



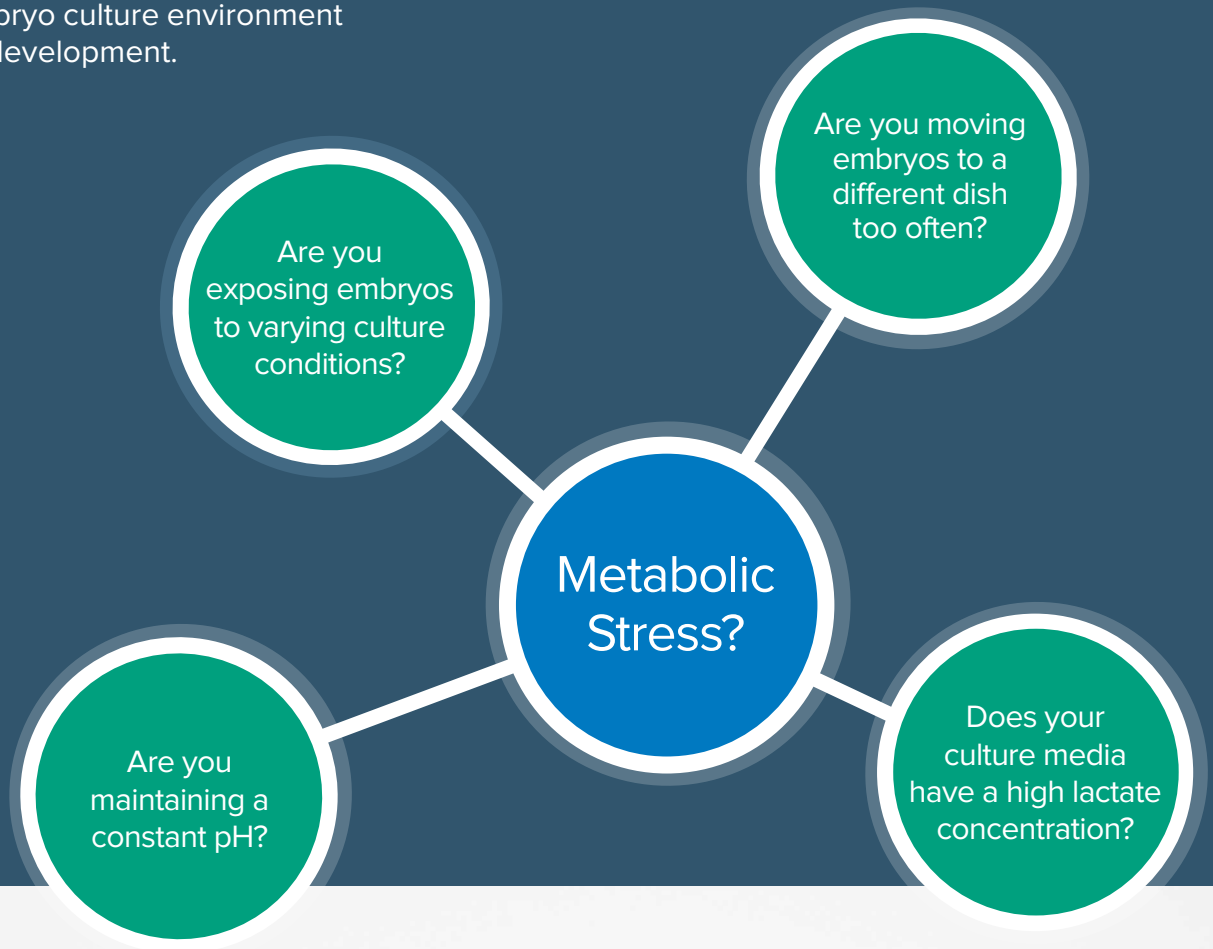
The Best Possible Start

# Continuous Single Culture-NX (CSCM-NX)

HELPS EMBRYOS MINIMIZE METABOLIC STRESS

# Are Your Embryos On The Path To Metabolic Stress?

Stress in the embryo culture environment affects embryo development.



Continuous Single Culture-NX is a clinically-proven, low lactate, single-step medium that helps improve blastocyst development.



# Lower Lactate Concentrations Maintain Efficient Metabolic Rates

Pyruvate, lactate, and glucose are main energy sources for oocytes and embryos, while pyruvate is the preferred energy source at early cleavage stages.<sup>1,3</sup>

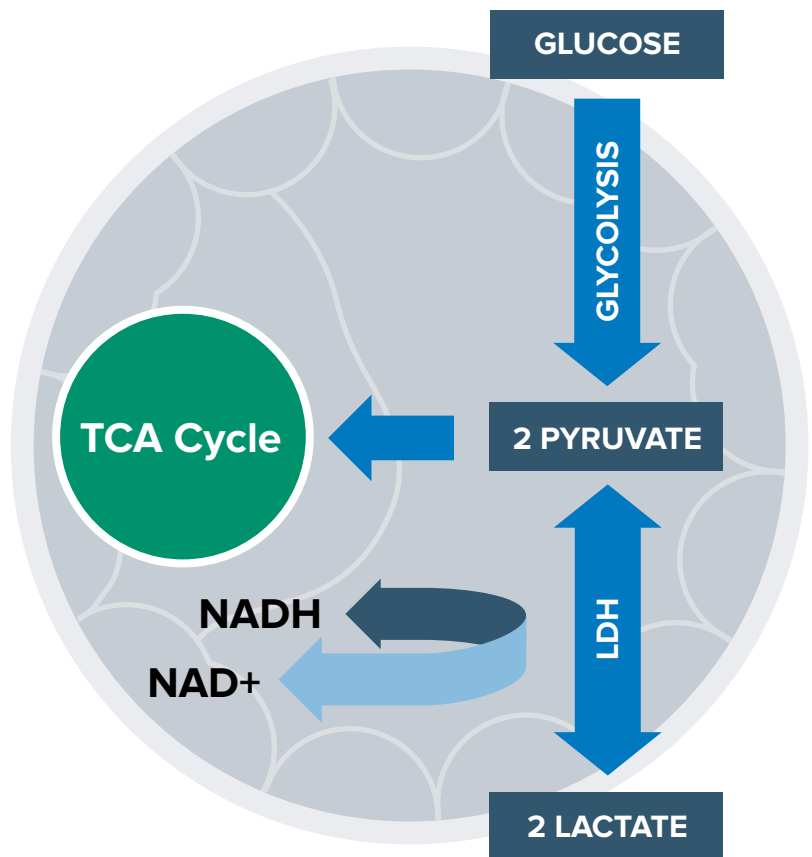
Glucose is naturally consumed by embryos at all stages of development. The consumption increases as the embryo progresses to the blastocyst stage.<sup>2</sup>

The glucose taken up from the culture medium is converted to pyruvate and then into lactate by lactate dehydrogenase (LDH), with the concomitant production of NAD<sup>+</sup> from NADH. This reaction is reversible and operates close to equilibrium.<sup>3,4</sup>

Lactate is produced naturally by embryos from glucose metabolism, with two molecules of lactate appearing in the culture medium for every one molecule of glucose consumed.

As glucose consumption increases, production of lactate increases and accumulates in the culture medium, resulting in a negative influence on embryo metabolism due to reduced pyruvate conversion by LDH and oxidation.<sup>3</sup>

Excess lactate in the culture medium, in addition to pyruvate and glucose, can burden metabolic efficiency, as embryos naturally produce lactate during energy production.<sup>1,3</sup>



1 Gardner (1990)

2 White (2017)

3 Internal data on file

4 Lane (2000)

# CSCM-NX Helps Reduce Stress On Embryo Development

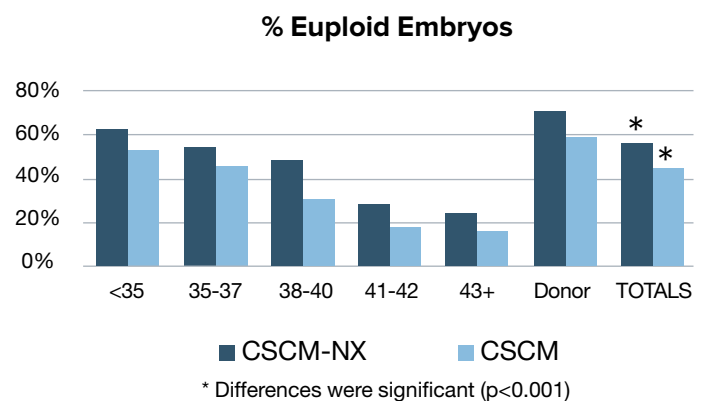
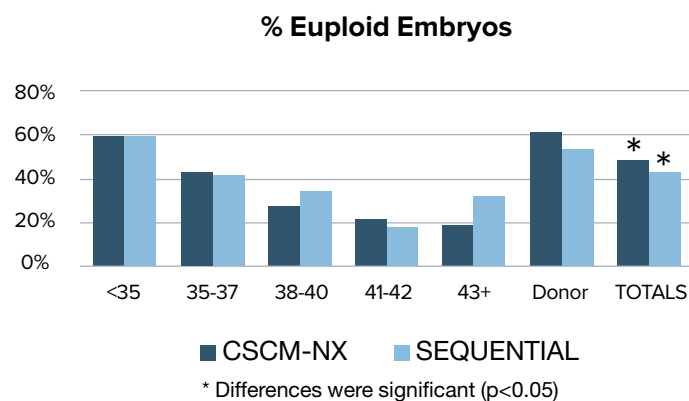
In a clinical evaluation of over 8,000 embryos, embryos cultured in CSCM-NXC demonstrated improved development over those cultured in CSCM-C.†

Embryo Culture Media		Fertilization Rate	Total-Usable Blastocysts	Good/Fair Quality Blastocysts on Day 5
CSCM-C	N=8021	70.7%	46.1%	41.4%*
CSCM-NXC	N=148	73.6%	48.4%	46.8%*

N=Number of embryos

\*Differences were significant (p<0.05)

In a retrospective analysis of more than 6,600 embryos, embryos cultured in CSCM-NX had higher euploidy rates.‡




† Salmon, K, et al. "Improved Embryo development After Use of Irvine Scientific's Next Generation Continuous-Culture Media (NXC); ART Reproductive Center, Beverly Hills, CA USA, PCRS 2018

‡ VerMilyea, M.D, et al. "Stress Relief: Can Continuous Culture in a Low-Lactate Culture Medium Reduce Numerical Chromosomal Abnormalities and Therefore Improve Euploidy Rates?"; Ovation Fertility-Austin, Texas. ASRM 2018

**10%**  
Increase in Mitotic Euploidy Embryos

With a lower lactate concentration, CSCM-NX improves mitotic euploidy rate by 10% when compared to a sequential culture system and Continuous Single Culture (CSCM).‡



A photograph of a woman with blonde hair, wearing a white hospital gown, smiling warmly as she holds a newborn baby wrapped in a white blanket. The baby is lying on a bed, and the woman is looking down at it with a joyful expression. The background is softly blurred, showing a hospital room with a window and some furniture. The image is overlaid with a large, semi-transparent blue geometric shape that contains the text.

# Use CSCM-NX to help take embryos further

Continuous Single Culture–NX provides an optimal environment for embryo development by eliminating unnecessary stress.

- Lower lactate concentrations in the culture media keep metabolic rates efficient
- Minimize embryo disturbances
  - No dish changes
  - Reduce pH fluctuations
  - Reduce exposure to varying culture conditions
- Save on laboratory supplies
  - Reduce media usage – no medium changes
  - Fewer dishes and medium preparation steps

# Ordering Information

## Uninterrupted Culture Media

Item	Catalog #	Size	Additional Information	Shelf Life	Storage
Continuous Single Culture-NX Complete (CSCM-NXC)	90168	2 x 20 mL	Ready-to-use, pre-supplemented with Human Serum Albumin (5% v/v HSA), for a final total protein concentration of 5 mg/mL. Phenol red free. CE Marked.	4 weeks after opening 120 days*	2–8°C
Continuous Single Culture-NX (CSCM-NX)	90167	20 mL 60 mL	Requires protein supplement. Phenol red free. CE Marked.	4 weeks after opening 120 days*	2–8°C

## Also Available

Item	Catalog #	Size	Additional Information	Shelf Life	Storage
Continuous Single Culture Complete (CSCM-C)	90165	2 x 20 mL	Ready-to-use, pre-supplemented with Human Serum Albumin (5% v/v HSA), for a final total protein concentration of 5 mg/mL. CE marked.	8 weeks after opening 120 days*	2–8°C
Continuous Single Culture (CSCM)	90164	60 mL	Requires protein supplement. CE marked.	8 weeks after opening 90 days*	2–8°C

\*From date of manufacture



Simpler Processes.  
Less Stress.  
Better Results.

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Value from Innovation

 **IrvineScientific**