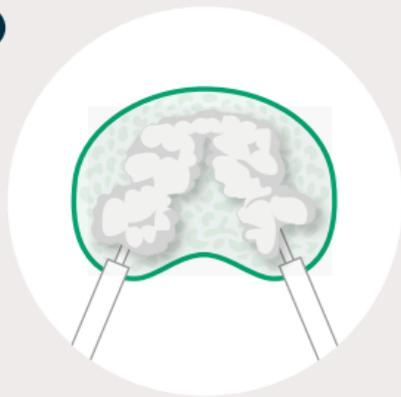
The pressure and volume of each balloon can be adjusted separately for more precision and control.

3



Target bone cement application.

4



Treatment with the Joline Kyphoplasty System results in a significant reduction in pain to improve daily quality of life.²

Joline is your partner in the treatment of vertebral compression fractures.

**A treatment with the Joline
Kyphoplasty System results in
a significant reduction in pain
to improve daily quality of life.²**

Further advantages of a balloon kyphoplasty are:

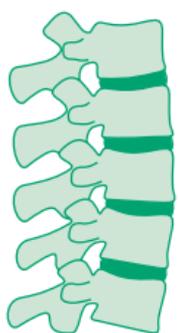
- Safe and effective treatment for osteoporotic and traumatic vertebral compression fractures (VCFs).³
- Increased postoperative vertebral body height in vertebral body wall (PVBW) defects.³
- Safe for older patients.⁴
- Less cement leakage than with vertebroplasty.⁵

For more than 15 years Joline has has been your reliable partner when it comes to the treatment of vertebral compression fractures. Visit our website or get in contact with us to learn more about the Joline Spine product portfolio and our innovation in spinal surgery – the Stop'n GO Double Balloon/Quattroplasty® for targeted vertebral body reconstruction with the strength of FOUR balloons.

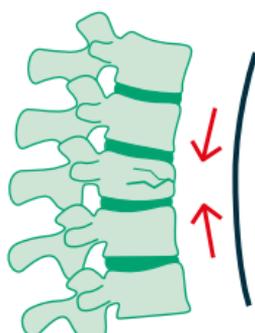


What is a vertebral compression fracture?

The vast majority of vertebral body fractures are associated with osteoporosis, a disease that mainly occurs in postmenopausal women. Osteoporosis is associated with a loss of bone strength. It shows no signs or symptoms until a fracture occurs. Osteoporosis is often called the 'silent disease' because most people don't know that they have osteoporosis until they suffer a broken bone from a minor fall or bump. It affects all bones in the body - but most fractures occur in the vertebrae (spine), wrist and hip. Broken bones due to osteoporosis are not just painful, they are all too often a cause of life-changing disability and loss of independence.¹



Healthy vertebral bodies



Collapsed vertebral body

The following symptoms may indicate a vertebral compression fracture:

- Severe back pain after everyday activities such as carrying shopping bags or gardening.
- Regularly assuming a bent posture to reduce back pain.
- Persistent back pain, increasing in upright posture or when walking.

References

- 1 Safety and Efficacy of Balloon Kyphoplasty for Vertebral Fractures With Posterior Wall Disruption JENNIFER L. PEREZ, PHD, ALP OZPINAR, MD, NITIN AGARWAL, MD, EMILY HACKER, BS, NIMA ALAN, MD, PETER C. GERSZTEN, MD, MPH International Journal of Spine Surgery, Vol. 15, No. 2, 2021, pp. 353–358
<https://doi.org/10.14444/8046>
- 2 Internal data of Joline GmbH & Co. KG
- 3 Is percutaneous kyphoplasty safe and beneficial for patients aged 90 and over? Yang, Bo MDa,b; Zhao, Yu MDb; Zhao, Yangxue MDb, * Medicine 101(33):p e30138, August 19, 2022.
<https://doi.org/10.1097/MD.00000000000030138>
- 4; 5 Vertebral fragility fractures: clinical and radiological results of augmentation and fixation—a systematic review of randomized controlled clinical trials Piazzolla et al 2020 Andrea Piazzolla; Davide Bizzoca; Giuseppe Solarino; Lorenzo Moretti; Biagio Moretti; Aging Clinical and Experimental Research (2020) 32:1219-1232
<https://doi.Org/10.1007A40520-019-01289-1>

Discuss any questions you may
have with your physician:

Joline[®] Medical
Inc.

Joline Medical Inc.
13575 58th St North, Ste. 202
Clearwater, FL 33760-3721
USA

Phone: 978-245-8800

E-mail: info@joline.us

www.joline.us



Quality first: Joline is EN ISO 13485 certified.
Subject to alterations: Art. 53375/26/01_R01